Prepared for
Miami Fort Power Company, LLC

Date
January 31, 2025

Project No.
1940106781-011

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

POND SYSTEM

MIAMI FORT POWER PLANT

NORTH BEND, OHIO

CCR UNIT 115

RAMBOLL Bright ideas. Sustainable change.

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT POND SYSTEM

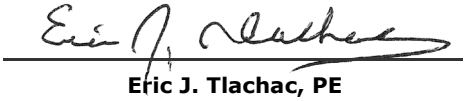
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ACRONYMS AND ABBREVIATIONS

40 C.F.R.	Title 40 of the Code of Federal Regulations
A7	Quarter 1, 2024 Assessment Monitoring sampling event
A7D	Quarter 3, 2024 Assessment Monitoring sampling event
ASD	Alternative Source Demonstration
CCR	coal combustion residuals
CMA	Corrective Measures Assessment
GWPS	groundwater protection standard
MFPP	Miami Fort Power Plant
NA	not applicable
OBG	OBG, part of Ramboll
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SAP	Sampling and Analysis Plan
SSL	statistically significant level

EXECUTIVE SUMMARY

This report has been prepared to provide the information required by Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.90(e) for the Pond System located at the Miami Fort Power Plant (MFPP) near North Bend, Ohio.

Groundwater is being monitored at the Pond System in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment monitoring was initiated at the Pond System on April 9, 2018.

No changes were made to the monitoring system in 2024 (no wells were installed or decommissioned).

The following Statistically Significant Levels (SSLs) of 40 C.F.R. § 257 Appendix IV parameters above groundwater protection standards (GWPSs) were reported in 2024:

- Arsenic at wells MW-2, MW-6, and MW-10
- Cobalt at well MW-4

As required by 40 C.F.R. § 257.95(g)(3)(i), a Corrective Measures Assessment (CMA) following the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019 which addresses the cobalt SSL listed above (OBG, part of Ramboll (OBG), 2019). The CMA was revised on November 12, 2020, to reflect the characterization of the Pond System as a single multi-unit comprised of Basins A and B, including an Alternative Source Demonstration (ASD) which addresses the arsenic SSLs at MW-2 and MW-10 (Ramboll Americas Engineering Solutions, Inc. [Ramboll], 2020a). An additional ASD was completed in April 2024 to address the arsenic SSL at MW-6 (Geosyntec Consultants, Inc., 2024).

Selection of a source control measure continues to be in the feasibility study phase and will incorporate groundwater flow and transport modeling that is in development. Additional background groundwater quality data and sampling and analysis results from additional monitoring wells installed in 2023 continue to be incorporated into the groundwater flow and transport model. This model will also be used to facilitate the further evaluation and selection of a groundwater remedy. A hydrogeologic site characterization report is also in development to summarize information gained from the additional monitoring wells. Semiannual remedy selection progress reports are being completed as required by 40 C.F.R. § 257.97(a). The Pond System remains in the Assessment Monitoring Program in accordance with 40 C.F.R. § 257.96(b).

1. INTRODUCTION

This report has been prepared by Ramboll on behalf of Miami Fort Power Company, LLC, to provide the information required by 40 C.F.R. § 257.90(e) for the Pond System located at the MFPP near North Bend, Ohio.

In accordance with 40 C.F.R. § 257.90(e), the owner or operator of a coal combustion residuals (CCR) unit must prepare an Annual Groundwater Monitoring and Corrective Action Report for the preceding calendar year that documents the status of the Groundwater Monitoring and Corrective Action Program for the CCR unit (**Section 2**), summarizes key actions completed (**Section 3**), describes any problems encountered and actions to resolve the problems (**Section 4**), and projects key activities for the upcoming year (**Section 5**). At a minimum, the annual report must contain the following information, to the extent available:

1. A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit (**Figure 1**).
2. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken (**Section 3**, paragraph 1).
3. In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs (**Section 3**, **Table A**).
4. A narrative discussion of any transition between monitoring programs (*e.g.*, the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase relative to background levels) (**Section 2**).
5. Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.
6. A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit (see **Executive Summary**). At a minimum, the summary must specify all of the following:
    i. At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.
    ii. At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.
    iii. If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III of §257 pursuant to §257.94(e):
        A. Identify those constituents listed in Appendix III of §257 and the names of the monitoring wells associated with such an increase.

B. Provide the date when the assessment monitoring program was initiated for the CCR unit.

iv. If it was determined that there was a statistically significant level above the groundwater protection standard [GWPS] for one or more constituents listed in Appendix IV of §257 pursuant to §257.95(g) include all of the following:

A. Identify those constituents listed in Appendix IV of §257 and the names of the monitoring wells associated with such an increase.

B. Provide the date when the assessment of corrective measures was initiated for the CCR unit.

C. Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.

D. Provide the date when the assessment of corrective measures was completed for the CCR unit.

v. Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection.

vi. Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

This report provides the required information for the Pond System for calendar year 2024.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

Groundwater is being monitored at the Pond System in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment monitoring was initiated on April 9, 2018. SSLs were determined for the Pond System and alternative source evaluations were inconclusive for one or more SSLs. In accordance with 40 C.F.R. § 257.95(g)(5), a CMA following the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019 to address cobalt SSLs. An ASD was completed to address the arsenic SSLs.

A public meeting was held on December 16, 2019 at the the Miami Township Community Center in North Bend, Ohio to discuss the results of the CMA in accordance with 40 C.F.R. § 257.96(e).

The CMA was revised on November 12, 2020 to reflect the characterization of the Pond System as a single multi-unit comprised of Basins A and B, including an ASD for SSLs of arsenic and molybdenum. The CMA was revised again on November 30, 2020, to include additional information related to site geology and hydrogeology and apply evaluation criteria to potential corrective measures.

Selection of a source control measure continues to be in the feasibility study phase and will incorporate groundwater flow and transport modeling that is in development. Additional background groundwater quality data and sampling and analysis results from additional monitoring wells installed in 2023 continue to be incorporated into the groundwater flow and transport model. This model will also be used to facilitate the further evaluation and selection of a groundwater remedy. A hydrogeologic site characterization report is also in development to summarize information gained from the additional monitoring wells. Semiannual remedy selection progress reports are being completed as required by 40 C.F.R. § 257.97(a).

The Pond System remains in the Assessment Monitoring Program in accordance with 40 C.F.R. § 257.96(b).

3. KEY ACTIONS COMPLETED IN 2024

A summary of the samples collected from background and compliance monitoring wells in 2024 under the Assessment Monitoring Program is included in **Table A** on the following page. No changes to the monitoring system occurred in 2024 (no wells were installed or abandoned). The groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**.

One groundwater sample was collected from each background and compliance well during each monitoring event.[1] All samples were collected and analyzed in accordance with the Multi-Site Sampling and Analysis Plan (SAP) (Ramboll, 2023b).

Potentiometric surfaces are included in **Figures 2 and 3**. All monitoring data and analytical results obtained under 40 C.F.R. § 257.90 through 257.98 are presented in **Tables 1 through 3**. All associated laboratory reports and field data sheets are included in **Appendix A**.

Analytical data were evaluated in accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022a), the Multi-Site Quality Assurance Project Plan (Ramboll, 2022b), and the Multi-Site Data Management Plan (Ramboll, 2022c) to determine any SSLs of Appendix IV parameters over GWPSs and SSIs of Appendix III parameters greater than background values. SSL notifications were completed in accordance with 40 C.F.R. § 257.95(g). SSIs are highlighted in **Table 2**. Statistical background values are provided in **Table 4** and a flow chart showing the statistical methodology for determination of background values is included as **Appendix B**. GWPSs are provided in **Table 5**. A summary of the determination of SSLs is included in **Table 6**. A flow chart showing the statistical methodology for determination of SSLs is included as **Appendix C**.

Potential alternative sources were evaluated as outlined in the 40 C.F.R. § 257.94(e)(2). An ASD was completed in 2024 for the arsenic SSL in MW-6 detected during the Quarter 3, 2023 sampling event. Associated laboratory analytical data is included in the 2023 Annual Groundwater Monitoring and Corrective Action Report (Ramboll, 2024). The ASD was certified by a qualified professional engineer and is included in **Appendix D**.

[1] Compliance well 4A was not sampled during the September sampling event because the well was not producing water at the time of sample collection.

Table A. 2024 Assessment Monitoring Program Summary

Event ID	Sampling Dates [1, 2, 3]	Analytical Data Receipt Date	SSL(s) Determination Date	SSL(s)	CMA Initiated
A7	March 25-28, 2024	April 30, 2024	July 29, 2024	Arsenic at wells MW-2, MW-6, and MW-10; Cobalt at well MW-4	NA
A7D [4]	September 9-12, 2024	October 8, 2024	January 6, 2025	Arsenic at wells MW-2, MW-6, and MW-10; Cobalt at well MW-4	NA

Notes:

CMA: Corrective Measures Assessment

NA: not applicable

SSL: Statistically Significant Level

[1] All samples were analyzed for Appendix III parameters listed in 40 C.F.R. § 257.94(e) and Appendix IV parameters listed in 40 C.F.R. § 257.95(g).

[2] The following background wells were sampled for each event: MW-7, MW-17, and MW-19

[3] The following compliance wells were sampled for each event: 4A, MW-1, MW-2, MW-3A, MW-4, MW-5, MW-6, MW-8, MW-9, MW-10, MW 11, MW-12, MW-13, MW-14, MW-15, and MW-16

[4] Compliance well 4A was not sampled during the September sampling event because the well was not producing water at the time of sample collection.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the groundwater monitoring program during 2024. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2025

The following key activities are planned for 2025:

- Continuation of the Assessment Monitoring Program with semiannual sampling scheduled for the first and third quarters of 2025.
- Complete evaluation of analytical data from the compliance wells to determine whether an SSL of Appendix IV parameters using GWPSs has occurred.
- Remedy selection will continue; semiannual progress reports required by 40 C.F.R. § 257.97(a) will be completed and posted to the publicly accessible website as required by 40 C.F.R. § 257.107(h)(9).

6. REFERENCES

Geosyntec Consultants, Inc., 2024. Alternative Source Demonstration, Pond System, Miami Fort Power Plant, Pond System (Unit ID #115), 40 C.F.R. § 257(g)(3)(ii), April.

OBG, Part of Ramboll (OBG), 2019. Corrective Measures Assessment, Miami Fort Basin A, Miami Fort Power Station, 11021 Brower Road, North Bend, Ohio, Dynegy Miami Fort, LLC, September 5, 2019.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2020a. Corrective Measures Assessment Revision 1, Miami Fort Pond System, Miami Fort Power Station, 11021 Brower Road, North Bend, Ohio, Dynegy Miami Fort, LLC, November 12, 2020.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2020b. Corrective Measures Assessment Revision 2, Miami Fort Pond System, Miami Fort Power Station, 11021 Brower Road, North Bend, Ohio, Dynegy Miami Fort, LLC, November 30, 2020.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022a. Multi-Site Statistical Analysis Plan, 40 C.F.R. § 257. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022b. Multi-Site Quality Assurance Project Plan. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022c. Multi-Site Data Management Plan. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023a. 40 C.F.R. § 257 Groundwater Monitoring Plan, Pond System, Miami Fort Power Plant, North Bend, Ohio. December 31, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023b. Multi-Site Sampling and Analysis Plan, Revision 1. October 10, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2024. 2023 Annual Groundwater Monitoring and Corrective Action Report, Pond System, Miami Fort Power Plant, North Bend, Ohio, CCR Unit 115.
https://www.luminant.com/documents/ccr/Ohio/Miami-Fort/2023/2023-Miami%20Fort-2023%20Annual%20Groundwater%20Monitoring%20and%20Corrective%20Action%20Report-Pond%20System.pdf

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
MW-1	Compliance	UA	03/25/2024	48.33	456.16
MW-1	Compliance	UA	09/09/2024	50.44	454.05
MW-2	Compliance	UA	03/25/2024	17.69	454.54
MW-2	Compliance	UA	09/09/2024	19.59	452.64
MW-3A	Compliance	UA	03/25/2024	18.02	455.21
MW-3A	Compliance	UA	09/09/2024	19.00	454.23
MW-4	Compliance	UA	03/25/2024	22.57	455.32
MW-4	Compliance	UA	09/09/2024	24.00	453.89
MW-5	Compliance	UA	03/25/2024	54.67	455.29
MW-5	Compliance	UA	09/09/2024	56.45	453.51
MW-6	Compliance	UA	03/25/2024	52.22	456.12
MW-6	Compliance	UA	09/09/2024	54.35	453.99
MW-7	Background	UA	03/25/2024	54.80	455.37
MW-7	Background	UA	09/09/2024	57.19	452.98
MW-8	Compliance	UA	03/25/2024	38.52	454.91
MW-8	Compliance	UA	09/09/2024	40.39	453.04
MW-9	Compliance	UA	03/25/2024	19.03	454.02
MW-9	Compliance	UA	09/09/2024	20.79	452.26
MW-10	Compliance	UA	03/25/2024	18.73	454.62
MW-10	Compliance	UA	09/09/2024	19.96	453.39
MW-11	Compliance	UA	03/25/2024	19.83	454.62
MW-11	Compliance	UA	09/09/2024	21.08	453.37
MW-12	Compliance	UA	03/25/2024	52.23	456.21
MW-12	Compliance	UA	09/09/2024	54.78	453.66
MW-13	Compliance	UA	03/25/2024	25.50	455.20
MW-13	Compliance	UA	09/09/2024	27.08	453.62
MW-14	Compliance	UA	03/25/2024	24.43	455.46
MW-14	Compliance	UA	09/09/2024	25.85	454.04
MW-15	Compliance	UA	03/25/2024	41.04	456.48
MW-15	Compliance	UA	09/09/2024	43.60	453.92
MW-16	Compliance	UA	03/25/2024	40.79	456.50
MW-16	Compliance	UA	09/09/2024	43.37	453.92
MW-17	Background	UA	03/25/2024	55.25	456.57
MW-17	Background	UA	09/09/2024	57.62	454.20
MW-19	Background	UA	03/25/2024	43.86	457.52
MW-19	Background	UA	09/09/2024	46.75	454.63
MW-4A	Compliance	UA	03/25/2024	36.21	456.35
MW-4A	Compliance	UA	09/09/2024	38.96	453.60
XPW-01	Water Level	CCR	03/25/2024	8.00	NA
XPW-01	Water Level	CCR	09/09/2024	7.31	NA

TABLE 1
GROUNDWATER ELEVATION DATA
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Notes:
BMP = below measuring point
Depth to Groundwater/Groundwater Elevation Code (if applicable):
- DM[1] = Depth to water was not measured.
- DM[2] = Depth to water was not measured because water was above or below the staff gage markings.
- DM[3] = Depth to water was not measured because the location was inaccessible.
- DM[4] = Depth to water was not measured because water level was below the top of the pump.
- DM[5] = Depth to water was not measured because water level was above the top of casing (artesian well).
- DM[6] = Depth to water was not measured because of damage to the well.
- DM[7] = Depth to water was not measured due to required pressure transducer maintenance.
- DM[8] = Lab provided groundwater elevation data and not depth to water.

NA = not available/not applicable
NAVD88 = North American Vertical Datum of 1988
Monitored Unit Abbreviations:
- CCR = coal combustion residuals
- UA = uppermost aquifer

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TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
MW-7	UA	Background	03/27/2024	A7	Boron, total	mg/L	0.0757	--	--	--
MW-7	UA	Background	09/09/2024	A7D	Boron, total	mg/L	0.0770	--	--	--
MW-7	UA	Background	03/27/2024	A7	Calcium, total	mg/L	111	--	--	--
MW-7	UA	Background	09/09/2024	A7D	Calcium, total	mg/L	110	--	--	--
MW-7	UA	Background	03/27/2024	A7	Chloride, total	mg/L	3.36 J+	--	--	--
MW-7	UA	Background	09/09/2024	A7D	Chloride, total	mg/L	2.78	--	--	--
MW-7	UA	Background	03/27/2024	A7	Fluoride, total	mg/L	0.064 U	--	--	--
MW-7	UA	Background	09/09/2024	A7D	Fluoride, total	mg/L	0.136 J	--	--	--
MW-7	UA	Background	03/27/2024	A7	pH (field)	SU	6.9	--	--	--
MW-7	UA	Background	09/09/2024	A7D	pH (field)	SU	7.0	--	--	--
MW-7	UA	Background	03/27/2024	A7	Sulfate, total	mg/L	39.1	--	--	--
MW-7	UA	Background	09/09/2024	A7D	Sulfate, total	mg/L	41.1	--	--	--
MW-7	UA	Background	03/27/2024	A7	Total Dissolved Solids	mg/L	428 J	--	--	--
MW-7	UA	Background	09/09/2024	A7D	Total Dissolved Solids	mg/L	456	--	--	--
MW-17	UA	Background	03/27/2024	A7	Boron, total	mg/L	0.0503	--	--	--
MW-17	UA	Background	09/10/2024	A7D	Boron, total	mg/L	0.0457	--	--	--
MW-17	UA	Background	03/27/2024	A7	Calcium, total	mg/L	139	--	--	--
MW-17	UA	Background	09/10/2024	A7D	Calcium, total	mg/L	127	--	--	--
MW-17	UA	Background	03/27/2024	A7	Chloride, total	mg/L	67.1 J-	--	--	--
MW-17	UA	Background	09/10/2024	A7D	Chloride, total	mg/L	50.0	--	--	--
MW-17	UA	Background	03/27/2024	A7	Fluoride, total	mg/L	0.197 J	--	--	--
MW-17	UA	Background	09/10/2024	A7D	Fluoride, total	mg/L	0.170	--	--	--
MW-17	UA	Background	03/27/2024	A7	pH (field)	SU	7.0	--	--	--
MW-17	UA	Background	09/10/2024	A7D	pH (field)	SU	6.9	--	--	--
MW-17	UA	Background	03/27/2024	A7	Sulfate, total	mg/L	81.6 J-	--	--	--
MW-17	UA	Background	09/10/2024	A7D	Sulfate, total	mg/L	64.1	--	--	--
MW-17	UA	Background	03/27/2024	A7	Total Dissolved Solids	mg/L	555 J	--	--	--
MW-17	UA	Background	09/10/2024	A7D	Total Dissolved Solids	mg/L	579	--	--	--
MW-19	UA	Background	03/25/2024	A7	Boron, total	mg/L	0.0847	--	--	--
MW-19	UA	Background	09/12/2024	A7D	Boron, total	mg/L	0.0794	--	--	--
MW-19	UA	Background	03/25/2024	A7	Calcium, total	mg/L	138	--	--	--
MW-19	UA	Background	09/12/2024	A7D	Calcium, total	mg/L	132	--	--	--
MW-19	UA	Background	03/25/2024	A7	Chloride, total	mg/L	33.6	--	--	--
MW-19	UA	Background	09/12/2024	A7D	Chloride, total	mg/L	34.6 J-	--	--	--
MW-19	UA	Background	03/25/2024	A7	Fluoride, total	mg/L	0.0755 J	--	--	--
MW-19	UA	Background	09/12/2024	A7D	Fluoride, total	mg/L	0.0784 J	--	--	--
MW-19	UA	Background	03/25/2024	A7	pH (field)	SU	6.9	--	--	--
MW-19	UA	Background	09/12/2024	A7D	pH (field)	SU	6.7	--	--	--
MW-19	UA	Background	03/25/2024	A7	Sulfate, total	mg/L	57.0	--	--	--
MW-19	UA	Background	09/12/2024	A7D	Sulfate, total	mg/L	43.5 J-	--	--	--
MW-19	UA	Background	03/25/2024	A7	Total Dissolved Solids	mg/L	547	--	--	--
MW-19	UA	Background	09/12/2024	A7D	Total Dissolved Solids	mg/L	566	--	--	--
4A	UA	Compliance	03/26/2024	A7	Boron, total	mg/L	8.50	8.50	0.137	Reported
4A	UA	Compliance	--	A7D	Boron, total	mg/L	NS[8]	--	0.137	--
4A	UA	Compliance	03/26/2024	A7	Calcium, total	mg/L	190	190	154	Reported
4A	UA	Compliance	--	A7D	Calcium, total	mg/L	NS[8]	--	154	--

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
4A	UA	Compliance	03/26/2024	A7	Chloride, total	mg/L	198	198	80.2	Reported
4A	UA	Compliance	--	A7D	Chloride, total	mg/L	NS[8]	--	80.2	--
4A	UA	Compliance	03/26/2024	A7	Fluoride, total	mg/L	0.32 U	0.75	0.310	No Exceedance
4A	UA	Compliance	--	A7D	Fluoride, total	mg/L	NS[8]	--	0.310	--
4A	UA	Compliance	03/26/2024	A7	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
4A	UA	Compliance	--	A7D	pH (field)	SU	NS[8]	--	6.6/7.5	--
4A	UA	Compliance	03/26/2024	A7	Sulfate, total	mg/L	511	511	85.2	Reported
4A	UA	Compliance	--	A7D	Sulfate, total	mg/L	NS[8]	--	85.2	--
4A	UA	Compliance	03/26/2024	A7	Total Dissolved Solids	mg/L	1,230	1,230	654	Reported
4A	UA	Compliance	--	A7D	Total Dissolved Solids	mg/L	NS[8]	--	654	--
MW-1	UA	Compliance	03/26/2024	A7	Boron, total	mg/L	0.756	0.756	0.137	Reported
MW-1	UA	Compliance	09/10/2024	A7D	Boron, total	mg/L	0.978	0.978	0.137	Reported
MW-1	UA	Compliance	03/26/2024	A7	Calcium, total	mg/L	130	130	154	No Exceedance
MW-1	UA	Compliance	09/10/2024	A7D	Calcium, total	mg/L	170	170	154	Reported
MW-1	UA	Compliance	03/26/2024	A7	Chloride, total	mg/L	41.6	41.6	80.2	No Exceedance
MW-1	UA	Compliance	09/10/2024	A7D	Chloride, total	mg/L	39.5 J-	39.5	80.2	No Exceedance
MW-1	UA	Compliance	03/26/2024	A7	Fluoride, total	mg/L	0.289	0.289	0.310	No Exceedance
MW-1	UA	Compliance	09/10/2024	A7D	Fluoride, total	mg/L	0.383	0.383	0.310	Reported
MW-1	UA	Compliance	03/26/2024	A7	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
MW-1	UA	Compliance	09/10/2024	A7D	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
MW-1	UA	Compliance	03/26/2024	A7	Sulfate, total	mg/L	264	264	85.2	Reported
MW-1	UA	Compliance	09/10/2024	A7D	Sulfate, total	mg/L	363	363	85.2	Reported
MW-1	UA	Compliance	03/26/2024	A7	Total Dissolved Solids	mg/L	660	660	654	Reported
MW-1	UA	Compliance	09/10/2024	A7D	Total Dissolved Solids	mg/L	827	827	654	Reported
MW-2	UA	Compliance	03/28/2024	A7	Boron, total	mg/L	0.554	0.554	0.137	Reported
MW-2	UA	Compliance	09/10/2024	A7D	Boron, total	mg/L	0.563	0.563	0.137	Reported
MW-2	UA	Compliance	03/28/2024	A7	Calcium, total	mg/L	127	127	154	No Exceedance
MW-2	UA	Compliance	09/10/2024	A7D	Calcium, total	mg/L	118	118	154	No Exceedance
MW-2	UA	Compliance	03/28/2024	A7	Chloride, total	mg/L	35.7	35.7	80.2	No Exceedance
MW-2	UA	Compliance	09/10/2024	A7D	Chloride, total	mg/L	37.3	37.3	80.2	No Exceedance
MW-2	UA	Compliance	03/28/2024	A7	Fluoride, total	mg/L	0.0783 J	0.15	0.310	No Exceedance
MW-2	UA	Compliance	09/10/2024	A7D	Fluoride, total	mg/L	0.107 J	0.15	0.310	No Exceedance
MW-2	UA	Compliance	03/28/2024	A7	pH (field)	SU	6.8	6.8	6.6/7.5	No Exceedance
MW-2	UA	Compliance	09/10/2024	A7D	pH (field)	SU	6.8	6.8	6.6/7.5	No Exceedance
MW-2	UA	Compliance	03/28/2024	A7	Sulfate, total	mg/L	25.2	25.2	85.2	No Exceedance
MW-2	UA	Compliance	09/10/2024	A7D	Sulfate, total	mg/L	15.6	15.6	85.2	No Exceedance
MW-2	UA	Compliance	03/28/2024	A7	Total Dissolved Solids	mg/L	572	572	654	No Exceedance
MW-2	UA	Compliance	09/10/2024	A7D	Total Dissolved Solids	mg/L	571	571	654	No Exceedance
MW-3A	UA	Compliance	03/28/2024	A7	Boron, total	mg/L	0.0569	0.0569	0.137	No Exceedance
MW-3A	UA	Compliance	09/11/2024	A7D	Boron, total	mg/L	0.0541	0.0541	0.137	No Exceedance
MW-3A	UA	Compliance	03/28/2024	A7	Calcium, total	mg/L	50.7	50.7	154	No Exceedance
MW-3A	UA	Compliance	09/11/2024	A7D	Calcium, total	mg/L	47.7	47.7	154	No Exceedance
MW-3A	UA	Compliance	03/28/2024	A7	Chloride, total	mg/L	23.3	23.3	80.2	No Exceedance
MW-3A	UA	Compliance	09/11/2024	A7D	Chloride, total	mg/L	23.5	23.5	80.2	No Exceedance
MW-3A	UA	Compliance	03/28/2024	A7	Fluoride, total	mg/L	0.089 J	0.15	0.310	No Exceedance
MW-3A	UA	Compliance	09/11/2024	A7D	Fluoride, total	mg/L	0.126 J	0.15	0.310	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
MW-3A	UA	Compliance	03/28/2024	A7	pH (field)	SU	7.1	7.1	6.6/7.5	No Exceedance
MW-3A	UA	Compliance	09/11/2024	A7D	pH (field)	SU	7.1	7.1	6.6/7.5	No Exceedance
MW-3A	UA	Compliance	03/28/2024	A7	Sulfate, total	mg/L	4.23 J	5	85.2	No Exceedance
MW-3A	UA	Compliance	09/11/2024	A7D	Sulfate, total	mg/L	4.9 J	5	85.2	No Exceedance
MW-3A	UA	Compliance	03/28/2024	A7	Total Dissolved Solids	mg/L	242	242	654	No Exceedance
MW-3A	UA	Compliance	09/11/2024	A7D	Total Dissolved Solids	mg/L	250	250	654	No Exceedance
MW-4	UA	Compliance	03/28/2024	A7	Boron, total	mg/L	0.534	0.534	0.137	Reported
MW-4	UA	Compliance	09/11/2024	A7D	Boron, total	mg/L	0.311	0.311	0.137	Reported
MW-4	UA	Compliance	03/28/2024	A7	Calcium, total	mg/L	343	343	154	Reported
MW-4	UA	Compliance	09/11/2024	A7D	Calcium, total	mg/L	215	215	154	Reported
MW-4	UA	Compliance	03/28/2024	A7	Chloride, total	mg/L	26.9	26.9	80.2	No Exceedance
MW-4	UA	Compliance	09/11/2024	A7D	Chloride, total	mg/L	24.8	24.8	80.2	No Exceedance
MW-4	UA	Compliance	03/28/2024	A7	Fluoride, total	mg/L	0.0655 J	0.15	0.310	No Exceedance
MW-4	UA	Compliance	09/11/2024	A7D	Fluoride, total	mg/L	0.38 U	0.75	0.310	No Exceedance
MW-4	UA	Compliance	03/28/2024	A7	pH (field)	SU	5.7	5.7	6.6/7.5	Reported
MW-4	UA	Compliance	09/11/2024	A7D	pH (field)	SU	6.0	6.0	6.6/7.5	Reported
MW-4	UA	Compliance	03/28/2024	A7	Sulfate, total	mg/L	1,160	1,160	85.2	Reported
MW-4	UA	Compliance	09/11/2024	A7D	Sulfate, total	mg/L	693	693	85.2	Reported
MW-4	UA	Compliance	03/28/2024	A7	Total Dissolved Solids	mg/L	1,770	1,770	654	Reported
MW-4	UA	Compliance	09/11/2024	A7D	Total Dissolved Solids	mg/L	1,140	1,140	654	Reported
MW-5	UA	Compliance	03/26/2024	A7	Boron, total	mg/L	24.8	24.8	0.137	Reported
MW-5	UA	Compliance	09/12/2024	A7D	Boron, total	mg/L	18.1	18.1	0.137	Reported
MW-5	UA	Compliance	03/26/2024	A7	Calcium, total	mg/L	359	359	154	Reported
MW-5	UA	Compliance	09/12/2024	A7D	Calcium, total	mg/L	296	296	154	Reported
MW-5	UA	Compliance	03/26/2024	A7	Chloride, total	mg/L	507	507	80.2	Reported
MW-5	UA	Compliance	09/12/2024	A7D	Chloride, total	mg/L	460	460	80.2	Reported
MW-5	UA	Compliance	03/26/2024	A7	Fluoride, total	mg/L	0.0917 J	0.15	0.310	No Exceedance
MW-5	UA	Compliance	09/12/2024	A7D	Fluoride, total	mg/L	0.38 U	0.75	0.310	No Exceedance
MW-5	UA	Compliance	03/26/2024	A7	pH (field)	SU	6.8	6.8	6.6/7.5	No Exceedance
MW-5	UA	Compliance	09/12/2024	A7D	pH (field)	SU	6.8	6.8	6.6/7.5	No Exceedance
MW-5	UA	Compliance	03/26/2024	A7	Sulfate, total	mg/L	663	663	85.2	Reported
MW-5	UA	Compliance	09/12/2024	A7D	Sulfate, total	mg/L	463	463	85.2	Reported
MW-5	UA	Compliance	03/26/2024	A7	Total Dissolved Solids	mg/L	1,900	1,900	654	Reported
MW-5	UA	Compliance	09/12/2024	A7D	Total Dissolved Solids	mg/L	1,730	1,730	654	Reported
MW-6	UA	Compliance	03/26/2024	A7	Boron, total	mg/L	2.49	2.49	0.137	Reported
MW-6	UA	Compliance	09/12/2024	A7D	Boron, total	mg/L	1.11	1.11	0.137	Reported
MW-6	UA	Compliance	03/26/2024	A7	Calcium, total	mg/L	41.5	41.5	154	No Exceedance
MW-6	UA	Compliance	09/12/2024	A7D	Calcium, total	mg/L	53.6	53.6	154	No Exceedance
MW-6	UA	Compliance	03/26/2024	A7	Chloride, total	mg/L	76.1	76.1	80.2	No Exceedance
MW-6	UA	Compliance	09/12/2024	A7D	Chloride, total	mg/L	104	104	80.2	Reported
MW-6	UA	Compliance	03/26/2024	A7	Fluoride, total	mg/L	0.653	0.653	0.310	Reported
MW-6	UA	Compliance	09/12/2024	A7D	Fluoride, total	mg/L	0.584	0.584	0.310	Reported
MW-6	UA	Compliance	03/26/2024	A7	pH (field)	SU	7.4	7.4	6.6/7.5	No Exceedance
MW-6	UA	Compliance	09/12/2024	A7D	pH (field)	SU	7.3	7.3	6.6/7.5	No Exceedance
MW-6	UA	Compliance	03/26/2024	A7	Sulfate, total	mg/L	13.3	13.3	85.2	No Exceedance
MW-6	UA	Compliance	09/12/2024	A7D	Sulfate, total	mg/L	2.7 J	2.5	85.2	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
MW-6	UA	Compliance	03/26/2024	A7	Total Dissolved Solids	mg/L	484	484	654	No Exceedance
MW-6	UA	Compliance	09/12/2024	A7D	Total Dissolved Solids	mg/L	525	525	654	No Exceedance
MW-8	UA	Compliance	03/27/2024	A7	Boron, total	mg/L	4.86	4.86	0.137	Reported
MW-8	UA	Compliance	09/11/2024	A7D	Boron, total	mg/L	1.10	1.10	0.137	Reported
MW-8	UA	Compliance	03/27/2024	A7	Calcium, total	mg/L	215	215	154	Reported
MW-8	UA	Compliance	09/11/2024	A7D	Calcium, total	mg/L	119	119	154	No Exceedance
MW-8	UA	Compliance	03/27/2024	A7	Chloride, total	mg/L	36.2	36.2	80.2	No Exceedance
MW-8	UA	Compliance	09/11/2024	A7D	Chloride, total	mg/L	45.3	45.3	80.2	No Exceedance
MW-8	UA	Compliance	03/27/2024	A7	Fluoride, total	mg/L	0.114 J	0.15	0.310	No Exceedance
MW-8	UA	Compliance	09/11/2024	A7D	Fluoride, total	mg/L	0.237	0.237	0.310	No Exceedance
MW-8	UA	Compliance	03/27/2024	A7	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
MW-8	UA	Compliance	09/11/2024	A7D	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
MW-8	UA	Compliance	03/27/2024	A7	Sulfate, total	mg/L	555	555	85.2	Reported
MW-8	UA	Compliance	09/11/2024	A7D	Sulfate, total	mg/L	221	221	85.2	Reported
MW-8	UA	Compliance	03/27/2024	A7	Total Dissolved Solids	mg/L	1,000 J	1,000	654	Reported
MW-8	UA	Compliance	09/11/2024	A7D	Total Dissolved Solids	mg/L	638	638	654	No Exceedance
MW-9	UA	Compliance	03/27/2024	A7	Boron, total	mg/L	5.85	5.85	0.137	Reported
MW-9	UA	Compliance	09/11/2024	A7D	Boron, total	mg/L	3.87	3.87	0.137	Reported
MW-9	UA	Compliance	03/27/2024	A7	Calcium, total	mg/L	185	185	154	Reported
MW-9	UA	Compliance	09/11/2024	A7D	Calcium, total	mg/L	186	186	154	Reported
MW-9	UA	Compliance	03/27/2024	A7	Chloride, total	mg/L	114	114	80.2	Reported
MW-9	UA	Compliance	09/11/2024	A7D	Chloride, total	mg/L	89.3	89.3	80.2	Reported
MW-9	UA	Compliance	03/27/2024	A7	Fluoride, total	mg/L	0.294	0.294	0.310	No Exceedance
MW-9	UA	Compliance	09/11/2024	A7D	Fluoride, total	mg/L	0.324	0.324	0.310	Reported
MW-9	UA	Compliance	03/27/2024	A7	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
MW-9	UA	Compliance	09/11/2024	A7D	pH (field)	SU	6.9	6.9	6.6/7.5	No Exceedance
MW-9	UA	Compliance	03/27/2024	A7	Sulfate, total	mg/L	355	355	85.2	Reported
MW-9	UA	Compliance	09/11/2024	A7D	Sulfate, total	mg/L	390	390	85.2	Reported
MW-9	UA	Compliance	03/27/2024	A7	Total Dissolved Solids	mg/L	860 J	860	654	Reported
MW-9	UA	Compliance	09/11/2024	A7D	Total Dissolved Solids	mg/L	946	946	654	Reported
MW-10	UA	Compliance	03/28/2024	A7	Boron, total	mg/L	0.0744	0.0744	0.137	No Exceedance
MW-10	UA	Compliance	09/12/2024	A7D	Boron, total	mg/L	0.0774	0.0774	0.137	No Exceedance
MW-10	UA	Compliance	03/28/2024	A7	Calcium, total	mg/L	64.1	64.1	154	No Exceedance
MW-10	UA	Compliance	09/12/2024	A7D	Calcium, total	mg/L	48.7	48.7	154	No Exceedance
MW-10	UA	Compliance	03/28/2024	A7	Chloride, total	mg/L	58.3	58.3	80.2	No Exceedance
MW-10	UA	Compliance	09/12/2024	A7D	Chloride, total	mg/L	26.6	26.6	80.2	No Exceedance
MW-10	UA	Compliance	03/28/2024	A7	Fluoride, total	mg/L	0.132 J	0.15	0.310	No Exceedance
MW-10	UA	Compliance	09/12/2024	A7D	Fluoride, total	mg/L	0.178	0.178	0.310	No Exceedance
MW-10	UA	Compliance	03/28/2024	A7	pH (field)	SU	7.6	7.6	6.6/7.5	Reported
MW-10	UA	Compliance	09/12/2024	A7D	pH (field)	SU	7.6	7.6	6.6/7.5	Reported
MW-10	UA	Compliance	03/28/2024	A7	Sulfate, total	mg/L	21.5	21.5	85.2	No Exceedance
MW-10	UA	Compliance	09/12/2024	A7D	Sulfate, total	mg/L	18.1	18.1	85.2	No Exceedance
MW-10	UA	Compliance	03/28/2024	A7	Total Dissolved Solids	mg/L	359	359	654	No Exceedance
MW-10	UA	Compliance	09/12/2024	A7D	Total Dissolved Solids	mg/L	275	275	654	No Exceedance
MW-11	UA	Compliance	03/28/2024	A7	Boron, total	mg/L	0.0545	0.0545	0.137	No Exceedance
MW-11	UA	Compliance	09/11/2024	A7D	Boron, total	mg/L	0.0549	0.0549	0.137	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
MW-11	UA	Compliance	03/28/2024	A7	Calcium, total	mg/L	53.9	53.9	154	No Exceedance
MW-11	UA	Compliance	09/11/2024	A7D	Calcium, total	mg/L	61.6	61.6	154	No Exceedance
MW-11	UA	Compliance	03/28/2024	A7	Chloride, total	mg/L	40.1	40.1	80.2	No Exceedance
MW-11	UA	Compliance	09/11/2024	A7D	Chloride, total	mg/L	54.7	54.7	80.2	No Exceedance
MW-11	UA	Compliance	03/28/2024	A7	Fluoride, total	mg/L	0.112 J	0.15	0.310	No Exceedance
MW-11	UA	Compliance	09/11/2024	A7D	Fluoride, total	mg/L	0.133 J	0.15	0.310	No Exceedance
MW-11	UA	Compliance	03/28/2024	A7	pH (field)	SU	7.7	7.7	6.6/7.5	Reported
MW-11	UA	Compliance	09/11/2024	A7D	pH (field)	SU	7.5	7.5	6.6/7.5	No Exceedance
MW-11	UA	Compliance	03/28/2024	A7	Sulfate, total	mg/L	18.8	18.8	85.2	No Exceedance
MW-11	UA	Compliance	09/11/2024	A7D	Sulfate, total	mg/L	30.0	30.0	85.2	No Exceedance
MW-11	UA	Compliance	03/28/2024	A7	Total Dissolved Solids	mg/L	274	274	654	No Exceedance
MW-11	UA	Compliance	09/11/2024	A7D	Total Dissolved Solids	mg/L	367	367	654	No Exceedance
MW-12	UA	Compliance	03/27/2024	A7	Boron, total	mg/L	6.53	6.53	0.137	Reported
MW-12	UA	Compliance	09/12/2024	A7D	Boron, total	mg/L	5.14	5.14	0.137	Reported
MW-12	UA	Compliance	03/27/2024	A7	Calcium, total	mg/L	150	150	154	No Exceedance
MW-12	UA	Compliance	09/12/2024	A7D	Calcium, total	mg/L	148	148	154	No Exceedance
MW-12	UA	Compliance	03/27/2024	A7	Chloride, total	mg/L	194	194	80.2	Reported
MW-12	UA	Compliance	09/12/2024	A7D	Chloride, total	mg/L	187	187	80.2	Reported
MW-12	UA	Compliance	03/27/2024	A7	Fluoride, total	mg/L	0.064 U	0.15	0.310	No Exceedance
MW-12	UA	Compliance	09/12/2024	A7D	Fluoride, total	mg/L	0.126 J	0.15	0.310	No Exceedance
MW-12	UA	Compliance	03/27/2024	A7	pH (field)	SU	5.7	5.7	6.6/7.5	Reported
MW-12	UA	Compliance	09/12/2024	A7D	pH (field)	SU	5.8	5.8	6.6/7.5	Reported
MW-12	UA	Compliance	03/27/2024	A7	Sulfate, total	mg/L	288	288	85.2	Reported
MW-12	UA	Compliance	09/12/2024	A7D	Sulfate, total	mg/L	293	293	85.2	Reported
MW-12	UA	Compliance	03/27/2024	A7	Total Dissolved Solids	mg/L	808	808	654	Reported
MW-12	UA	Compliance	09/12/2024	A7D	Total Dissolved Solids	mg/L	867	867	654	Reported
MW-13	UA	Compliance	03/27/2024	A7	Boron, total	mg/L	0.0562	0.0562	0.137	No Exceedance
MW-13	UA	Compliance	09/11/2024	A7D	Boron, total	mg/L	0.0568	0.0568	0.137	No Exceedance
MW-13	UA	Compliance	03/27/2024	A7	Calcium, total	mg/L	41.4	41.4	154	No Exceedance
MW-13	UA	Compliance	09/11/2024	A7D	Calcium, total	mg/L	40.0	40.0	154	No Exceedance
MW-13	UA	Compliance	03/27/2024	A7	Chloride, total	mg/L	25.2	25.2	80.2	No Exceedance
MW-13	UA	Compliance	09/11/2024	A7D	Chloride, total	mg/L	26.1	26.1	80.2	No Exceedance
MW-13	UA	Compliance	03/27/2024	A7	Fluoride, total	mg/L	0.146 J	0.15	0.310	No Exceedance
MW-13	UA	Compliance	09/11/2024	A7D	Fluoride, total	mg/L	0.126 J	0.15	0.310	No Exceedance
MW-13	UA	Compliance	03/27/2024	A7	pH (field)	SU	7.7	7.7	6.6/7.5	Reported
MW-13	UA	Compliance	09/11/2024	A7D	pH (field)	SU	7.5	7.5	6.6/7.5	No Exceedance
MW-13	UA	Compliance	03/27/2024	A7	Sulfate, total	mg/L	42.0	42.0	85.2	No Exceedance
MW-13	UA	Compliance	09/11/2024	A7D	Sulfate, total	mg/L	44.6	44.6	85.2	No Exceedance
MW-13	UA	Compliance	03/27/2024	A7	Total Dissolved Solids	mg/L	214	214	654	No Exceedance
MW-13	UA	Compliance	09/11/2024	A7D	Total Dissolved Solids	mg/L	229	229	654	No Exceedance
MW-14	UA	Compliance	03/28/2024	A7	Boron, total	mg/L	0.0604	0.0604	0.137	No Exceedance
MW-14	UA	Compliance	09/11/2024	A7D	Boron, total	mg/L	0.0580	0.0580	0.137	No Exceedance
MW-14	UA	Compliance	03/28/2024	A7	Calcium, total	mg/L	42.5	42.5	154	No Exceedance
MW-14	UA	Compliance	09/11/2024	A7D	Calcium, total	mg/L	41.7	41.7	154	No Exceedance
MW-14	UA	Compliance	03/28/2024	A7	Chloride, total	mg/L	25.8	25.8	80.2	No Exceedance
MW-14	UA	Compliance	09/11/2024	A7D	Chloride, total	mg/L	29.4	29.4	80.2	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
MW-14	UA	Compliance	03/28/2024	A7	Fluoride, total	mg/L	0.0858 J	0.15	0.310	No Exceedance
MW-14	UA	Compliance	09/11/2024	A7D	Fluoride, total	mg/L	0.112 J	0.15	0.310	No Exceedance
MW-14	UA	Compliance	03/28/2024	A7	pH (field)	SU	7.8	7.8	6.6/7.5	Reported
MW-14	UA	Compliance	09/11/2024	A7D	pH (field)	SU	7.6	7.6	6.6/7.5	Reported
MW-14	UA	Compliance	03/28/2024	A7	Sulfate, total	mg/L	48.6	48.6	85.2	No Exceedance
MW-14	UA	Compliance	09/11/2024	A7D	Sulfate, total	mg/L	48.2	48.2	85.2	No Exceedance
MW-14	UA	Compliance	03/28/2024	A7	Total Dissolved Solids	mg/L	230	230	654	No Exceedance
MW-14	UA	Compliance	09/11/2024	A7D	Total Dissolved Solids	mg/L	247	247	654	No Exceedance
MW-15	UA	Compliance	03/26/2024	A7	Boron, total	mg/L	0.504	0.504	0.137	Reported
MW-15	UA	Compliance	09/10/2024	A7D	Boron, total	mg/L	0.472	0.472	0.137	Reported
MW-15	UA	Compliance	03/26/2024	A7	Calcium, total	mg/L	118	118	154	No Exceedance
MW-15	UA	Compliance	09/10/2024	A7D	Calcium, total	mg/L	117	117	154	No Exceedance
MW-15	UA	Compliance	03/26/2024	A7	Chloride, total	mg/L	195	195	80.2	Reported
MW-15	UA	Compliance	09/10/2024	A7D	Chloride, total	mg/L	219	219	80.2	Reported
MW-15	UA	Compliance	03/26/2024	A7	Fluoride, total	mg/L	0.106 J	0.15	0.310	No Exceedance
MW-15	UA	Compliance	09/10/2024	A7D	Fluoride, total	mg/L	0.229	0.229	0.310	No Exceedance
MW-15	UA	Compliance	03/26/2024	A7	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
MW-15	UA	Compliance	09/10/2024	A7D	pH (field)	SU	7.0	7.0	6.6/7.5	No Exceedance
MW-15	UA	Compliance	03/26/2024	A7	Sulfate, total	mg/L	8.93	8.93	85.2	No Exceedance
MW-15	UA	Compliance	09/10/2024	A7D	Sulfate, total	mg/L	5.65	5.65	85.2	No Exceedance
MW-15	UA	Compliance	03/26/2024	A7	Total Dissolved Solids	mg/L	681	681	654	Reported
MW-15	UA	Compliance	09/10/2024	A7D	Total Dissolved Solids	mg/L	686	686	654	Reported
MW-16	UA	Compliance	03/26/2024	A7	Boron, total	mg/L	0.0603	0.0603	0.137	No Exceedance
MW-16	UA	Compliance	09/10/2024	A7D	Boron, total	mg/L	0.0574	0.0574	0.137	No Exceedance
MW-16	UA	Compliance	03/26/2024	A7	Calcium, total	mg/L	186	186	154	Reported
MW-16	UA	Compliance	09/10/2024	A7D	Calcium, total	mg/L	176	176	154	Reported
MW-16	UA	Compliance	03/26/2024	A7	Chloride, total	mg/L	103	103	80.2	Reported
MW-16	UA	Compliance	09/10/2024	A7D	Chloride, total	mg/L	105	105	80.2	Reported
MW-16	UA	Compliance	03/26/2024	A7	Fluoride, total	mg/L	0.064 U	0.15	0.310	No Exceedance
MW-16	UA	Compliance	09/10/2024	A7D	Fluoride, total	mg/L	0.114 J	0.15	0.310	No Exceedance
MW-16	UA	Compliance	03/26/2024	A7	pH (field)	SU	6.8	6.8	6.6/7.5	No Exceedance
MW-16	UA	Compliance	09/10/2024	A7D	pH (field)	SU	6.7	6.7	6.6/7.5	No Exceedance
MW-16	UA	Compliance	03/26/2024	A7	Sulfate, total	mg/L	182	182	85.2	Reported
MW-16	UA	Compliance	09/10/2024	A7D	Sulfate, total	mg/L	199	199	85.2	Reported
MW-16	UA	Compliance	03/26/2024	A7	Total Dissolved Solids	mg/L	812	812	654	Reported
MW-16	UA	Compliance	09/10/2024	A7D	Total Dissolved Solids	mg/L	900	900	654	Reported
MW-4A	UA	Compliance	03/26/2024	A7	Boron, total	mg/L	7.63	--	0.137	--
MW-4A	UA	Compliance	09/10/2024	A7D	Boron, total	mg/L	7.47	--	0.137	--
MW-4A	UA	Compliance	03/26/2024	A7	Calcium, total	mg/L	184	--	154	--
MW-4A	UA	Compliance	09/10/2024	A7D	Calcium, total	mg/L	196	--	154	--
MW-4A	UA	Compliance	03/26/2024	A7	Chloride, total	mg/L	192	--	80.2	--
MW-4A	UA	Compliance	09/10/2024	A7D	Chloride, total	mg/L	351	--	80.2	--
MW-4A	UA	Compliance	03/26/2024	A7	Fluoride, total	mg/L	0.219	--	0.310	--
MW-4A	UA	Compliance	09/10/2024	A7D	Fluoride, total	mg/L	0.38 U	--	0.310	--
MW-4A	UA	Compliance	03/26/2024	A7	pH (field)	SU	7.0	--	6.6/7.5	--
MW-4A	UA	Compliance	09/10/2024	A7D	pH (field)	SU	6.9	--	6.6/7.5	--

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
MW-4A	UA	Compliance	03/26/2024	A7	Sulfate, total	mg/L	470	--	85.2	--
MW-4A	UA	Compliance	09/10/2024	A7D	Sulfate, total	mg/L	812	--	85.2	--
MW-4A	UA	Compliance	03/26/2024	A7	Total Dissolved Solids	mg/L	1,260	--	654	--
MW-4A	UA	Compliance	09/10/2024	A7D	Total Dissolved Solids	mg/L	1,360	--	654	--

Notes:
-- = not applicable
Comparison Value is different from the Result when the Result is below the Reporting Limit (RL). The Result will not be used in statistical calculations due to the inherent uncertainty in results that are below the RL. Half of the RL will be substituted for these data. See the *Multi-Site Statistical Analysis Plan* (Ramboll, 2022a) for more information.
Event IDs:
A7 = Quarter 1, 2024 Corrective Action Monitoring sampling event
A7D = Quarter 3, 2024 Corrective Action Monitoring sampling event
HSU = hydrostratigraphic unit:
UA = Uppermost Aquifer
ID = identification
mg/L = milligrams per liter
Result Code (if applicable):
NR[1] = Parameter not analyzed.
NS[1] = Well has been, or will be, abandoned; therefore, a sample was not collected.
NS[2] = Well either needs or was undergoing maintenance; therefore, a sample was not collected.
NS[3] = The location was not accessible; therefore, a sample was not collected.
NS[4] = The location could not be found; therefore, a sample was not collected.
NS[5] = The location was damaged; therefore, a sample was not collected.
NS[6] = Sampling pump could not yield a sample.
NS[7] = Well was either dry or purged dry and did not recover sufficiently to yield adequate volume for a sample.
NS[8] = A sample was not collected.
PM[1] = Parameter not analyzed as the well purged dry during sample collection and did not sufficiently recover to yield adequate sample volume for analysis.
Result qualifiers as defined in the United States Environmental Protection Agency's *National Functional Guidelines for Inorganic Superfund Methods Data Review*, EPA 542-R-20-006. November 2020.:
J- = The result is an estimated quantity, but the result may be biased low.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, but the result may be biased high.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.
Statistically Significant Increase (SSI) Type:
No Exceedance: No exceedance of the background.
Reported: An exceedance in the parent event was observed and reported.
SU = Standard Units

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TABLE 3
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	Well Type	Date	Event ID	Antimony, total (mg/L)	Arsenic, total (mg/L)	Barium, total (mg/L)	Beryllium, total (mg/L)	Cadmium, total (mg/L)	Chromium, total (mg/L)	Cobalt, total (mg/L)	Fluoride, total (mg/L)	Lead, total (mg/L)	Lithium, total (mg/L)	Mercury, total (mg/L)	Molybdenum, total (mg/L)	Radium 226 + 228 (pCi/L)	Selenium, total (mg/L)	Thallium, total (mg/L)
MW-7	B	03/27/2024	A7	0.004 UJ	0.00018 U	0.0935	0.00019 U	0.00015 U	0.00124 U	0.0000596 U	0.064 U	0.000849 U	0.00410	0.0001 U	0.000833 J	0.585	0.000332 J	0.000121 U
MW-7	B	09/09/2024	A7D	0.00103 U	0.00018 U	0.0922	0.00019 U	0.00015 U	0.00124 U	0.0000596 U	0.136 J	0.000849 U	0.00420	0.0001 U	0.000844 J	1.42	0.0003 U	0.000121 U
MW-17	B	03/27/2024	A7	0.004 UJ	0.00028 J	0.0539	0.00019 U	0.00015 U	0.00124 U	0.00176 J	0.197 J	0.000849 U	0.0101	0.0001 U	0.00336 J	0.446	0.0003 U	0.000121 U
MW-17	B	09/10/2024	A7D	0.00103 U	0.000227 J	0.0528	0.00019 U	0.00015 U	0.00124 U	0.00166 J	0.170	0.000849 U	0.0104	0.0001 U	0.00312 J	0.716	0.0003 U	0.000121 U
MW-19	B	03/25/2024	A7	0.00103 U	0.000255 J	0.124	0.00019 U	0.00015 U	0.00124 U	0.000758 J	0.0755 J	0.000849 U	0.00624	0.0001 U	0.00248 J	0.244	0.0003 U	0.000121 U
MW-19	B	09/12/2024	A7D	0.00103 U	0.000183 J	0.133	0.00019 U	0.00015 U	0.00124 U	0.000561 J	0.0784 J	0.000849 U	0.00659	0.0001 U	0.00229 J	0.988	0.0003 U	0.000121 U
4A	C	03/26/2024	A7	0.00103 U	0.00105 J	0.0661	0.00019 U	0.000273 J	0.00363	0.00665	0.32 U	0.00129 J	0.00856	0.0001 U	0.0156	0.692	0.0003 U	0.000121 U
4A	C	--	A7D	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]
MW-1	C	03/26/2024	A7	0.00103 U	0.000371 J	0.0431	0.00019 U	0.00015 U	0.00124 U	0.0000596 U	0.289	0.000849 U	0.0328	0.0001 U	0.0913	0.888	0.0003 U	0.000206 J
MW-1	C	09/10/2024	A7D	0.00103 U	0.000212 J	0.0552	0.00019 U	0.000262 J	0.00124 U	0.0000845 J	0.383	0.000849 U	0.0346	0.0001 U	0.0815	0.378	0.0003 U	0.000245 J
MW-2	C	03/28/2024	A7	0.00103 U	0.0366	0.383	0.00019 U	0.00015 U	0.00124 U	0.000464 J	0.0783 J	0.000849 U	0.00151 J	0.0001 U	0.00235 J	1.22	0.0003 U	0.000121 U
MW-2	C	09/10/2024	A7D	0.00103 U	0.0405	0.374	0.00019 U	0.00015 U	0.00124 U	0.000375 J	0.107 J	0.000849 U	0.00109 J	0.0001 U	0.0025 J	0.544	0.0003 U	0.000121 U
MW-3A	C	03/28/2024	A7	0.00103 U	0.00997	0.129	0.00019 U	0.00015 U	0.00124 U	0.0000596 U	0.089 J	0.000849 U	0.00184 J	0.0001 U	0.000906 J	0.421	0.0003 U	0.000121 U
MW-3A	C	09/11/2024	A7D	0.00103 U	0.00822	0.118	0.00019 U	0.00015 U	0.00124 U	0.0000596 U	0.126 J	0.000938 J	0.00123 J	0.0001 U	0.000829 J	0.184	0.0003 U	0.000121 U
MW-4	C	03/28/2024	A7	0.00103 U	0.00124 J	0.0195	0.00019 U	0.00105	0.00124 U	0.0166	0.0655 J	0.000937 J	0.00532	0.0001 U	0.000594 J	0.605	0.0003 U	0.000121 U
MW-4	C	09/11/2024	A7D	0.00103 U	0.00116 J	0.0126	0.00019 U	0.000466 J	0.00124 U	0.00974	0.38 U	0.000849 U	0.00432	0.0001 U	0.00106 J	0.997	0.0003 U	0.000121 U
MW-5	C	03/26/2024	A7	0.00103 U	0.00055 J	0.0580	0.00019 U	0.00015 U	0.00124 U	0.000337 J	0.0917 J	0.000849 U	0.00945	0.0001 U	0.0354	0.481	0.0003 U	0.000134 J
MW-5	C	09/12/2024	A7D	0.00103 U	0.000445 J	0.0516	0.00019 U	0.000159 J	0.00124 U	0.000461 J	0.38 U	0.000849 U	0.0101	0.0001 U	0.0604	1.07	0.0003 U	0.000137 J
MW-6	C	03/26/2024	A7	0.00103 U	0.0137	0.398	0.00019 U	0.00015 U	0.00124 U	0.000978 J	0.653	0.000849 U	0.00711	0.0001 U	0.175	0.794	0.0003 U	0.000121 U
MW-6	C	09/12/2024	A7D	0.00103 U	0.0139	1.10	0.00019 U	0.00015 U	0.00124 U	0.000829 J	0.584	0.000849 U	0.00898	0.0001 U	0.152	1.12	0.0003 U	0.000121 U
MW-8	C	03/27/2024	A7	0.00103 U	0.000236 J	0.0482	0.00019 U	0.00015 U	0.00124 U	0.0000916 J	0.114 J	0.000849 U	0.0166	0.0001 U	0.00762	1.29	0.00415	0.000121 U
MW-8	C	09/11/2024	A7D	0.00103 U	0.000362 J	0.0360	0.00019 U	0.00015 U	0.00124 U	0.0000596 U	0.237	0.000849 U	0.0142	0.0001 U	0.00921	0.690	0.0003 U	0.000121 U
MW-9	C	03/27/2024	A7	0.00103 U	0.000385 J	0.0834	0.00019 U	0.00015 U	0.00124 U	0.000177 J	0.294	0.000849 U	0.0125	0.0001 U	0.0584	0.527	0.0003 U	0.000141 J
MW-9	C	09/11/2024	A7D	0.00103 U	0.000298 J	0.0867	0.00019 U	0.00015 U	0.00124 U	0.000174 J	0.324	0.000849 U	0.0144	0.0001 U	0.0618	1.39	0.0003 U	0.000121 U
MW-10	C	03/28/2024	A7	0.00103 U	0.0140	0.158	0.00019 U	0.00015 U	0.00124 U	0.000066 J	0.132 J	0.000849 U	0.00222	0.0001 U	0.00465 J	1.02	0.0003 U	0.000121 U
MW-10	C	09/12/2024	A7D	0.00103 U	0.0265	0.154	0.00019 U	0.000194 J	0.00124 U	0.0000596 U	0.178	0.000849 U	0.00191 J	0.0001 U	0.00471 J	0.967	0.0003 U	0.000121 U
MW-11	C	03/28/2024	A7	0.00103 U	0.00801	0.215	0.00019 U	0.00015 U	0.00124 U	0.000612 J	0.112 J	0.000849 U	0.00294	0.0001 U	0.00427 J	1.03	0.0003 U	0.000121 U

TABLE 3
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	Well Type	Date	Event ID	Antimony, total (mg/L)	Arsenic, total (mg/L)	Barium, total (mg/L)	Beryllium, total (mg/L)	Cadmium, total (mg/L)	Chromium, total (mg/L)	Cobalt, total (mg/L)	Fluoride, total (mg/L)	Lead, total (mg/L)	Lithium, total (mg/L)	Mercury, total (mg/L)	Molybdenum, total (mg/L)	Radium 226 + 228 (pCi/L)	Selenium, total (mg/L)	Thallium, total (mg/L)
MW-11	C	09/11/2024	A7D	0.00103 U	0.00899	0.272	0.00019 U	0.00015 U	0.00124 U	0.000688 J	0.133 J	0.000849 U	0.00338	0.0001 U	0.00364 J	1.73	0.0003 U	0.000121 U
MW-12	C	03/27/2024	A7	0.00103 U	0.000201 J	0.0164	0.00019 U	0.000991 J	0.00124 U	0.00274	0.064 U	0.000849 U	0.00294	0.000429	0.000348 U	0.0483	0.0003 U	0.000121 U
MW-12	C	09/12/2024	A7D	0.00103 U	0.000211 J	0.0151	0.00019 U	0.00100	0.00124 U	0.00245	0.126 J	0.000849 U	0.00336	0.000252	0.000671 J	0.449	0.0003 U	0.000121 U
MW-13	C	03/27/2024	A7	0.00103 U	0.00834	0.137	0.00019 U	0.00015 U	0.00124 U	0.000271 J	0.146 J	0.000849 U	0.00453	0.0001 U	0.0122	0.320	0.0003 U	0.000121 U
MW-13	C	09/11/2024	A7D	0.00103 U	0.0106	0.144	0.00019 U	0.00015 U	0.00124 U	0.000281 J	0.126 J	0.000849 U	0.00500	0.0001 U	0.0123	1.00	0.0003 U	0.000121 U
MW-14	C	03/28/2024	A7	0.00103 U	0.000607 J	0.0404	0.00019 U	0.00015 U	0.00124 U	0.000506 J	0.0858 J	0.000849 U	0.00374	0.0001 U	0.00619	1.28	0.0003 U	0.000121 U
MW-14	C	09/11/2024	A7D	0.00103 U	0.000548 J	0.0439	0.00019 U	0.00015 U	0.00124 U	0.000509 J	0.112 J	0.000849 U	0.00401	0.0001 U	0.00587	1.24	0.0003 U	0.000121 U
MW-15	C	03/26/2024	A7	0.00103 U	0.000596 J	0.0818	0.00019 U	0.00015 U	0.00124 U	0.00192 J	0.106 J	0.000849 U	0.00681	0.0001 U	0.0216	0.159	0.0003 U	0.000121 U
MW-15	C	09/10/2024	A7D	0.00103 U	0.000633 J	0.0831	0.00019 U	0.00015 U	0.00124 U	0.00200 J	0.229	0.000849 U	0.00781	0.0001 U	0.0224	0.678	0.0003 U	0.000121 U
MW-16	C	03/26/2024	A7	0.00103 U	0.000226 J	0.0672	0.00019 U	0.00015 U	0.00124 U	0.000479 J	0.064 U	0.000849 U	0.0106	0.0001 U	0.000491 J	0.669	0.0003 U	0.000121 U
MW-16	C	09/10/2024	A7D	0.00103 U	0.00018 U	0.0762	0.00019 U	0.00015 U	0.00124 U	0.000453 J	0.114 J	0.000849 U	0.0123	0.0001 U	0.000389 J	0.848	0.0003 U	0.000121 U
MW-4A	C	03/26/2024	A7	0.00103 U	0.000366 J	0.0723	0.00019 U	0.000245 J	0.00124 U	0.00629	0.219	0.000849 U	0.00830	0.0001 U	0.0167	1.15	0.0003 U	0.000121 U
MW-4A	C	09/10/2024	A7D	0.00103 U	0.000208 J	0.0573	0.00019 U	0.00028 J	0.00124 U	0.00424	0.38 U	0.000849 U	0.00876	0.0001 U	0.0120	0.792	0.0003 U	0.000121 U

TABLE 3
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Notes:
-- = not applicable
Data qualifiers as defined in the United States Environmental Protection Agency's *National Functional Guidelines for Inorganic Superfund Methods Data Review* (2020):
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.
UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
Event IDs:
A7 = Quarter 1, 2024 Corrective Action Monitoring sampling event
A7D = Quarter 3, 2024 Corrective Action Monitoring sampling event
ID = identification
mg/L = milligrams per liter
pCi/L = picoCuries per liter
Result Code (if applicable):
NR[1] = Parameter not analyzed.
NS[1] = Well has been, or will be, abandoned; therefore, a sample was not collected.
NS[2] = Well either needs or was undergoing maintenance; therefore, a sample was not collected.
NS[3] = The location was not accessible; therefore, a sample was not collected.
NS[4] = The location could not be found; therefore, a sample was not collected.
NS[5] = The location was damaged; therefore, a sample was not collected.
NS[6] = Sampling pump could not yield a sample.
NS[7] = Well was either dry or purged dry and did not recover sufficiently to yield adequate volume for a sample.
NS[8] = A sample was not collected.
PM[1] = Parameter not analyzed as the well purged dry during sample collection and did not sufficiently recover to yield adequate sample volume for analysis.
Well Type:
B = Background
C = Compliance

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TABLE 4
STATISTICAL BACKGROUND VALUES
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Parameter	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Background Value (LPL/UPL)
Boron (mg/L)	09/14/2020 - 09/21/2022	33	0	Parametric UPL	0.137
Calcium (mg/L)	09/14/2020 - 09/21/2022	33	0	Parametric UPL	154
Chloride (mg/L)	09/14/2020 - 09/21/2022	32	0	Non-Parametric UPL	80.2
Fluoride (mg/L)	09/14/2020 - 09/21/2022	33	64	Non-Parametric UPL	0.310
pH (field) (SU)	09/14/2020 - 09/21/2022	33	0	Parametric LPL/UPL	6.6/7.5
Sulfate (mg/L)	09/14/2020 - 09/21/2022	33	0	Non-Parametric UPL	85.2
Total Dissolved Solids (mg/L)	09/14/2020 - 09/21/2022	32	0	Non-Parametric UPL	654

Notes:
LPL = lower prediction limit (applicable for pH only)
mg/L = milligrams per liter
SU = standard units
UPL = upper prediction limit

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TABLE 5
GROUNDWATER PROTECTION STANDARDS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Parameter	Background					MCL/HBL	Groundwater Protection Standard*	Groundwater Protection Standard Source
	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Value			
Antimony (mg/L)	09/15/2020 - 09/21/2022	32	100	All ND - Last Reporting Limit	0.004	0.006	0.006	MCL/HBL
Arsenic (mg/L)	09/14/2020 - 09/21/2022	33	79	Non-parametric UTL	0.00828	0.010	0.010	MCL/HBL
Barium (mg/L)	09/14/2020 - 09/21/2022	33	0	Non-parametric UTL	0.203	2.0	2.0	MCL/HBL
Beryllium (mg/L)	09/14/2020 - 09/21/2022	33	100	All ND - Last Reporting Limit	0.002	0.004	0.004	MCL/HBL
Cadmium (mg/L)	09/14/2020 - 09/21/2022	33	100	All ND - Last Reporting Limit	0.001	0.005	0.005	MCL/HBL
Chromium (mg/L)	09/14/2020 - 09/21/2022	33	94	Non-parametric UTL	0.00207	0.1	0.1	MCL/HBL
Cobalt (mg/L)	09/14/2020 - 09/21/2022	32	78	Non-parametric UTL	0.00435	0.006	0.006	MCL/HBL
Fluoride (mg/L)	09/14/2020 - 09/21/2022	33	64	Non-parametric UTL	0.310	4.0	4.0	MCL/HBL
Lead (mg/L)	09/14/2020 - 09/21/2022	33	100	All ND - Last Reporting Limit	0.002	0.015	0.015	MCL/HBL
Lithium (mg/L)	09/14/2020 - 09/21/2022	33	0	Parametric UTL	0.0119	0.04	0.04	MCL/HBL
Mercury (mg/L)	09/14/2020 - 09/21/2022	33	100	All ND - Last Reporting Limit	0.0002	0.002	0.002	MCL/HBL
Molybdenum (mg/L)	09/14/2020 - 09/21/2022	33	91	Non-parametric UTL	0.0125	0.1	0.1	MCL/HBL
Radium 226 + Radium 228 (pCi/L)	09/14/2020 - 09/21/2022	28	0	Parametric UTL (log-transformed)	2.88	5	5	MCL/HBL
Selenium (mg/L)	09/14/2020 - 09/21/2022	33	91	Non-parametric UTL	0.00459	0.05	0.05	MCL/HBL
Thallium (mg/L)	09/14/2020 - 09/21/2022	33	100	All ND - Last Reporting Limit	0.002	0.002	0.002	MCL/HBL

Notes:
* Groundwater Protection Standard is the higher of the MCL/HBL or background.
MCL/HBL = maximum contaminant level/health-based level
mg/L = milligrams per liter
ND = non-detect
pCi/L = picoCuries per liter
UTL = upper tolerance limit

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TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
4A	UA	A7	Antimony, total	mg/L	09/15/20 - 03/26/24	13	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
4A	UA	A7	Arsenic, total	mg/L	09/15/20 - 03/26/24	13	46	CI around median	0.00200	0.010	MCL/HBL	No Exceedance
4A	UA	A7	Barium, total	mg/L	09/15/20 - 03/26/24	13	0	CB around T-S line	-1.18	2.0	MCL/HBL	No Exceedance
4A	UA	A7	Beryllium, total	mg/L	09/15/20 - 03/26/24	13	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
4A	UA	A7	Cadmium, total	mg/L	09/15/20 - 03/26/24	13	92	CI around median	0.00100	0.005	MCL/HBL	No Exceedance
4A	UA	A7	Chromium, total	mg/L	09/15/20 - 03/26/24	13	69	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
4A	UA	A7	Cobalt, total	mg/L	06/12/20 - 03/26/24	14	14	CI around mean	0.00600	0.006	MCL/HBL	No Exceedance
4A	UA	A7	Fluoride, total	mg/L	09/15/20 - 03/26/24	13	38	CI around median	0.150	4.0	MCL/HBL	No Exceedance
4A	UA	A7	Lead, total	mg/L	09/15/20 - 03/26/24	13	53	CI around median	0.00200	0.015	MCL/HBL	No Exceedance
4A	UA	A7	Lithium, total	mg/L	09/15/20 - 03/26/24	13	7	CI around geomean	0.00760	0.04	MCL/HBL	No Exceedance
4A	UA	A7	Mercury, total	mg/L	09/15/20 - 03/26/24	13	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
4A	UA	A7	Molybdenum, total	mg/L	09/15/20 - 03/26/24	13	0	CI around median	0.0140	0.1	MCL/HBL	No Exceedance
4A	UA	A7	Radium 226 + Radium 228, total	pCi/L	09/15/20 - 03/26/24	10	0	CI around mean	0.738	5	MCL/HBL	No Exceedance
4A	UA	A7	Selenium, total	mg/L	09/15/20 - 03/26/24	13	92	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
4A	UA	A7	Thallium, total	mg/L	09/15/20 - 03/26/24	13	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-1	UA	A7	Antimony, total	mg/L	12/08/15 - 03/26/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-1	UA	A7D	Antimony, total	mg/L	12/08/15 - 09/10/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-1	UA	A7	Arsenic, total	mg/L	12/08/15 - 03/26/24	21	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-1	UA	A7D	Arsenic, total	mg/L	12/08/15 - 09/10/24	22	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-1	UA	A7	Barium, total	mg/L	12/08/15 - 03/26/24	21	4	CI around median	0.0394	2.0	MCL/HBL	No Exceedance
MW-1	UA	A7D	Barium, total	mg/L	12/08/15 - 09/10/24	22	4	CI around median	0.0394	2.0	MCL/HBL	No Exceedance
MW-1	UA	A7	Beryllium, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-1	UA	A7D	Beryllium, total	mg/L	12/08/15 - 09/10/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-1	UA	A7	Cadmium, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-1	UA	A7D	Cadmium, total	mg/L	12/08/15 - 09/10/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-1	UA	A7	Chromium, total	mg/L	12/08/15 - 03/26/24	21	95	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-1	UA	A7D	Chromium, total	mg/L	12/08/15 - 09/10/24	22	95	CI around median	0.00200	0.1	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-1	UA	A7	Cobalt, total	mg/L	12/08/15 - 03/26/24	22	100	All ND - Last	0.002	0.006	MCL/HBL	No Exceedance
MW-1	UA	A7D	Cobalt, total	mg/L	12/08/15 - 09/10/24	23	100	All ND - Last	0.002	0.006	MCL/HBL	No Exceedance
MW-1	UA	A7	Fluoride, total	mg/L	12/08/15 - 03/26/24	22	50	CI around median	0.373	4.0	MCL/HBL	No Exceedance
MW-1	UA	A7D	Fluoride, total	mg/L	12/08/15 - 09/10/24	23	47	CI around median	0.373	4.0	MCL/HBL	No Exceedance
MW-1	UA	A7	Lead, total	mg/L	12/08/15 - 03/26/24	20	95	CB around T-S line	0.00100	0.015	MCL/HBL	No Exceedance
MW-1	UA	A7D	Lead, total	mg/L	12/08/15 - 09/10/24	21	95	CB around T-S line	0.00166	0.015	MCL/HBL	No Exceedance
MW-1	UA	A7	Lithium, total	mg/L	12/08/15 - 03/26/24	20	25	CB around linear reg	0.0130	0.04	MCL/HBL	No Exceedance
MW-1	UA	A7D	Lithium, total	mg/L	12/08/15 - 09/10/24	21	23	CB around linear reg	0.0138	0.04	MCL/HBL	No Exceedance
MW-1	UA	A7	Mercury, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-1	UA	A7D	Mercury, total	mg/L	12/08/15 - 09/10/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-1	UA	A7	Molybdenum, total	mg/L	12/08/15 - 03/26/24	22	0	CI around geomean	0.0333	0.1	MCL/HBL	No Exceedance
MW-1	UA	A7D	Molybdenum, total	mg/L	12/08/15 - 09/10/24	23	0	CI around geomean	0.0343	0.1	MCL/HBL	No Exceedance
MW-1	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/08/15 - 03/26/24	21	0	CI around geomean	0.169	5	MCL/HBL	No Exceedance
MW-1	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/08/15 - 09/10/24	22	0	CI around geomean	0.175	5	MCL/HBL	No Exceedance
MW-1	UA	A7	Selenium, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-1	UA	A7D	Selenium, total	mg/L	12/08/15 - 09/10/24	21	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-1	UA	A7	Thallium, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-1	UA	A7D	Thallium, total	mg/L	12/08/15 - 09/10/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-2	UA	A7	Antimony, total	mg/L	12/09/15 - 03/28/24	18	94	CB around T-S line	0.00200	0.006	MCL/HBL	No Exceedance
MW-2	UA	A7D	Antimony, total	mg/L	12/09/15 - 09/10/24	19	94	CB around T-S line	0.00200	0.006	MCL/HBL	No Exceedance
MW-2	UA	A7	Arsenic, total	mg/L	12/09/15 - 03/28/24	21	0	CI around mean	0.0277	0.010	MCL/HBL	Reported
MW-2	UA	A7D	Arsenic, total	mg/L	12/09/15 - 09/10/24	22	0	CI around mean	0.0281	0.010	MCL/HBL	Reported
MW-2	UA	A7	Barium, total	mg/L	12/09/15 - 03/28/24	21	0	CI around mean	0.420	2.0	MCL/HBL	No Exceedance
MW-2	UA	A7D	Barium, total	mg/L	12/09/15 - 09/10/24	22	0	CI around mean	0.417	2.0	MCL/HBL	No Exceedance
MW-2	UA	A7	Beryllium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-2	UA	A7D	Beryllium, total	mg/L	12/09/15 - 09/10/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-2	UA	A7	Cadmium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-2	UA	A7D	Cadmium, total	mg/L	12/09/15 - 09/10/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-2	UA	A7	Chromium, total	mg/L	12/09/15 - 03/28/24	21	76	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-2	UA	A7D	Chromium, total	mg/L	12/09/15 - 09/10/24	22	77	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-2	UA	A7	Cobalt, total	mg/L	12/09/15 - 03/28/24	20	70	CI around median	0.000626	0.006	MCL/HBL	No Exceedance
MW-2	UA	A7D	Cobalt, total	mg/L	12/09/15 - 09/10/24	21	71	CI around median	0.000730	0.006	MCL/HBL	No Exceedance
MW-2	UA	A7	Fluoride, total	mg/L	12/09/15 - 03/28/24	22	90	CB around T-S line	-0.320	4.0	MCL/HBL	No Exceedance
MW-2	UA	A7D	Fluoride, total	mg/L	12/09/15 - 09/10/24	23	91	CB around T-S line	-0.432	4.0	MCL/HBL	No Exceedance
MW-2	UA	A7	Lead, total	mg/L	12/09/15 - 03/28/24	20	70	CI around median	0.00100	0.015	MCL/HBL	No Exceedance
MW-2	UA	A7D	Lead, total	mg/L	12/09/15 - 09/10/24	21	71	CI around median	0.00122	0.015	MCL/HBL	No Exceedance
MW-2	UA	A7	Lithium, total	mg/L	12/09/15 - 03/28/24	20	80	CB around T-S line	-0.0334	0.04	MCL/HBL	No Exceedance
MW-2	UA	A7D	Lithium, total	mg/L	12/09/15 - 09/10/24	21	80	CB around T-S line	-0.0357	0.04	MCL/HBL	No Exceedance
MW-2	UA	A7	Mercury, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-2	UA	A7D	Mercury, total	mg/L	12/09/15 - 09/10/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-2	UA	A7	Molybdenum, total	mg/L	12/09/15 - 03/28/24	21	95	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-2	UA	A7D	Molybdenum, total	mg/L	12/09/15 - 09/10/24	22	95	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-2	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 03/28/24	21	0	CI around mean	0.744	5	MCL/HBL	No Exceedance
MW-2	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 09/10/24	22	0	CI around mean	0.731	5	MCL/HBL	No Exceedance
MW-2	UA	A7	Selenium, total	mg/L	12/09/15 - 03/28/24	20	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-2	UA	A7D	Selenium, total	mg/L	12/09/15 - 09/10/24	21	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-2	UA	A7	Thallium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-2	UA	A7D	Thallium, total	mg/L	12/09/15 - 09/10/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-3A	UA	A7	Antimony, total	mg/L	12/09/15 - 03/28/24	18	94	CB around T-S line	0.00344	0.006	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Antimony, total	mg/L	12/09/15 - 09/11/24	19	94	CB around T-S line	0.00345	0.006	MCL/HBL	No Exceedance
MW-3A	UA	A7	Arsenic, total	mg/L	12/09/15 - 03/28/24	21	0	CI around geomean	0.00660	0.010	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Arsenic, total	mg/L	12/09/15 - 09/11/24	22	0	CI around geomean	0.00668	0.010	MCL/HBL	No Exceedance
MW-3A	UA	A7	Barium, total	mg/L	12/09/15 - 03/28/24	21	4	CI around mean	0.118	2.0	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Barium, total	mg/L	12/09/15 - 09/11/24	22	4	CI around mean	0.118	2.0	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-3A	UA	A7	Beryllium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Beryllium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-3A	UA	A7	Cadmium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Cadmium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-3A	UA	A7	Chromium, total	mg/L	12/09/15 - 03/28/24	21	80	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Chromium, total	mg/L	12/09/15 - 09/11/24	22	81	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-3A	UA	A7	Cobalt, total	mg/L	12/09/15 - 03/28/24	20	80	CB around T-S line	0.000554	0.006	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Cobalt, total	mg/L	12/09/15 - 09/11/24	21	80	CB around T-S line	0.00145	0.006	MCL/HBL	No Exceedance
MW-3A	UA	A7	Fluoride, total	mg/L	12/09/15 - 03/28/24	22	77	CB around T-S line	-0.284	4.0	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Fluoride, total	mg/L	12/09/15 - 09/11/24	23	78	CB around T-S line	-0.413	4.0	MCL/HBL	No Exceedance
MW-3A	UA	A7	Lead, total	mg/L	12/09/15 - 03/28/24	20	80	CB around T-S line	0.00141	0.015	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Lead, total	mg/L	12/09/15 - 09/11/24	21	80	CB around T-S line	0.00165	0.015	MCL/HBL	No Exceedance
MW-3A	UA	A7	Lithium, total	mg/L	12/09/15 - 03/28/24	20	85	CB around T-S line	-0.0364	0.04	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Lithium, total	mg/L	12/09/15 - 09/11/24	21	85	CB around T-S line	-0.0405	0.04	MCL/HBL	No Exceedance
MW-3A	UA	A7	Mercury, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Mercury, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-3A	UA	A7	Molybdenum, total	mg/L	12/09/15 - 03/28/24	21	95	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Molybdenum, total	mg/L	12/09/15 - 09/11/24	22	95	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-3A	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 03/28/24	21	0	CI around mean	0.459	5	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 09/11/24	22	0	CI around mean	0.440	5	MCL/HBL	No Exceedance
MW-3A	UA	A7	Selenium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Selenium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-3A	UA	A7	Thallium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-3A	UA	A7D	Thallium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-4	UA	A7	Antimony, total	mg/L	12/07/15 - 03/28/24	24	95	CB around T-S line	0.00400	0.006	MCL/HBL	No Exceedance
MW-4	UA	A7D	Antimony, total	mg/L	12/07/15 - 09/11/24	25	96	CB around T-S line	0.00388	0.006	MCL/HBL	No Exceedance
MW-4	UA	A7	Arsenic, total	mg/L	12/07/15 - 03/28/24	27	48	CI around median	0.00200	0.010	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-4	UA	A7D	Arsenic, total	mg/L	12/07/15 - 09/11/24	28	50	CI around median	0.00200	0.010	MCL/HBL	No Exceedance
MW-4	UA	A7	Barium, total	mg/L	12/07/15 - 03/28/24	27	14	CI around geomean	0.0164	2.0	MCL/HBL	No Exceedance
MW-4	UA	A7D	Barium, total	mg/L	12/07/15 - 09/11/24	28	14	CI around geomean	0.0162	2.0	MCL/HBL	No Exceedance
MW-4	UA	A7	Beryllium, total	mg/L	12/07/15 - 03/28/24	26	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-4	UA	A7D	Beryllium, total	mg/L	12/07/15 - 09/11/24	27	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-4	UA	A7	Cadmium, total	mg/L	12/07/15 - 03/28/24	26	69	CI around median	0.00100	0.005	MCL/HBL	No Exceedance
MW-4	UA	A7D	Cadmium, total	mg/L	12/07/15 - 09/11/24	27	70	CI around median	0.00100	0.005	MCL/HBL	No Exceedance
MW-4	UA	A7	Chromium, total	mg/L	12/07/15 - 03/28/24	26	65	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-4	UA	A7D	Chromium, total	mg/L	12/07/15 - 09/11/24	27	66	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-4	UA	A7	Cobalt, total	mg/L	12/07/15 - 03/28/24	28	0	CI around mean	0.00954	0.006	MCL/HBL	Reported
MW-4	UA	A7D	Cobalt, total	mg/L	12/07/15 - 09/11/24	29	0	CI around mean	0.00955	0.006	MCL/HBL	Reported
MW-4	UA	A7	Fluoride, total	mg/L	12/07/15 - 03/28/24	28	71	CB around T-S line	-0.368	4.0	MCL/HBL	No Exceedance
MW-4	UA	A7D	Fluoride, total	mg/L	12/07/15 - 09/11/24	29	72	CB around T-S line	-0.455	4.0	MCL/HBL	No Exceedance
MW-4	UA	A7	Lead, total	mg/L	12/07/15 - 03/28/24	26	73	CI around median	0.00131	0.015	MCL/HBL	No Exceedance
MW-4	UA	A7D	Lead, total	mg/L	12/07/15 - 09/11/24	27	74	CI around median	0.00131	0.015	MCL/HBL	No Exceedance
MW-4	UA	A7	Lithium, total	mg/L	12/07/15 - 03/28/24	26	30	CB around linear reg	-0.0217	0.04	MCL/HBL	No Exceedance
MW-4	UA	A7D	Lithium, total	mg/L	12/07/15 - 09/11/24	27	29	CB around linear reg	-0.0220	0.04	MCL/HBL	No Exceedance
MW-4	UA	A7	Mercury, total	mg/L	12/07/15 - 03/28/24	26	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-4	UA	A7D	Mercury, total	mg/L	12/07/15 - 09/11/24	27	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-4	UA	A7	Molybdenum, total	mg/L	12/07/15 - 03/28/24	28	96	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-4	UA	A7D	Molybdenum, total	mg/L	12/07/15 - 09/11/24	29	96	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-4	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/07/15 - 03/28/24	27	0	CI around median	0.369	5	MCL/HBL	No Exceedance
MW-4	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/07/15 - 09/11/24	28	0	CI around median	0.369	5	MCL/HBL	No Exceedance
MW-4	UA	A7	Selenium, total	mg/L	12/07/15 - 03/28/24	26	88	CB around T-S line	-0.0000440	0.05	MCL/HBL	No Exceedance
MW-4	UA	A7D	Selenium, total	mg/L	12/07/15 - 09/11/24	27	88	CB around T-S line	-0.0000183	0.05	MCL/HBL	No Exceedance
MW-4	UA	A7	Thallium, total	mg/L	12/07/15 - 03/28/24	26	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-4	UA	A7D	Thallium, total	mg/L	12/07/15 - 09/11/24	27	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-5	UA	A7	Antimony, total	mg/L	12/08/15 - 03/26/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-5	UA	A7D	Antimony, total	mg/L	12/08/15 - 09/12/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-5	UA	A7	Arsenic, total	mg/L	12/08/15 - 03/26/24	21	80	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-5	UA	A7D	Arsenic, total	mg/L	12/08/15 - 09/12/24	22	81	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-5	UA	A7	Barium, total	mg/L	12/08/15 - 03/26/24	21	4	CI around mean	0.0612	2.0	MCL/HBL	No Exceedance
MW-5	UA	A7D	Barium, total	mg/L	12/08/15 - 09/12/24	22	4	CI around mean	0.0605	2.0	MCL/HBL	No Exceedance
MW-5	UA	A7	Beryllium, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-5	UA	A7D	Beryllium, total	mg/L	12/08/15 - 09/12/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-5	UA	A7	Cadmium, total	mg/L	12/08/15 - 03/26/24	20	95	CI around median	0.00100	0.005	MCL/HBL	No Exceedance
MW-5	UA	A7D	Cadmium, total	mg/L	12/08/15 - 09/12/24	21	95	CI around median	0.00100	0.005	MCL/HBL	No Exceedance
MW-5	UA	A7	Chromium, total	mg/L	12/08/15 - 03/26/24	20	80	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-5	UA	A7D	Chromium, total	mg/L	12/08/15 - 09/12/24	21	80	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-5	UA	A7	Cobalt, total	mg/L	12/08/15 - 03/26/24	22	81	CB around T-S line	0.000500	0.006	MCL/HBL	No Exceedance
MW-5	UA	A7D	Cobalt, total	mg/L	12/08/15 - 09/12/24	23	82	CB around T-S line	0.000532	0.006	MCL/HBL	No Exceedance
MW-5	UA	A7	Fluoride, total	mg/L	12/08/15 - 03/26/24	22	90	CI around median	0.150	4.0	MCL/HBL	No Exceedance
MW-5	UA	A7D	Fluoride, total	mg/L	12/08/15 - 09/12/24	23	91	CI around median	0.150	4.0	MCL/HBL	No Exceedance
MW-5	UA	A7	Lead, total	mg/L	12/08/15 - 03/26/24	20	90	CB around T-S line	0.00121	0.015	MCL/HBL	No Exceedance
MW-5	UA	A7D	Lead, total	mg/L	12/08/15 - 09/12/24	21	90	CB around T-S line	0.00168	0.015	MCL/HBL	No Exceedance
MW-5	UA	A7	Lithium, total	mg/L	12/08/15 - 03/26/24	20	45	CI around median	0.00945	0.04	MCL/HBL	No Exceedance
MW-5	UA	A7D	Lithium, total	mg/L	12/08/15 - 09/12/24	21	42	CI around median	0.00982	0.04	MCL/HBL	No Exceedance
MW-5	UA	A7	Mercury, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-5	UA	A7D	Mercury, total	mg/L	12/08/15 - 09/12/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-5	UA	A7	Molybdenum, total	mg/L	12/08/15 - 03/26/24	22	13	CB around linear reg	0.0174	0.1	MCL/HBL	No Exceedance
MW-5	UA	A7D	Molybdenum, total	mg/L	12/08/15 - 09/12/24	23	13	CB around T-S line	0.00885	0.1	MCL/HBL	No Exceedance
MW-5	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/08/15 - 03/26/24	21	0	CI around median	0.211	5	MCL/HBL	No Exceedance
MW-5	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/08/15 - 09/12/24	22	0	CI around mean	0.291	5	MCL/HBL	No Exceedance
MW-5	UA	A7	Selenium, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-5	UA	A7D	Selenium, total	mg/L	12/08/15 - 09/12/24	21	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-5	UA	A7	Thallium, total	mg/L	12/08/15 - 03/26/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-5	UA	A7D	Thallium, total	mg/L	12/08/15 - 09/12/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-6	UA	A7	Antimony, total	mg/L	12/07/15 - 03/26/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-6	UA	A7D	Antimony, total	mg/L	12/07/15 - 09/12/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-6	UA	A7	Arsenic, total	mg/L	12/07/15 - 03/26/24	21	4	CB around linear reg	0.0148	0.010	MCL/HBL	Reported
MW-6	UA	A7D	Arsenic, total	mg/L	12/07/15 - 09/12/24	22	4	CB around linear reg	0.0148	0.010	MCL/HBL	Reported
MW-6	UA	A7	Barium, total	mg/L	12/07/15 - 03/26/24	21	0	CI around mean	0.311	2.0	MCL/HBL	No Exceedance
MW-6	UA	A7D	Barium, total	mg/L	12/07/15 - 09/12/24	22	0	CI around mean	0.321	2.0	MCL/HBL	No Exceedance
MW-6	UA	A7	Beryllium, total	mg/L	12/07/15 - 03/26/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-6	UA	A7D	Beryllium, total	mg/L	12/07/15 - 09/12/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-6	UA	A7	Cadmium, total	mg/L	12/07/15 - 03/26/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-6	UA	A7D	Cadmium, total	mg/L	12/07/15 - 09/12/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-6	UA	A7	Chromium, total	mg/L	12/07/15 - 03/26/24	20	80	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-6	UA	A7D	Chromium, total	mg/L	12/07/15 - 09/12/24	21	80	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-6	UA	A7	Cobalt, total	mg/L	12/07/15 - 03/26/24	22	9	CI around mean	0.00284	0.006	MCL/HBL	No Exceedance
MW-6	UA	A7D	Cobalt, total	mg/L	12/07/15 - 09/12/24	23	13	CI around mean	0.00272	0.006	MCL/HBL	No Exceedance
MW-6	UA	A7	Fluoride, total	mg/L	12/07/15 - 03/26/24	22	4	CB around T-S line	0.0441	4.0	MCL/HBL	No Exceedance
MW-6	UA	A7D	Fluoride, total	mg/L	12/07/15 - 09/12/24	23	4	CB around T-S line	-0.0108	4.0	MCL/HBL	No Exceedance
MW-6	UA	A7	Lead, total	mg/L	12/07/15 - 03/26/24	20	90	CB around T-S line	0.00133	0.015	MCL/HBL	No Exceedance
MW-6	UA	A7D	Lead, total	mg/L	12/07/15 - 09/12/24	21	90	CB around T-S line	0.00166	0.015	MCL/HBL	No Exceedance
MW-6	UA	A7	Lithium, total	mg/L	12/07/15 - 03/26/24	20	40	CB around linear reg	-0.0160	0.04	MCL/HBL	No Exceedance
MW-6	UA	A7D	Lithium, total	mg/L	12/07/15 - 09/12/24	21	38	CB around linear reg	-0.0155	0.04	MCL/HBL	No Exceedance
MW-6	UA	A7	Mercury, total	mg/L	12/07/15 - 03/26/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-6	UA	A7D	Mercury, total	mg/L	12/07/15 - 09/12/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-6	UA	A7	Molybdenum, total	mg/L	12/07/15 - 03/26/24	22	0	CB around linear reg	0.0171	0.1	MCL/HBL	No Exceedance
MW-6	UA	A7D	Molybdenum, total	mg/L	12/07/15 - 09/12/24	23	0	CB around linear reg	0.00857	0.1	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-6	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/07/15 - 03/26/24	21	0	CI around mean	0.428	5	MCL/HBL	No Exceedance
MW-6	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/07/15 - 09/12/24	22	0	CI around mean	0.450	5	MCL/HBL	No Exceedance
MW-6	UA	A7	Selenium, total	mg/L	12/07/15 - 03/26/24	20	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-6	UA	A7D	Selenium, total	mg/L	12/07/15 - 09/12/24	21	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-6	UA	A7	Thallium, total	mg/L	12/07/15 - 03/26/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-6	UA	A7D	Thallium, total	mg/L	12/07/15 - 09/12/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-8	UA	A7	Antimony, total	mg/L	12/09/15 - 03/27/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-8	UA	A7D	Antimony, total	mg/L	12/09/15 - 09/11/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-8	UA	A7	Arsenic, total	mg/L	12/09/15 - 03/27/24	21	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-8	UA	A7D	Arsenic, total	mg/L	12/09/15 - 09/11/24	22	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-8	UA	A7	Barium, total	mg/L	12/09/15 - 03/27/24	21	4	CI around median	0.0350	2.0	MCL/HBL	No Exceedance
MW-8	UA	A7D	Barium, total	mg/L	12/09/15 - 09/11/24	22	4	CI around median	0.0350	2.0	MCL/HBL	No Exceedance
MW-8	UA	A7	Beryllium, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-8	UA	A7D	Beryllium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-8	UA	A7	Cadmium, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-8	UA	A7D	Cadmium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-8	UA	A7	Chromium, total	mg/L	12/09/15 - 03/27/24	21	90	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-8	UA	A7D	Chromium, total	mg/L	12/09/15 - 09/11/24	22	90	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-8	UA	A7	Cobalt, total	mg/L	12/09/15 - 03/27/24	20	95	CB around T-S line	0.000500	0.006	MCL/HBL	No Exceedance
MW-8	UA	A7D	Cobalt, total	mg/L	12/09/15 - 09/11/24	21	95	CB around T-S line	0.000500	0.006	MCL/HBL	No Exceedance
MW-8	UA	A7	Fluoride, total	mg/L	12/09/15 - 03/27/24	22	54	CI around median	0.197	4.0	MCL/HBL	No Exceedance
MW-8	UA	A7D	Fluoride, total	mg/L	12/09/15 - 09/11/24	23	52	CI around median	0.197	4.0	MCL/HBL	No Exceedance
MW-8	UA	A7	Lead, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.002	0.015	MCL/HBL	No Exceedance
MW-8	UA	A7D	Lead, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.015	MCL/HBL	No Exceedance
MW-8	UA	A7	Lithium, total	mg/L	12/09/15 - 03/27/24	20	40	CB around linear reg	-0.00655	0.04	MCL/HBL	No Exceedance
MW-8	UA	A7D	Lithium, total	mg/L	12/09/15 - 09/11/24	21	38	CB around linear reg	-0.00624	0.04	MCL/HBL	No Exceedance
MW-8	UA	A7	Mercury, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-8	UA	A7D	Mercury, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-8	UA	A7	Molybdenum, total	mg/L	12/09/15 - 03/27/24	21	9	CI around median	0.00668	0.1	MCL/HBL	No Exceedance
MW-8	UA	A7D	Molybdenum, total	mg/L	12/09/15 - 09/11/24	22	9	CI around median	0.00668	0.1	MCL/HBL	No Exceedance
MW-8	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 03/27/24	21	0	CI around mean	0.514	5	MCL/HBL	No Exceedance
MW-8	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 09/11/24	22	0	CI around mean	0.524	5	MCL/HBL	No Exceedance
MW-8	UA	A7	Selenium, total	mg/L	12/09/15 - 03/27/24	20	80	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-8	UA	A7D	Selenium, total	mg/L	12/09/15 - 09/11/24	21	80	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-8	UA	A7	Thallium, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-8	UA	A7D	Thallium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-9	UA	A7	Antimony, total	mg/L	12/09/15 - 03/27/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-9	UA	A7D	Antimony, total	mg/L	12/09/15 - 09/11/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-9	UA	A7	Arsenic, total	mg/L	12/09/15 - 03/27/24	21	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-9	UA	A7D	Arsenic, total	mg/L	12/09/15 - 09/11/24	22	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-9	UA	A7	Barium, total	mg/L	12/09/15 - 03/27/24	21	4	CB around linear reg	0.0569	2.0	MCL/HBL	No Exceedance
MW-9	UA	A7D	Barium, total	mg/L	12/09/15 - 09/11/24	22	4	CB around linear reg	0.0579	2.0	MCL/HBL	No Exceedance
MW-9	UA	A7	Beryllium, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-9	UA	A7D	Beryllium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-9	UA	A7	Cadmium, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-9	UA	A7D	Cadmium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-9	UA	A7	Chromium, total	mg/L	12/09/15 - 03/27/24	21	90	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-9	UA	A7D	Chromium, total	mg/L	12/09/15 - 09/11/24	22	90	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-9	UA	A7	Cobalt, total	mg/L	12/09/15 - 03/27/24	20	90	CI around median	0.000500	0.006	MCL/HBL	No Exceedance
MW-9	UA	A7D	Cobalt, total	mg/L	12/09/15 - 09/11/24	21	90	CB around T-S line	0.000500	0.006	MCL/HBL	No Exceedance
MW-9	UA	A7	Fluoride, total	mg/L	12/09/15 - 03/27/24	22	50	CB around T-S line	-0.0467	4.0	MCL/HBL	No Exceedance
MW-9	UA	A7D	Fluoride, total	mg/L	12/09/15 - 09/11/24	23	47	CB around T-S line	-0.103	4.0	MCL/HBL	No Exceedance
MW-9	UA	A7	Lead, total	mg/L	12/09/15 - 03/27/24	20	95	CB around T-S line	0.00100	0.015	MCL/HBL	No Exceedance
MW-9	UA	A7D	Lead, total	mg/L	12/09/15 - 09/11/24	21	95	CB around T-S line	0.00166	0.015	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-9	UA	A7	Lithium, total	mg/L	12/09/15 - 03/27/24	20	45	CB around linear reg	-0.0148	0.04	MCL/HBL	No Exceedance
MW-9	UA	A7D	Lithium, total	mg/L	12/09/15 - 09/11/24	21	42	CB around linear reg	-0.0136	0.04	MCL/HBL	No Exceedance
MW-9	UA	A7	Mercury, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-9	UA	A7D	Mercury, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-9	UA	A7	Molybdenum, total	mg/L	12/09/15 - 03/27/24	21	0	CB around linear reg	0.0358	0.1	MCL/HBL	No Exceedance
MW-9	UA	A7D	Molybdenum, total	mg/L	12/09/15 - 09/11/24	22	0	CB around linear reg	0.0374	0.1	MCL/HBL	No Exceedance
MW-9	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 03/27/24	21	0	CI around median	0.235	5	MCL/HBL	No Exceedance
MW-9	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 09/11/24	22	0	CI around median	0.235	5	MCL/HBL	No Exceedance
MW-9	UA	A7	Selenium, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-9	UA	A7D	Selenium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-9	UA	A7	Thallium, total	mg/L	12/09/15 - 03/27/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-9	UA	A7D	Thallium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-10	UA	A7	Antimony, total	mg/L	12/09/15 - 03/28/24	18	94	CB around T-S line	0.00200	0.006	MCL/HBL	No Exceedance
MW-10	UA	A7D	Antimony, total	mg/L	12/09/15 - 09/12/24	19	94	CB around T-S line	0.00200	0.006	MCL/HBL	No Exceedance
MW-10	UA	A7	Arsenic, total	mg/L	12/09/15 - 03/28/24	21	0	CI around geomean	0.0144	0.010	MCL/HBL	Reported
MW-10	UA	A7D	Arsenic, total	mg/L	12/09/15 - 09/12/24	22	0	CI around mean	0.0160	0.010	MCL/HBL	Reported
MW-10	UA	A7	Barium, total	mg/L	12/09/15 - 03/28/24	21	4	CB around linear reg	-0.0605	2.0	MCL/HBL	No Exceedance
MW-10	UA	A7D	Barium, total	mg/L	12/09/15 - 09/12/24	22	4	CB around linear reg	-0.0522	2.0	MCL/HBL	No Exceedance
MW-10	UA	A7	Beryllium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-10	UA	A7D	Beryllium, total	mg/L	12/09/15 - 09/12/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-10	UA	A7	Cadmium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-10	UA	A7D	Cadmium, total	mg/L	12/09/15 - 09/12/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-10	UA	A7	Chromium, total	mg/L	12/09/15 - 03/28/24	21	90	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-10	UA	A7D	Chromium, total	mg/L	12/09/15 - 09/12/24	22	90	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-10	UA	A7	Cobalt, total	mg/L	12/09/15 - 03/28/24	20	70	CI around median	0.00200	0.006	MCL/HBL	No Exceedance
MW-10	UA	A7D	Cobalt, total	mg/L	12/09/15 - 09/12/24	21	71	CI around median	0.00200	0.006	MCL/HBL	No Exceedance
MW-10	UA	A7	Fluoride, total	mg/L	12/09/15 - 03/28/24	22	54	CI around median	0.227	4.0	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-10	UA	A7D	Fluoride, total	mg/L	12/09/15 - 09/12/24	23	52	CI around median	0.224	4.0	MCL/HBL	No Exceedance
MW-10	UA	A7	Lead, total	mg/L	12/09/15 - 03/28/24	20	90	CB around T-S line	0.00100	0.015	MCL/HBL	No Exceedance
MW-10	UA	A7D	Lead, total	mg/L	12/09/15 - 09/12/24	21	90	CB around T-S line	0.00166	0.015	MCL/HBL	No Exceedance
MW-10	UA	A7	Lithium, total	mg/L	12/09/15 - 03/28/24	20	65	CB around T-S line	-0.0360	0.04	MCL/HBL	No Exceedance
MW-10	UA	A7D	Lithium, total	mg/L	12/09/15 - 09/12/24	21	66	CB around T-S line	-0.0405	0.04	MCL/HBL	No Exceedance
MW-10	UA	A7	Mercury, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-10	UA	A7D	Mercury, total	mg/L	12/09/15 - 09/12/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-10	UA	A7	Molybdenum, total	mg/L	12/09/15 - 03/28/24	21	61	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-10	UA	A7D	Molybdenum, total	mg/L	12/09/15 - 09/12/24	22	63	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-10	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 03/28/24	21	0	CI around mean	0.750	5	MCL/HBL	No Exceedance
MW-10	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 09/12/24	22	0	CI around mean	0.761	5	MCL/HBL	No Exceedance
MW-10	UA	A7	Selenium, total	mg/L	12/09/15 - 03/28/24	20	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-10	UA	A7D	Selenium, total	mg/L	12/09/15 - 09/12/24	21	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-10	UA	A7	Thallium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-10	UA	A7D	Thallium, total	mg/L	12/09/15 - 09/12/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-11	UA	A7	Antimony, total	mg/L	12/09/15 - 03/28/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-11	UA	A7D	Antimony, total	mg/L	12/09/15 - 09/11/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-11	UA	A7	Arsenic, total	mg/L	12/09/15 - 03/28/24	21	0	CI around median	0.00884	0.010	MCL/HBL	No Exceedance
MW-11	UA	A7D	Arsenic, total	mg/L	12/09/15 - 09/11/24	22	0	CI around median	0.00884	0.010	MCL/HBL	No Exceedance
MW-11	UA	A7	Barium, total	mg/L	12/09/15 - 03/28/24	21	0	CB around linear reg	0.0982	2.0	MCL/HBL	No Exceedance
MW-11	UA	A7D	Barium, total	mg/L	12/09/15 - 09/11/24	22	0	CB around linear reg	0.109	2.0	MCL/HBL	No Exceedance
MW-11	UA	A7	Beryllium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-11	UA	A7D	Beryllium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-11	UA	A7	Cadmium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-11	UA	A7D	Cadmium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-11	UA	A7	Chromium, total	mg/L	12/09/15 - 03/28/24	21	76	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-11	UA	A7D	Chromium, total	mg/L	12/09/15 - 09/11/24	22	77	CI around median	0.00200	0.1	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-11	UA	A7	Cobalt, total	mg/L	12/09/15 - 03/28/24	20	50	CI around geomean	0.000846	0.006	MCL/HBL	No Exceedance
MW-11	UA	A7D	Cobalt, total	mg/L	12/09/15 - 09/11/24	21	52	CI around median	0.00200	0.006	MCL/HBL	No Exceedance
MW-11	UA	A7	Fluoride, total	mg/L	12/09/15 - 03/28/24	22	59	CB around T-S line	-0.263	4.0	MCL/HBL	No Exceedance
MW-11	UA	A7D	Fluoride, total	mg/L	12/09/15 - 09/11/24	23	60	CB around T-S line	-0.347	4.0	MCL/HBL	No Exceedance
MW-11	UA	A7	Lead, total	mg/L	12/09/15 - 03/28/24	20	70	CI around median	0.00100	0.015	MCL/HBL	No Exceedance
MW-11	UA	A7D	Lead, total	mg/L	12/09/15 - 09/11/24	21	71	CI around median	0.00114	0.015	MCL/HBL	No Exceedance
MW-11	UA	A7	Lithium, total	mg/L	12/09/15 - 03/28/24	20	50	CB around linear reg	-0.0275	0.04	MCL/HBL	No Exceedance
MW-11	UA	A7D	Lithium, total	mg/L	12/09/15 - 09/11/24	21	47	CB around linear reg	-0.0266	0.04	MCL/HBL	No Exceedance
MW-11	UA	A7	Mercury, total	mg/L	12/09/15 - 03/28/24	20	95	CI around median	0.000200	0.002	MCL/HBL	No Exceedance
MW-11	UA	A7D	Mercury, total	mg/L	12/09/15 - 09/11/24	21	95	CI around median	0.000200	0.002	MCL/HBL	No Exceedance
MW-11	UA	A7	Molybdenum, total	mg/L	12/09/15 - 03/28/24	21	76	CB around T-S line	0.00421	0.1	MCL/HBL	No Exceedance
MW-11	UA	A7D	Molybdenum, total	mg/L	12/09/15 - 09/11/24	22	77	CB around T-S line	0.00401	0.1	MCL/HBL	No Exceedance
MW-11	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 03/28/24	21	0	CI around mean	0.774	5	MCL/HBL	No Exceedance
MW-11	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/09/15 - 09/11/24	22	0	CI around mean	0.808	5	MCL/HBL	No Exceedance
MW-11	UA	A7	Selenium, total	mg/L	12/09/15 - 03/28/24	20	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-11	UA	A7D	Selenium, total	mg/L	12/09/15 - 09/11/24	21	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-11	UA	A7	Thallium, total	mg/L	12/09/15 - 03/28/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-11	UA	A7D	Thallium, total	mg/L	12/09/15 - 09/11/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-12	UA	A7	Antimony, total	mg/L	12/07/15 - 03/27/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-12	UA	A7D	Antimony, total	mg/L	12/07/15 - 09/12/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-12	UA	A7	Arsenic, total	mg/L	12/07/15 - 03/27/24	21	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-12	UA	A7D	Arsenic, total	mg/L	12/07/15 - 09/12/24	22	95	CI around median	0.00100	0.010	MCL/HBL	No Exceedance
MW-12	UA	A7	Barium, total	mg/L	12/07/15 - 03/27/24	21	19	CB around T-S line	0.00786	2.0	MCL/HBL	No Exceedance
MW-12	UA	A7D	Barium, total	mg/L	12/07/15 - 09/12/24	22	18	CB around T-S line	0.00477	2.0	MCL/HBL	No Exceedance
MW-12	UA	A7	Beryllium, total	mg/L	12/07/15 - 03/27/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-12	UA	A7D	Beryllium, total	mg/L	12/07/15 - 09/12/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-12	UA	A7	Cadmium, total	mg/L	12/07/15 - 03/27/24	20	15	CB around linear reg	-0.000118	0.005	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-12	UA	A7D	Cadmium, total	mg/L	12/07/15 - 09/12/24	21	14	CB around linear reg	-0.000102	0.005	MCL/HBL	No Exceedance
MW-12	UA	A7	Chromium, total	mg/L	12/07/15 - 03/27/24	20	80	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-12	UA	A7D	Chromium, total	mg/L	12/07/15 - 09/12/24	21	80	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-12	UA	A7	Cobalt, total	mg/L	12/07/15 - 03/27/24	22	4	CB around linear reg	0.00267	0.006	MCL/HBL	No Exceedance
MW-12	UA	A7D	Cobalt, total	mg/L	12/07/15 - 09/12/24	23	4	CB around linear reg	0.00261	0.006	MCL/HBL	No Exceedance
MW-12	UA	A7	Fluoride, total	mg/L	12/07/15 - 03/27/24	22	90	CB around T-S line	-0.320	4.0	MCL/HBL	No Exceedance
MW-12	UA	A7D	Fluoride, total	mg/L	12/07/15 - 09/12/24	23	91	CB around T-S line	-0.454	4.0	MCL/HBL	No Exceedance
MW-12	UA	A7	Lead, total	mg/L	12/07/15 - 03/27/24	20	95	CB around T-S line	0.00100	0.015	MCL/HBL	No Exceedance
MW-12	UA	A7D	Lead, total	mg/L	12/07/15 - 09/12/24	21	95	CB around T-S line	0.00166	0.015	MCL/HBL	No Exceedance
MW-12	UA	A7	Lithium, total	mg/L	12/07/15 - 03/27/24	20	40	CB around linear reg	-0.0240	0.04	MCL/HBL	No Exceedance
MW-12	UA	A7D	Lithium, total	mg/L	12/07/15 - 09/12/24	21	38	CB around linear reg	-0.0236	0.04	MCL/HBL	No Exceedance
MW-12	UA	A7	Mercury, total	mg/L	12/07/15 - 03/27/24	20	45	CB around T-S line	0.000407	0.002	MCL/HBL	No Exceedance
MW-12	UA	A7D	Mercury, total	mg/L	12/07/15 - 09/12/24	21	42	CB around T-S line	0.000277	0.002	MCL/HBL	No Exceedance
MW-12	UA	A7	Molybdenum, total	mg/L	12/07/15 - 03/27/24	22	95	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-12	UA	A7D	Molybdenum, total	mg/L	12/07/15 - 09/12/24	23	95	CI around median	0.00500	0.1	MCL/HBL	No Exceedance
MW-12	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/07/15 - 03/27/24	21	0	CI around mean	0.274	5	MCL/HBL	No Exceedance
MW-12	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/07/15 - 09/12/24	22	0	CI around mean	0.283	5	MCL/HBL	No Exceedance
MW-12	UA	A7	Selenium, total	mg/L	12/07/15 - 03/27/24	20	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-12	UA	A7D	Selenium, total	mg/L	12/07/15 - 09/12/24	21	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-12	UA	A7	Thallium, total	mg/L	12/07/15 - 03/27/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-12	UA	A7D	Thallium, total	mg/L	12/07/15 - 09/12/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-13	UA	A7	Antimony, total	mg/L	12/08/15 - 03/27/24	18	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-13	UA	A7D	Antimony, total	mg/L	12/08/15 - 09/11/24	19	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-13	UA	A7	Arsenic, total	mg/L	12/08/15 - 03/27/24	22	9	CI around mean	0.00670	0.010	MCL/HBL	No Exceedance
MW-13	UA	A7D	Arsenic, total	mg/L	12/08/15 - 09/11/24	23	8	CI around mean	0.00689	0.010	MCL/HBL	No Exceedance
MW-13	UA	A7	Barium, total	mg/L	12/08/15 - 03/27/24	21	4	CB around linear reg	0.147	2.0	MCL/HBL	No Exceedance
MW-13	UA	A7D	Barium, total	mg/L	12/08/15 - 09/11/24	22	4	CI around median	0.0341	2.0	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-13	UA	A7	Beryllium, total	mg/L	12/08/15 - 03/27/24	20	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-13	UA	A7D	Beryllium, total	mg/L	12/08/15 - 09/11/24	21	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-13	UA	A7	Cadmium, total	mg/L	12/08/15 - 03/27/24	20	70	CI around median	0.00100	0.005	MCL/HBL	No Exceedance
MW-13	UA	A7D	Cadmium, total	mg/L	12/08/15 - 09/11/24	21	71	CI around median	0.00100	0.005	MCL/HBL	No Exceedance
MW-13	UA	A7	Chromium, total	mg/L	12/08/15 - 03/27/24	20	75	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-13	UA	A7D	Chromium, total	mg/L	12/08/15 - 09/11/24	21	76	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-13	UA	A7	Cobalt, total	mg/L	12/08/15 - 03/27/24	22	72	CI around median	0.000500	0.006	MCL/HBL	No Exceedance
MW-13	UA	A7D	Cobalt, total	mg/L	12/08/15 - 09/11/24	23	73	CI around median	0.000500	0.006	MCL/HBL	No Exceedance
MW-13	UA	A7	Fluoride, total	mg/L	12/08/15 - 03/27/24	22	68	CI around median	0.150	4.0	MCL/HBL	No Exceedance
MW-13	UA	A7D	Fluoride, total	mg/L	12/08/15 - 09/11/24	23	69	CI around median	0.150	4.0	MCL/HBL	No Exceedance
MW-13	UA	A7	Lead, total	mg/L	12/08/15 - 03/27/24	20	90	CI around median	0.00100	0.015	MCL/HBL	No Exceedance
MW-13	UA	A7D	Lead, total	mg/L	12/08/15 - 09/11/24	21	90	CB around T-S line	0.00100	0.015	MCL/HBL	No Exceedance
MW-13	UA	A7	Lithium, total	mg/L	12/08/15 - 03/27/24	20	35	CB around linear reg	-0.0240	0.04	MCL/HBL	No Exceedance
MW-13	UA	A7D	Lithium, total	mg/L	12/08/15 - 09/11/24	21	33	CB around linear reg	-0.0233	0.04	MCL/HBL	No Exceedance
MW-13	UA	A7	Mercury, total	mg/L	12/08/15 - 03/27/24	20	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-13	UA	A7D	Mercury, total	mg/L	12/08/15 - 09/11/24	21	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-13	UA	A7	Molybdenum, total	mg/L	12/08/15 - 03/27/24	22	27	CB around linear reg	0.0108	0.1	MCL/HBL	No Exceedance
MW-13	UA	A7D	Molybdenum, total	mg/L	12/08/15 - 09/11/24	23	26	CB around linear reg	0.0110	0.1	MCL/HBL	No Exceedance
MW-13	UA	A7	Radium 226 + Radium 228, total	pCi/L	12/08/15 - 03/27/24	21	0	CI around geomean	0.508	5	MCL/HBL	No Exceedance
MW-13	UA	A7D	Radium 226 + Radium 228, total	pCi/L	12/08/15 - 09/11/24	22	0	CI around geomean	0.523	5	MCL/HBL	No Exceedance
MW-13	UA	A7	Selenium, total	mg/L	12/08/15 - 03/27/24	20	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-13	UA	A7D	Selenium, total	mg/L	12/08/15 - 09/11/24	21	95	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-13	UA	A7	Thallium, total	mg/L	12/08/15 - 03/27/24	20	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-13	UA	A7D	Thallium, total	mg/L	12/08/15 - 09/11/24	21	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-14	UA	A7	Antimony, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-14	UA	A7D	Antimony, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-14	UA	A7	Arsenic, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.002	0.010	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-14	UA	A7D	Arsenic, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.002	0.010	MCL/HBL	No Exceedance
MW-14	UA	A7	Barium, total	mg/L	09/15/20 - 03/28/24	12	0	CI around mean	0.0397	2.0	MCL/HBL	No Exceedance
MW-14	UA	A7D	Barium, total	mg/L	09/15/20 - 09/11/24	13	0	CI around mean	0.0399	2.0	MCL/HBL	No Exceedance
MW-14	UA	A7	Beryllium, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-14	UA	A7D	Beryllium, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-14	UA	A7	Cadmium, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-14	UA	A7D	Cadmium, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-14	UA	A7	Chromium, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.002	0.1	MCL/HBL	No Exceedance
MW-14	UA	A7D	Chromium, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.002	0.1	MCL/HBL	No Exceedance
MW-14	UA	A7	Cobalt, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.002	0.006	MCL/HBL	No Exceedance
MW-14	UA	A7D	Cobalt, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.002	0.006	MCL/HBL	No Exceedance
MW-14	UA	A7	Fluoride, total	mg/L	09/15/20 - 03/28/24	12	66	CI around median	0.150	4.0	MCL/HBL	No Exceedance
MW-14	UA	A7D	Fluoride, total	mg/L	09/15/20 - 09/11/24	13	69	CI around median	0.150	4.0	MCL/HBL	No Exceedance
MW-14	UA	A7	Lead, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.002	0.015	MCL/HBL	No Exceedance
MW-14	UA	A7D	Lead, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.002	0.015	MCL/HBL	No Exceedance
MW-14	UA	A7	Lithium, total	mg/L	09/15/20 - 03/28/24	12	0	CI around mean	0.00377	0.04	MCL/HBL	No Exceedance
MW-14	UA	A7D	Lithium, total	mg/L	09/15/20 - 09/11/24	13	0	CI around mean	0.00379	0.04	MCL/HBL	No Exceedance
MW-14	UA	A7	Mercury, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-14	UA	A7D	Mercury, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-14	UA	A7	Molybdenum, total	mg/L	09/15/20 - 03/28/24	12	0	CI around mean	0.00582	0.1	MCL/HBL	No Exceedance
MW-14	UA	A7D	Molybdenum, total	mg/L	09/15/20 - 09/11/24	13	0	CI around mean	0.00582	0.1	MCL/HBL	No Exceedance
MW-14	UA	A7	Radium 226 + Radium 228, total	pCi/L	09/15/20 - 03/28/24	9	0	CI around mean	0.160	5	MCL/HBL	No Exceedance
MW-14	UA	A7D	Radium 226 + Radium 228, total	pCi/L	09/15/20 - 09/11/24	10	0	CI around mean	0.270	5	MCL/HBL	No Exceedance
MW-14	UA	A7	Selenium, total	mg/L	09/15/20 - 03/28/24	12	91	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-14	UA	A7D	Selenium, total	mg/L	09/15/20 - 09/11/24	13	92	CI around median	0.00200	0.05	MCL/HBL	No Exceedance
MW-14	UA	A7	Thallium, total	mg/L	09/15/20 - 03/28/24	12	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-14	UA	A7D	Thallium, total	mg/L	09/15/20 - 09/11/24	13	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-15	UA	A7	Antimony, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-15	UA	A7D	Antimony, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-15	UA	A7	Arsenic, total	mg/L	09/15/20 - 03/26/24	12	91	CI around median	0.00200	0.010	MCL/HBL	No Exceedance
MW-15	UA	A7D	Arsenic, total	mg/L	09/15/20 - 09/10/24	13	92	CI around median	0.00200	0.010	MCL/HBL	No Exceedance
MW-15	UA	A7	Barium, total	mg/L	09/15/20 - 03/26/24	12	0	CB around linear reg	0.0682	2.0	MCL/HBL	No Exceedance
MW-15	UA	A7D	Barium, total	mg/L	09/15/20 - 09/10/24	13	0	CI around mean	0.0797	2.0	MCL/HBL	No Exceedance
MW-15	UA	A7	Beryllium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-15	UA	A7D	Beryllium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-15	UA	A7	Cadmium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-15	UA	A7D	Cadmium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-15	UA	A7	Chromium, total	mg/L	09/15/20 - 03/26/24	12	83	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-15	UA	A7D	Chromium, total	mg/L	09/15/20 - 09/10/24	13	84	CI around median	0.00200	0.1	MCL/HBL	No Exceedance
MW-15	UA	A7	Cobalt, total	mg/L	09/15/20 - 03/26/24	12	8	CB around linear reg	0.000819	0.006	MCL/HBL	No Exceedance
MW-15	UA	A7D	Cobalt, total	mg/L	09/15/20 - 09/10/24	13	7	CB around linear reg	0.000778	0.006	MCL/HBL	No Exceedance
MW-15	UA	A7	Fluoride, total	mg/L	09/15/20 - 03/26/24	12	16	CI around mean	0.185	4.0	MCL/HBL	No Exceedance
MW-15	UA	A7D	Fluoride, total	mg/L	09/15/20 - 09/10/24	13	15	CI around mean	0.188	4.0	MCL/HBL	No Exceedance
MW-15	UA	A7	Lead, total	mg/L	09/15/20 - 03/26/24	12	91	CI around median	0.00200	0.015	MCL/HBL	No Exceedance
MW-15	UA	A7D	Lead, total	mg/L	09/15/20 - 09/10/24	13	92	CI around median	0.00200	0.015	MCL/HBL	No Exceedance
MW-15	UA	A7	Lithium, total	mg/L	09/15/20 - 03/26/24	12	0	CI around mean	0.00630	0.04	MCL/HBL	No Exceedance
MW-15	UA	A7D	Lithium, total	mg/L	09/15/20 - 09/10/24	13	0	CI around mean	0.00639	0.04	MCL/HBL	No Exceedance
MW-15	UA	A7	Mercury, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-15	UA	A7D	Mercury, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-15	UA	A7	Molybdenum, total	mg/L	09/15/20 - 03/26/24	12	0	CI around mean	0.0233	0.1	MCL/HBL	No Exceedance
MW-15	UA	A7D	Molybdenum, total	mg/L	09/15/20 - 09/10/24	13	0	CI around mean	0.0232	0.1	MCL/HBL	No Exceedance
MW-15	UA	A7	Radium 226 + Radium 228, total	pCi/L	09/15/20 - 03/26/24	9	0	CI around mean	0.0690	5	MCL/HBL	No Exceedance
MW-15	UA	A7D	Radium 226 + Radium 228, total	pCi/L	09/15/20 - 09/10/24	10	0	CI around mean	0.120	5	MCL/HBL	No Exceedance
MW-15	UA	A7	Selenium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-15	UA	A7D	Selenium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-15	UA	A7	Thallium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-15	UA	A7D	Thallium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-16	UA	A7	Antimony, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-16	UA	A7D	Antimony, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.004	0.006	MCL/HBL	No Exceedance
MW-16	UA	A7	Arsenic, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.010	MCL/HBL	No Exceedance
MW-16	UA	A7D	Arsenic, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.010	MCL/HBL	No Exceedance
MW-16	UA	A7	Barium, total	mg/L	09/15/20 - 03/26/24	12	0	CB around T-S line	0.0596	2.0	MCL/HBL	No Exceedance
MW-16	UA	A7D	Barium, total	mg/L	09/15/20 - 09/10/24	13	0	CB around T-S line	0.0571	2.0	MCL/HBL	No Exceedance
MW-16	UA	A7	Beryllium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-16	UA	A7D	Beryllium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.004	MCL/HBL	No Exceedance
MW-16	UA	A7	Cadmium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-16	UA	A7D	Cadmium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.001	0.005	MCL/HBL	No Exceedance
MW-16	UA	A7	Chromium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.1	MCL/HBL	No Exceedance
MW-16	UA	A7D	Chromium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.1	MCL/HBL	No Exceedance
MW-16	UA	A7	Cobalt, total	mg/L	09/15/20 - 03/26/24	12	66	CI around median	0.00200	0.006	MCL/HBL	No Exceedance
MW-16	UA	A7D	Cobalt, total	mg/L	09/15/20 - 09/10/24	13	69	CI around median	0.00200	0.006	MCL/HBL	No Exceedance
MW-16	UA	A7	Fluoride, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.15	4.0	MCL/HBL	No Exceedance
MW-16	UA	A7D	Fluoride, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.15	4.0	MCL/HBL	No Exceedance
MW-16	UA	A7	Lead, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.015	MCL/HBL	No Exceedance
MW-16	UA	A7D	Lead, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.015	MCL/HBL	No Exceedance
MW-16	UA	A7	Lithium, total	mg/L	09/15/20 - 03/26/24	12	0	CI around mean	0.0108	0.04	MCL/HBL	No Exceedance
MW-16	UA	A7D	Lithium, total	mg/L	09/15/20 - 09/10/24	13	0	CI around mean	0.0109	0.04	MCL/HBL	No Exceedance
MW-16	UA	A7	Mercury, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-16	UA	A7D	Mercury, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.0002	0.002	MCL/HBL	No Exceedance
MW-16	UA	A7	Molybdenum, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.005	0.1	MCL/HBL	No Exceedance
MW-16	UA	A7D	Molybdenum, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.005	0.1	MCL/HBL	No Exceedance

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
POND SYSTEM
NORTH BEND, OH

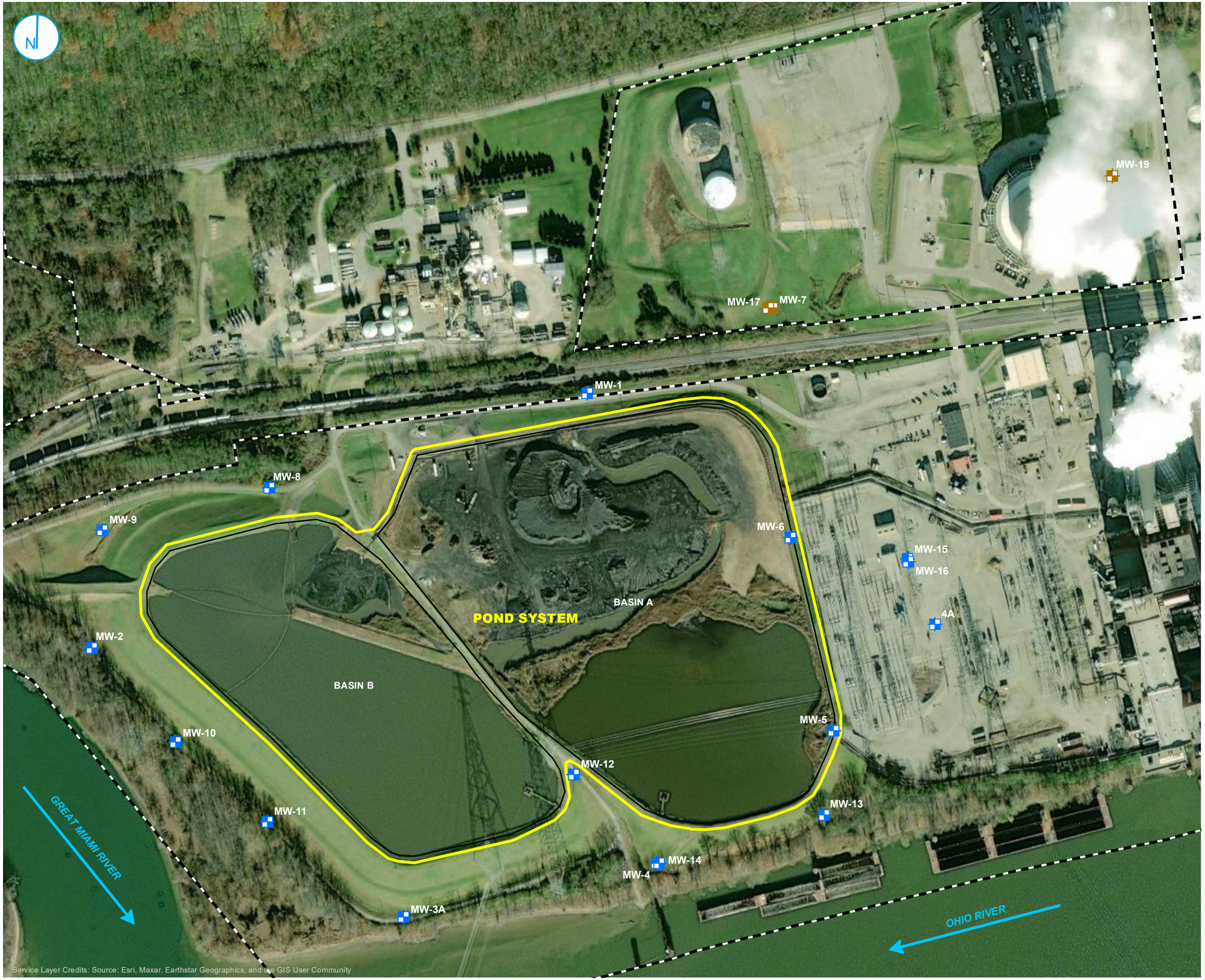
Well ID	HSU	Event ID	Parameter	Unit	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	SSL Type
MW-16	UA	A7	Radium 226 + Radium 228, total	pCi/L	09/15/20 - 03/26/24	9	0	CI around mean	0.0908	5	MCL/HBL	No Exceedance
MW-16	UA	A7D	Radium 226 + Radium 228, total	pCi/L	09/15/20 - 09/10/24	10	0	CI around mean	0.169	5	MCL/HBL	No Exceedance
MW-16	UA	A7	Selenium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-16	UA	A7D	Selenium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.05	MCL/HBL	No Exceedance
MW-16	UA	A7	Thallium, total	mg/L	09/15/20 - 03/26/24	12	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance
MW-16	UA	A7D	Thallium, total	mg/L	09/15/20 - 09/10/24	13	100	All ND - Last	0.002	0.002	MCL/HBL	No Exceedance

Notes:
Event IDs:
A7 = Quarter 1, 2024 Corrective Action Monitoring sampling event
A7D = Quarter 3, 2024 Corrective Action Monitoring sampling event
HSU = hydrostratigraphic unit:
UA = Uppermost Aquifer
ID = identification
ND = non-detect
mg/L = milligrams per liter
pCi/L = picocuries per liter
Statistically Significant Level (SSL) Type:
No Exceedance: No exceedance of the GWPS.
Reported: An exceedance in the parent event was observed and reported.
GWPS = Groundwater Protection Standard
GWPS Source:
MCL/HBL = maximum contaminant level/health-based level
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:
All ND - Last = All results were below the reporting limit, and the last determined reporting limit is shown.
CB around linear reg = Confidence band around linear regression
CB around T-S line = Confidence band around Thiel-Sen line
CI around geomean = Confidence interval around the geometric mean
CI around mean = Confidence interval around the mean
CI around median = Confidence interval around the median
Statistical Result = calculated in accordance with Statistical Analysis Plan using constituent concentrations observed at monitoring well during all sampling events within the specified date range

Generated 2024-12-03 20:12 by banoffra

FIGURES

Y:\Mapping\Projects\22\22851\MXD\2023_AnnualGWM_CAR\Miami_Fort\PS_115\Figure 1. MF PS MW Location Map.mxd



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- 40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

0 150 300 Feet

MONITORING WELL LOCATION MAP

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
POND SYSTEM
MIAMI FORT POWER PLANT
NORTH BEND, OHIO

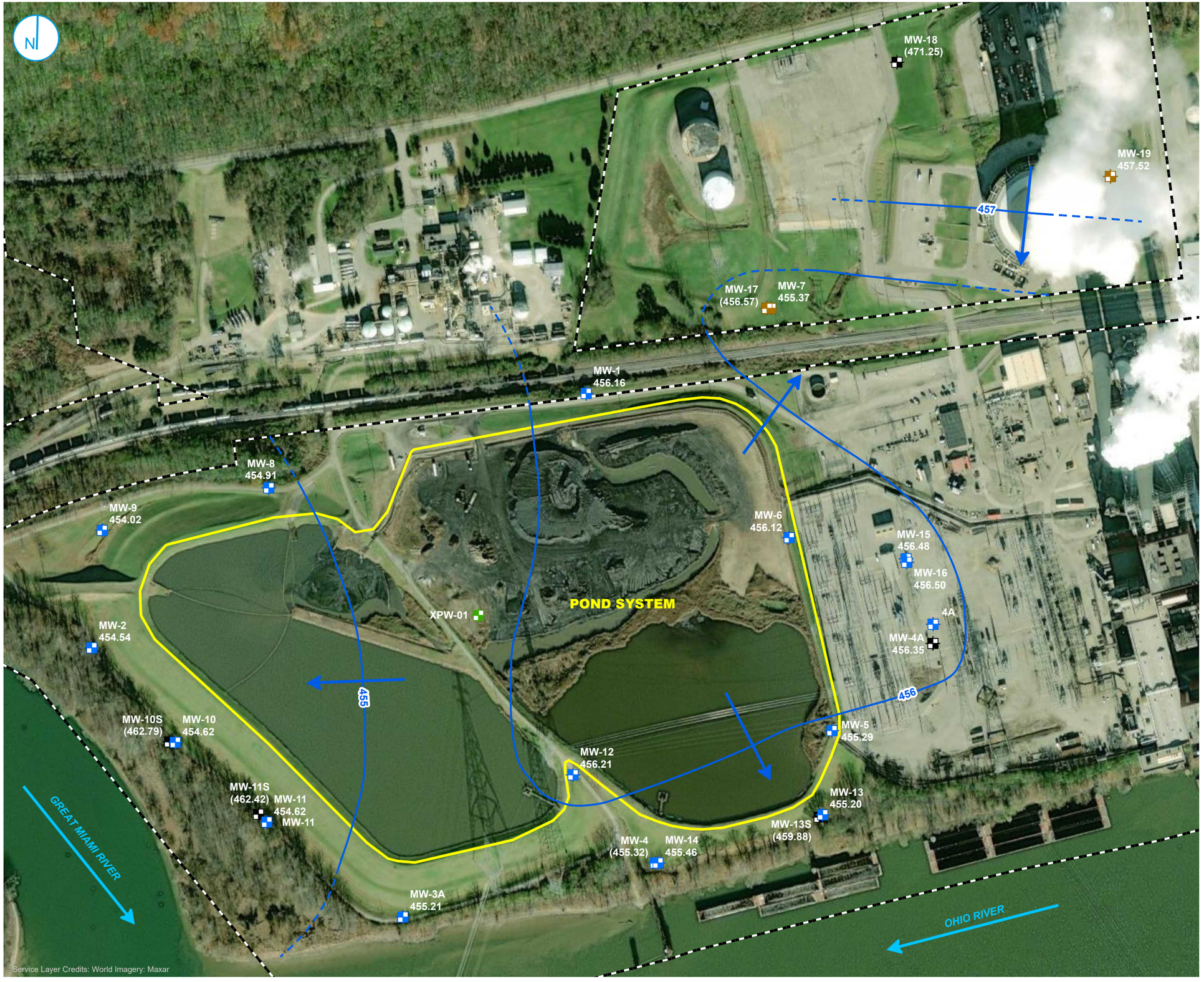
FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 12/20/2023 | DESIGNER: GALARNMC

Y:\Mapping\Projects\22\22985\MXD\GW_Contours\Round_2024\Miami_Fort\PS_115\MFS PS 115 2024.aprx



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- PORE WATER WELL
- GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- PROPERTY BOUNDARY

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

0 150 300 Feet

POTENTIOMETRIC SURFACE MAP MARCH 25-26, 2024

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
POND SYSTEM
MIAMI FORT POWER PLANT
NORTH BEND, OHIO

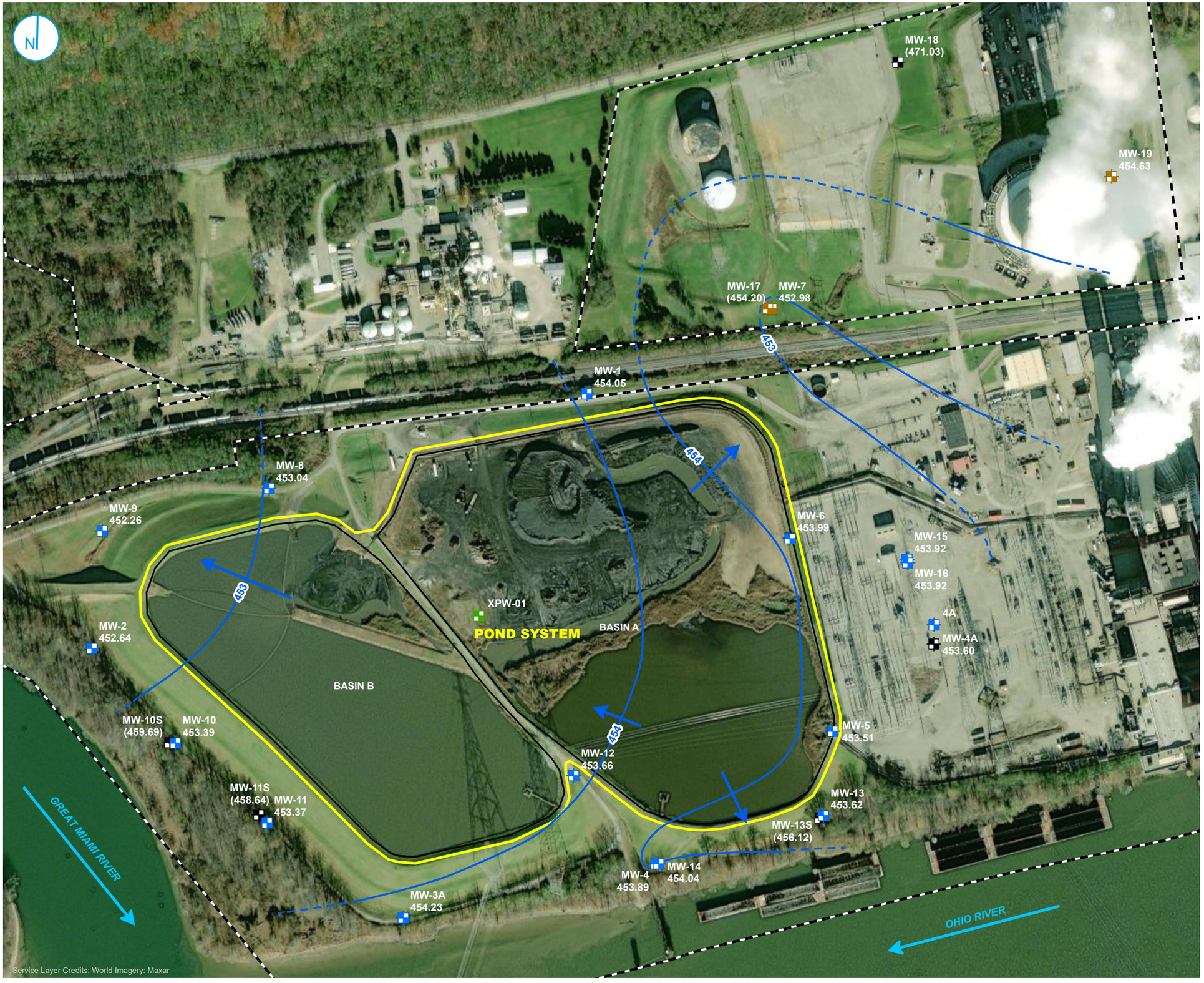
FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 5/15/2024 | DESIGNER: egreaves

Y:\Mapping\Projects\22\22285\MXD\GW_Contours\Round_2024\Miami_Fort\PS_115\MFS PS 115 2024.aprx



- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- REGULATED UNIT (SUBJECT UNIT)
- PROPERTY BOUNDARY

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

0 150 300 Feet

POTENTIOMETRIC SURFACE MAP SEPTEMBER 9, 2024

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
POND SYSTEM
MIAMI FORT POWER PLANT
NORTH BEND, OHIO

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 10/29/2024 | DESIGNER: PWYSIATKO

APPENDICES

APPENDIX A
LABORATORY REPORTS AND FIELD DATA SHEETS

Pace Analytical®

ANALYTICAL REPORT

April 09, 2024

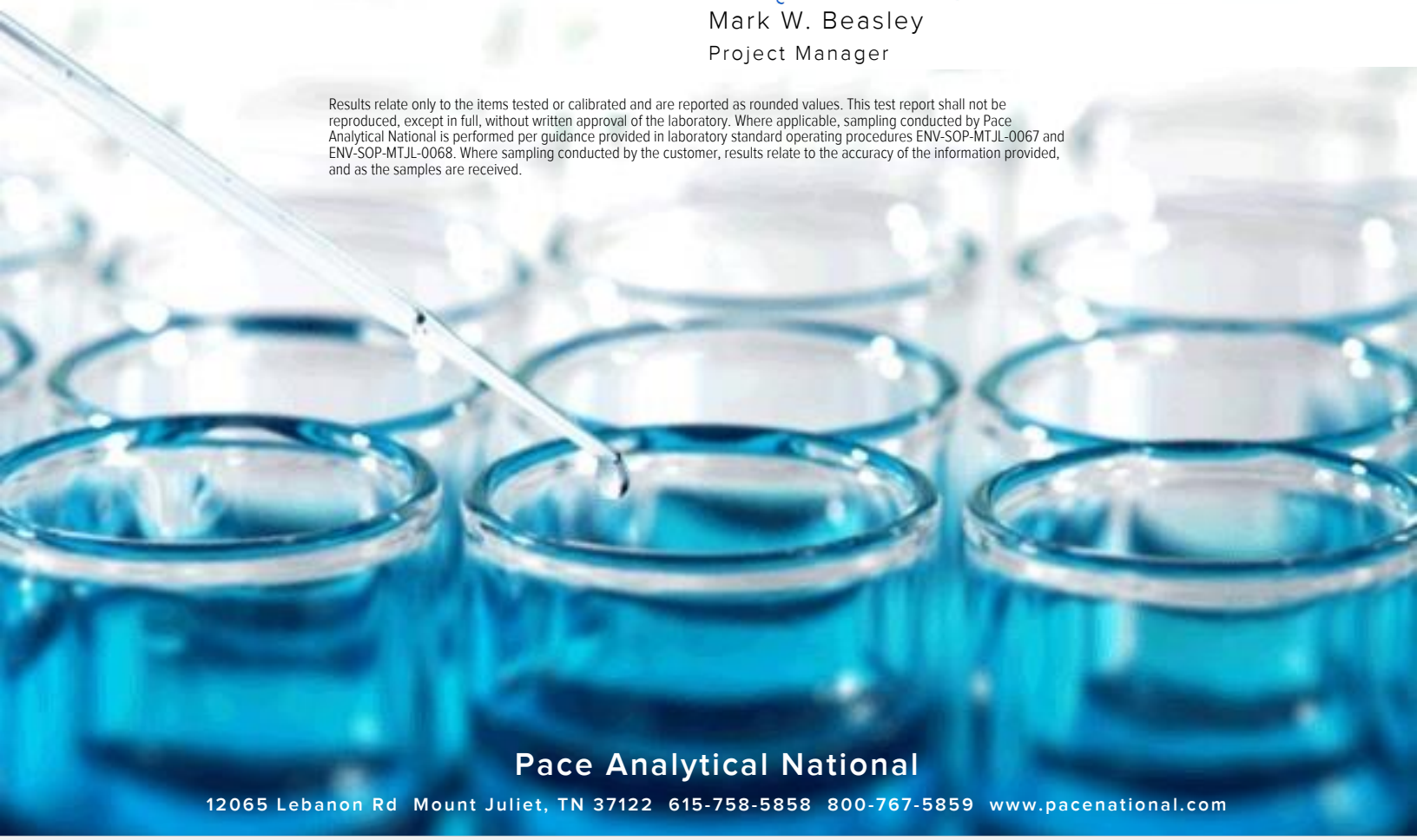
S&ME - Nashville, TN

Sample Delivery Group:	L1720134
Samples Received:	03/29/2024
Project Number:	7217-17-003D
Description:	Miami Fort Station - North Bend, OH
Site:	MIAMI (SITE 115)
Report To:	Vince Epps 862 East Crescentville Road Cincinnati, OH 45246

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

A-1_POND L1720134-01 GW

Collected by: Carter Harlan | Collected date/time: 03/28/24 16:40 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258342	1	04/02/24 11:37	04/02/24 22:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257630	1	04/01/24 10:06	04/01/24 10:06	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 01:23	04/07/24 01:23	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	5	04/07/24 01:36	04/07/24 01:36	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 16:31	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:08	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 13:16	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	50	04/02/24 09:42	04/04/24 10:26	JPD	Mt. Juliet, TN

B-1 POND L1720134-02 GW

Collected by: Carter Harlan | Collected date/time: 03/28/24 16:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258373	1	04/02/24 09:39	04/02/24 14:30	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 12:31	04/01/24 12:31	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 01:48	04/07/24 01:48	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2262574	5	04/08/24 23:40	04/08/24 23:40	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 16:41	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:11	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 13:22	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	50	04/02/24 09:42	04/04/24 10:29	JPD	Mt. Juliet, TN

MW-01 L1720134-03 GW

Collected by: Carter Harlan | Collected date/time: 03/26/24 16:25 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257437	1	03/31/24 11:05	03/31/24 13:28	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 12:38	04/01/24 12:38	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 02:40	04/07/24 02:40	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2262574	5	04/08/24 23:53	04/08/24 23:53	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 16:43	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:15	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 13:26	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	5	04/02/24 09:42	04/04/24 10:33	JPD	Mt. Juliet, TN

MW-02 L1720134-04 GW

Collected by: Carter Harlan | Collected date/time: 03/28/24 15:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258342	1	04/02/24 11:37	04/02/24 22:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 12:45	04/01/24 12:45	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 02:53	04/07/24 02:53	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 16:46	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:18	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	5	04/02/24 09:42	04/04/24 10:36	JPD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-03A L1720134-05 GW

Collected by	Collected date/time	Received date/time
Carter Harlan	03/28/24 12:05	03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258342	1	04/02/24 11:37	04/02/24 22:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 12:51	04/01/24 12:51	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 03:05	04/07/24 03:05	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 16:48	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:21	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 10:39	JPD	Mt. Juliet, TN

MW-04 L1720134-06 GW

Collected by	Collected date/time	Received date/time
Carter Harlan	03/28/24 11:15	03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258342	1	04/02/24 11:37	04/02/24 22:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:09	04/01/24 13:09	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 03:18	04/07/24 03:18	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	10	04/07/24 03:57	04/07/24 03:57	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 16:51	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:24	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 13:29	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	5	04/02/24 09:42	04/04/24 10:43	JPD	Mt. Juliet, TN

MW-4A L1720134-07 GW

Collected by	Collected date/time	Received date/time
Carter Harlan	03/26/24 10:20	03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257437	1	03/31/24 11:05	03/31/24 13:28	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 11:54	04/01/24 11:54	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	5	04/07/24 04:09	04/07/24 04:09	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2262425	1	04/08/24 23:25	04/08/24 23:25	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 16:53	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:28	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 13:32	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	50	04/02/24 09:42	04/04/24 10:46	JPD	Mt. Juliet, TN

MW-05 L1720134-08 GW

Collected by	Collected date/time	Received date/time
Carter Harlan	03/26/24 12:40	03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257457	1	03/31/24 11:29	04/01/24 13:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:11	04/01/24 13:11	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	5	04/07/24 04:22	04/07/24 04:22	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2262425	1	04/08/24 23:42	04/08/24 23:42	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:01	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:31	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 13:36	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	100	04/02/24 09:42	04/04/24 10:49	JPD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-06 L1720134-09 GW

Collected by: Carter Harlan | Collected date/time: 03/26/24 11:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257457	1	03/31/24 11:29	04/01/24 13:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:16	04/01/24 13:16	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 04:48	04/07/24 04:48	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:03	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/03/24 20:34	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	1	04/02/24 09:42	04/04/24 13:39	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257499	10	04/02/24 09:42	04/04/24 10:52	JPD	Mt. Juliet, TN

MW-07 L1720134-10 GW

Collected by: Carter Harlan | Collected date/time: 03/27/24 09:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:23	04/01/24 13:23	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 05:01	04/07/24 05:01	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:06	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:23	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:18	JPD	Mt. Juliet, TN

MW-08 L1720134-11 GW

Collected by: Carter Harlan | Collected date/time: 03/27/24 11:45 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257633	1	04/01/24 10:27	04/01/24 10:27	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 05:14	04/07/24 05:14	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	10	04/07/24 05:26	04/07/24 05:26	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:08	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:26	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	20	04/02/24 10:20	04/04/24 13:26	JPD	Mt. Juliet, TN

MW-09 L1720134-12 GW

Collected by: Carter Harlan | Collected date/time: 03/27/24 13:10 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:30	04/01/24 13:30	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 10:08	04/07/24 10:08	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	10	04/07/24 05:39	04/07/24 05:39	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:14	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:29	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	50	04/02/24 10:20	04/04/24 13:29	JPD	Mt. Juliet, TN

MW-10 L1720134-13 GW

Collected by: Carter Harlan | Collected date/time: 03/28/24 14:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258342	1	04/02/24 11:37	04/02/24 22:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 11:58	04/01/24 11:58	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 06:31	04/07/24 06:31	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:16	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:33	JPD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-10 L1720134-13 GW

Collected by: Carter Harlan | Collected date/time: 03/28/24 14:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:33	JPD	Mt. Juliet, TN

MW-11 L1720134-14 GW

Collected by: Carter Harlan | Collected date/time: 03/28/24 13:10 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258342	1	04/02/24 11:37	04/02/24 22:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 12:03	04/01/24 12:03	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 06:43	04/07/24 06:43	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:18	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:36	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:36	JPD	Mt. Juliet, TN

MW-12 L1720134-15 GW

Collected by: Carter Harlan | Collected date/time: 03/27/24 15:10 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257464	1	04/01/24 07:45	04/01/24 11:57	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 12:07	04/01/24 12:07	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 06:56	04/07/24 06:56	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	10	04/07/24 07:09	04/07/24 07:09	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:21	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:39	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	50	04/02/24 10:20	04/04/24 13:39	JPD	Mt. Juliet, TN

MW-13 L1720134-16 GW

Collected by: Carter Harlan | Collected date/time: 03/27/24 16:25 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 12:10	04/01/24 12:10	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 07:22	04/07/24 07:22	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:23	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:42	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:43	JPD	Mt. Juliet, TN

MW-14 L1720134-17 GW

Collected by: Carter Harlan | Collected date/time: 03/28/24 09:45 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258342	1	04/02/24 11:37	04/02/24 22:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 12:15	04/01/24 12:15	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 07:35	04/07/24 07:35	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:31	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:46	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:46	JPD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-15 L1720134-18 GW

Collected by: Carter Harlan | Collected date/time: 03/26/24 15:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258418	1	04/02/24 09:52	04/02/24 12:40	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:36	04/01/24 13:36	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 07:47	04/07/24 07:47	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	10	04/07/24 08:00	04/07/24 08:00	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:33	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:49	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	5	04/02/24 10:20	04/04/24 13:50	JPD	Mt. Juliet, TN

MW-16 L1720134-19 GW

Collected by: Carter Harlan | Collected date/time: 03/26/24 14:00 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257457	1	03/31/24 11:29	04/01/24 13:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 12:32	04/01/24 12:32	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 08:13	04/07/24 08:13	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	10	04/07/24 08:26	04/07/24 08:26	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:36	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 12:52	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:53	JPD	Mt. Juliet, TN

MW-17 L1720134-20 GW

Collected by: Carter Harlan | Collected date/time: 03/27/24 10:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257634	1	04/01/24 12:36	04/01/24 12:36	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258445	1	04/07/24 09:04	04/07/24 09:04	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2256788	1	03/30/24 15:37	03/31/24 17:38	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:15	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 14:03	JPD	Mt. Juliet, TN

MW-19 L1720134-21 GW

Collected by: Carter Harlan | Collected date/time: 03/25/24 16:00 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257437	1	03/31/24 11:05	03/31/24 13:28	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:43	04/01/24 13:43	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258451	1	04/02/24 12:11	04/02/24 12:11	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2256791	1	03/31/24 14:59	03/31/24 22:52	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:18	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 14:06	JPD	Mt. Juliet, TN

4A PRODUCTION WELL L1720134-22 GW

Collected by: Carter Harlan | Collected date/time: 03/26/24 09:30 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257464	1	04/01/24 07:38	04/01/24 11:57	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:49	04/01/24 13:49	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258451	5	04/02/24 12:24	04/02/24 12:24	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2256791	1	03/31/24 14:59	03/31/24 22:55	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:22	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	50	04/02/24 10:20	04/04/24 14:10	JPD	Mt. Juliet, TN

SAMPLE SUMMARY

XPW-01 L1720134-23 GW

Collected by: Carter Harlan
Collected date/time: 03/27/24 14:10
Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257765	1	04/01/24 15:30	04/03/24 14:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 13:54	04/01/24 13:54	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258451	1	04/02/24 13:15	04/02/24 13:15	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258451	5	04/02/24 13:53	04/02/24 13:53	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2256791	1	03/31/24 14:59	03/31/24 22:57	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:25	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	100	04/02/24 10:20	04/04/24 14:13	JPD	Mt. Juliet, TN

DUP-1 L1720134-24 GW

Collected by: Carter Harlan
Collected date/time: 03/26/24 00:00
Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2258418	1	04/02/24 09:52	04/02/24 12:40	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 14:10	04/01/24 14:10	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258459	1	04/03/24 02:11	04/03/24 02:11	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2256791	1	03/31/24 14:59	03/31/24 22:59	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:28	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	5	04/02/24 10:20	04/04/24 14:17	JPD	Mt. Juliet, TN

DUP-2 L1720134-25 GW

Collected by: Carter Harlan
Collected date/time: 03/27/24 00:00
Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2257437	1	03/31/24 11:05	03/31/24 13:28	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2257875	1	04/01/24 14:17	04/01/24 14:17	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258459	1	04/03/24 02:42	04/03/24 02:42	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2258459	10	04/03/24 02:58	04/03/24 02:58	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2256791	1	03/31/24 14:59	03/31/24 23:02	SDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	1	04/02/24 10:20	04/04/24 13:32	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2257500	20	04/02/24 10:20	04/04/24 14:20	JPD	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1190000		20000	1	04/02/2024 22:24	WG2258342

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	99400		8450	20000	1	04/01/2024 10:06	WG2257630
Alkalinity,Carbonate	32200		8450	20000	1	04/01/2024 10:06	WG2257630

Sample Narrative:

L1720134-01 WG2257630: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	284000		1900	5000	5	04/07/2024 01:36	WG2258445
Fluoride	1110		64.0	150	1	04/07/2024 01:23	WG2258445
Sulfate	284000		2970	25000	5	04/07/2024 01:36	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 16:31	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	1.32	J	1.03	4.00	1	04/03/2024 20:08	WG2257499
Arsenic	2.09		0.180	2.00	1	04/03/2024 20:08	WG2257499
Barium	51.7		0.381	2.00	1	04/03/2024 20:08	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:08	WG2257499
Boron	10800		482	1500	50	04/04/2024 10:26	WG2257499
Cadmium	0.216	J	0.150	1.00	1	04/03/2024 20:08	WG2257499
Calcium	85900		93.6	1000	1	04/03/2024 20:08	WG2257499
Chromium	1.77	J	1.24	2.00	1	04/03/2024 20:08	WG2257499
Cobalt	1.08	J	0.0596	2.00	1	04/03/2024 20:08	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:08	WG2257499
Magnesium	137000		73.5	1000	1	04/03/2024 20:08	WG2257499
Molybdenum	8.59		0.348	5.00	1	04/03/2024 20:08	WG2257499
Potassium	3750		108	2000	1	04/03/2024 20:08	WG2257499
Selenium	25.4		0.300	2.00	1	04/03/2024 20:08	WG2257499
Sodium	28300		376	2000	1	04/03/2024 20:08	WG2257499
Thallium	0.419	J	0.121	2.00	1	04/03/2024 20:08	WG2257499
Lithium	14.9		0.695	2.00	1	04/04/2024 13:16	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	856000		13300	1	04/02/2024 14:30	WG2258373

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	91100		8450	20000	1	04/01/2024 12:31	WG2257875
Alkalinity,Carbonate	15700	J	8450	20000	1	04/01/2024 12:31	WG2257875

Sample Narrative:

L1720134-02 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	178000	V	379	1000	1	04/07/2024 01:48	WG2258445
Fluoride	667		64.0	150	1	04/07/2024 01:48	WG2258445
Sulfate	203000		2970	25000	5	04/08/2024 23:40	WG2262574

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 16:41	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:11	WG2257499
Arsenic	3.55		0.180	2.00	1	04/03/2024 20:11	WG2257499
Barium	62.1		0.381	2.00	1	04/03/2024 20:11	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:11	WG2257499
Boron	6360		482	1500	50	04/04/2024 10:29	WG2257499
Cadmium	0.381	J	0.150	1.00	1	04/03/2024 20:11	WG2257499
Calcium	71000		93.6	1000	1	04/03/2024 20:11	WG2257499
Chromium	2.11		1.24	2.00	1	04/03/2024 20:11	WG2257499
Cobalt	0.554	J	0.0596	2.00	1	04/03/2024 20:11	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:11	WG2257499
Magnesium	78400		73.5	1000	1	04/03/2024 20:11	WG2257499
Molybdenum	17.3		0.348	5.00	1	04/03/2024 20:11	WG2257499
Potassium	3470		108	2000	1	04/03/2024 20:11	WG2257499
Selenium	13.8		0.300	2.00	1	04/03/2024 20:11	WG2257499
Sodium	27200		376	2000	1	04/03/2024 20:11	WG2257499
Thallium	0.636	J	0.121	2.00	1	04/03/2024 20:11	WG2257499
Lithium	14.6		0.695	2.00	1	04/04/2024 13:22	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	660000		13300	1	03/31/2024 13:28	WG2257437

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	194000		8450	20000	1	04/01/2024 12:38	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:38	WG2257875

Sample Narrative:

L1720134-03 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	41600		379	1000	1	04/07/2024 02:40	WG2258445
Fluoride	289		64.0	150	1	04/07/2024 02:40	WG2258445
Sulfate	264000		2970	25000	5	04/08/2024 23:53	WG2262574

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 16:43	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:15	WG2257499
Arsenic	0.371	J	0.180	2.00	1	04/03/2024 20:15	WG2257499
Barium	43.1		0.381	2.00	1	04/03/2024 20:15	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:15	WG2257499
Boron	756		48.2	150	5	04/04/2024 10:33	WG2257499
Cadmium	U		0.150	1.00	1	04/03/2024 20:15	WG2257499
Calcium	130000		93.6	1000	1	04/03/2024 20:15	WG2257499
Chromium	U		1.24	2.00	1	04/03/2024 20:15	WG2257499
Cobalt	U		0.0596	2.00	1	04/03/2024 20:15	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:15	WG2257499
Magnesium	24600		73.5	1000	1	04/03/2024 20:15	WG2257499
Molybdenum	91.3		0.348	5.00	1	04/03/2024 20:15	WG2257499
Potassium	7320		108	2000	1	04/03/2024 20:15	WG2257499
Selenium	U		0.300	2.00	1	04/03/2024 20:15	WG2257499
Sodium	35500		376	2000	1	04/03/2024 20:15	WG2257499
Thallium	0.206	J	0.121	2.00	1	04/03/2024 20:15	WG2257499
Lithium	32.8		0.695	2.00	1	04/04/2024 13:26	WG2257499

SAMPLE RESULTS - 04

MW-02
Client Sample ID: MW-02 Matrix: Groundwater
L1720134-04

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	572000		13300	1	04/02/2024 22:24	WG2258342

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	549000		8450	20000	1	04/01/2024 12:45	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:45	WG2257875

Sample Narrative:

L1720134-04 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	35700		379	1000	1	04/07/2024 02:53	WG2258445
Fluoride	78.3	J	64.0	150	1	04/07/2024 02:53	WG2258445
Sulfate	25200		594	5000	1	04/07/2024 02:53	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 16:46	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:18	WG2257499
Arsenic	36.6		0.180	2.00	1	04/03/2024 20:18	WG2257499
Barium	383		0.381	2.00	1	04/03/2024 20:18	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:18	WG2257499
Boron	554		48.2	150	5	04/04/2024 10:36	WG2257499
Cadmium	U		0.150	1.00	1	04/03/2024 20:18	WG2257499
Calcium	127000		93.6	1000	1	04/03/2024 20:18	WG2257499
Chromium	U		1.24	2.00	1	04/03/2024 20:18	WG2257499
Cobalt	0.464	J	0.0596	2.00	1	04/03/2024 20:18	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:18	WG2257499
Magnesium	53200		73.5	1000	1	04/03/2024 20:18	WG2257499
Molybdenum	2.35	J	0.348	5.00	1	04/03/2024 20:18	WG2257499
Potassium	912	J	108	2000	1	04/03/2024 20:18	WG2257499
Selenium	U		0.300	2.00	1	04/03/2024 20:18	WG2257499
Sodium	19500		376	2000	1	04/03/2024 20:18	WG2257499
Thallium	U		0.121	2.00	1	04/03/2024 20:18	WG2257499
Lithium	1.51	J	0.695	2.00	1	04/03/2024 20:18	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	242000		10000	1	04/02/2024 22:24	WG2258342

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	203000		8450	20000	1	04/01/2024 12:51	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:51	WG2257875

Sample Narrative:

L1720134-05 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	23300		379	1000	1	04/07/2024 03:05	WG2258445
Fluoride	89.0	J	64.0	150	1	04/07/2024 03:05	WG2258445
Sulfate	4230	J	594	5000	1	04/07/2024 03:05	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 16:48	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:21	WG2257499
Arsenic	9.97		0.180	2.00	1	04/03/2024 20:21	WG2257499
Barium	129		0.381	2.00	1	04/03/2024 20:21	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:21	WG2257499
Boron	56.9		9.63	30.0	1	04/04/2024 10:39	WG2257499
Cadmium	U		0.150	1.00	1	04/03/2024 20:21	WG2257499
Calcium	50700		93.6	1000	1	04/03/2024 20:21	WG2257499
Chromium	U		1.24	2.00	1	04/03/2024 20:21	WG2257499
Cobalt	U		0.0596	2.00	1	04/03/2024 20:21	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:21	WG2257499
Magnesium	13200		73.5	1000	1	04/03/2024 20:21	WG2257499
Molybdenum	0.906	J	0.348	5.00	1	04/03/2024 20:21	WG2257499
Potassium	2040		108	2000	1	04/03/2024 20:21	WG2257499
Selenium	U		0.300	2.00	1	04/03/2024 20:21	WG2257499
Sodium	18800		376	2000	1	04/03/2024 20:21	WG2257499
Thallium	U		0.121	2.00	1	04/03/2024 20:21	WG2257499
Lithium	1.84	J	0.695	2.00	1	04/03/2024 20:21	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1770000		25000	1	04/02/2024 22:24	WG2258342

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	108000		8450	20000	1	04/01/2024 13:09	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:09	WG2257875

Sample Narrative:

L1720134-06 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	26900		379	1000	1	04/07/2024 03:18	WG2258445
Fluoride	65.5	J	64.0	150	1	04/07/2024 03:18	WG2258445
Sulfate	1160000		5940	50000	10	04/07/2024 03:57	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 16:51	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:24	WG2257499
Arsenic	1.24	J	0.180	2.00	1	04/03/2024 20:24	WG2257499
Barium	19.5		0.381	2.00	1	04/03/2024 20:24	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:24	WG2257499
Boron	534		48.2	150	5	04/04/2024 10:43	WG2257499
Cadmium	1.05		0.150	1.00	1	04/03/2024 20:24	WG2257499
Calcium	343000		93.6	1000	1	04/03/2024 20:24	WG2257499
Chromium	U		1.24	2.00	1	04/03/2024 20:24	WG2257499
Cobalt	16.6		0.0596	2.00	1	04/03/2024 20:24	WG2257499
Lead	0.937	J	0.849	2.00	1	04/03/2024 20:24	WG2257499
Magnesium	102000		73.5	1000	1	04/03/2024 20:24	WG2257499
Molybdenum	0.594	J	0.348	5.00	1	04/03/2024 20:24	WG2257499
Potassium	911	J	108	2000	1	04/03/2024 20:24	WG2257499
Selenium	U		0.300	2.00	1	04/03/2024 20:24	WG2257499
Sodium	25200		376	2000	1	04/03/2024 20:24	WG2257499
Thallium	U		0.121	2.00	1	04/03/2024 20:24	WG2257499
Lithium	5.32		0.695	2.00	1	04/04/2024 13:29	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1260000		25000	1	03/31/2024 13:28	WG2257437

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	274000		8450	20000	1	04/01/2024 11:54	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 11:54	WG2257634

Sample Narrative:

L1720134-07 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	192000		1900	5000	5	04/07/2024 04:09	WG2258445
Fluoride	219		64.0	150	1	04/08/2024 23:25	WG2262425
Sulfate	470000		2970	25000	5	04/07/2024 04:09	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 16:53	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:28	WG2257499
Arsenic	0.366	J	0.180	2.00	1	04/03/2024 20:28	WG2257499
Barium	72.3		0.381	2.00	1	04/03/2024 20:28	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:28	WG2257499
Boron	7630		482	1500	50	04/04/2024 10:46	WG2257499
Cadmium	0.245	J	0.150	1.00	1	04/03/2024 20:28	WG2257499
Calcium	184000		93.6	1000	1	04/03/2024 20:28	WG2257499
Chromium	U		1.24	2.00	1	04/03/2024 20:28	WG2257499
Cobalt	6.29		0.0596	2.00	1	04/03/2024 20:28	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:28	WG2257499
Magnesium	115000		73.5	1000	1	04/03/2024 20:28	WG2257499
Molybdenum	16.7		0.348	5.00	1	04/03/2024 20:28	WG2257499
Potassium	5040		108	2000	1	04/03/2024 20:28	WG2257499
Selenium	U		0.300	2.00	1	04/03/2024 20:28	WG2257499
Sodium	46500		376	2000	1	04/03/2024 20:28	WG2257499
Thallium	U		0.121	2.00	1	04/03/2024 20:28	WG2257499
Lithium	8.30		0.695	2.00	1	04/04/2024 13:32	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1900000		50000	1	04/01/2024 13:09	WG2257457

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	315000		8450	20000	1	04/01/2024 13:11	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:11	WG2257875

Sample Narrative:
L1720134-08 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	507000		1900	5000	5	04/07/2024 04:22	WG2258445
Fluoride	91.7	J	64.0	150	1	04/08/2024 23:42	WG2262425
Sulfate	663000		2970	25000	5	04/07/2024 04:22	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:01	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:31	WG2257499
Arsenic	0.550	J	0.180	2.00	1	04/03/2024 20:31	WG2257499
Barium	58.0		0.381	2.00	1	04/03/2024 20:31	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:31	WG2257499
Boron	24800		963	3000	100	04/04/2024 10:49	WG2257499
Cadmium	U		0.150	1.00	1	04/03/2024 20:31	WG2257499
Calcium	359000		93.6	1000	1	04/03/2024 20:31	WG2257499
Chromium	U		1.24	2.00	1	04/03/2024 20:31	WG2257499
Cobalt	0.337	J	0.0596	2.00	1	04/03/2024 20:31	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:31	WG2257499
Magnesium	152000		73.5	1000	1	04/03/2024 20:31	WG2257499
Molybdenum	35.4		0.348	5.00	1	04/03/2024 20:31	WG2257499
Potassium	7010		108	2000	1	04/03/2024 20:31	WG2257499
Selenium	U		0.300	2.00	1	04/03/2024 20:31	WG2257499
Sodium	78800		376	2000	1	04/03/2024 20:31	WG2257499
Thallium	0.134	J	0.121	2.00	1	04/03/2024 20:31	WG2257499
Lithium	9.45		0.695	2.00	1	04/04/2024 13:36	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	484000		13300	1	04/01/2024 13:09	WG2257457

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	389000		8450	20000	1	04/01/2024 13:16	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:16	WG2257875

Sample Narrative:

L1720134-09 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	76100		379	1000	1	04/07/2024 04:48	WG2258445
Fluoride	653		64.0	150	1	04/07/2024 04:48	WG2258445
Sulfate	13300		594	5000	1	04/07/2024 04:48	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:03	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/03/2024 20:34	WG2257499
Arsenic	13.7		0.180	2.00	1	04/03/2024 20:34	WG2257499
Barium	398		0.381	2.00	1	04/03/2024 20:34	WG2257499
Beryllium	U		0.190	2.00	1	04/03/2024 20:34	WG2257499
Boron	2490		96.3	300	10	04/04/2024 10:52	WG2257499
Cadmium	U		0.150	1.00	1	04/03/2024 20:34	WG2257499
Calcium	41500		93.6	1000	1	04/03/2024 20:34	WG2257499
Chromium	U		1.24	2.00	1	04/03/2024 20:34	WG2257499
Cobalt	0.978	J	0.0596	2.00	1	04/03/2024 20:34	WG2257499
Lead	U		0.849	2.00	1	04/03/2024 20:34	WG2257499
Magnesium	75100		73.5	1000	1	04/03/2024 20:34	WG2257499
Molybdenum	175		0.348	5.00	1	04/03/2024 20:34	WG2257499
Potassium	3370		108	2000	1	04/03/2024 20:34	WG2257499
Selenium	U		0.300	2.00	1	04/03/2024 20:34	WG2257499
Sodium	41700		376	2000	1	04/03/2024 20:34	WG2257499
Thallium	U		0.121	2.00	1	04/03/2024 20:34	WG2257499
Lithium	7.11		0.695	2.00	1	04/04/2024 13:39	WG2257499

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	428000		10000	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	363000		8450	20000	1	04/01/2024 13:23	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:23	WG2257875

Sample Narrative:

L1720134-10 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	3360	B	379	1000	1	04/07/2024 05:01	WG2258445
Fluoride	U		64.0	150	1	04/07/2024 05:01	WG2258445
Sulfate	39100		594	5000	1	04/07/2024 05:01	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:06	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	1.81	B J	1.03	4.00	1	04/04/2024 12:23	WG2257500
Arsenic	U		0.180	2.00	1	04/04/2024 12:23	WG2257500
Barium	93.5		0.381	2.00	1	04/04/2024 12:23	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:23	WG2257500
Boron	75.7		9.63	30.0	1	04/04/2024 13:18	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:23	WG2257500
Calcium	111000		93.6	1000	1	04/04/2024 12:23	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:23	WG2257500
Cobalt	U		0.0596	2.00	1	04/04/2024 12:23	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:23	WG2257500
Magnesium	34100		73.5	1000	1	04/04/2024 12:23	WG2257500
Molybdenum	0.833	J	0.348	5.00	1	04/04/2024 12:23	WG2257500
Potassium	1320	J	108	2000	1	04/04/2024 12:23	WG2257500
Selenium	0.332	J	0.300	2.00	1	04/04/2024 12:23	WG2257500
Sodium	4620		376	2000	1	04/04/2024 12:23	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:23	WG2257500
Lithium	4.10		0.695	2.00	1	04/04/2024 12:23	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1000000		20000	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	201000		8450	20000	1	04/01/2024 10:27	WG2257633
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 10:27	WG2257633

Sample Narrative:

L1720134-11 WG2257633: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	36200		379	1000	1	04/07/2024 05:14	WG2258445
Fluoride	114	J	64.0	150	1	04/07/2024 05:14	WG2258445
Sulfate	555000		5940	50000	10	04/07/2024 05:26	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:08	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:26	WG2257500
Arsenic	0.236	J	0.180	2.00	1	04/04/2024 12:26	WG2257500
Barium	48.2		0.381	2.00	1	04/04/2024 12:26	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:26	WG2257500
Boron	4860		193	600	20	04/04/2024 13:26	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:26	WG2257500
Calcium	215000		93.6	1000	1	04/04/2024 12:26	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:26	WG2257500
Cobalt	0.0916	J	0.0596	2.00	1	04/04/2024 12:26	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:26	WG2257500
Magnesium	57200		73.5	1000	1	04/04/2024 12:26	WG2257500
Molybdenum	7.62		0.348	5.00	1	04/04/2024 12:26	WG2257500
Potassium	4980		108	2000	1	04/04/2024 12:26	WG2257500
Selenium	4.15		0.300	2.00	1	04/04/2024 12:26	WG2257500
Sodium	27700		376	2000	1	04/04/2024 12:26	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:26	WG2257500
Lithium	16.6		0.695	2.00	1	04/04/2024 12:26	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	860000		20000	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	196000		8450	20000	1	04/01/2024 13:30	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:30	WG2257875

Sample Narrative:

L1720134-12 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	114000		379	1000	1	04/07/2024 10:08	WG2258445
Fluoride	294		64.0	150	1	04/07/2024 10:08	WG2258445
Sulfate	355000		5940	50000	10	04/07/2024 05:39	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:14	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:29	WG2257500
Arsenic	0.385	J	0.180	2.00	1	04/04/2024 12:29	WG2257500
Barium	83.4		0.381	2.00	1	04/04/2024 12:29	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:29	WG2257500
Boron	5850		482	1500	50	04/04/2024 13:29	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:29	WG2257500
Calcium	185000		93.6	1000	1	04/04/2024 12:29	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:29	WG2257500
Cobalt	0.177	J	0.0596	2.00	1	04/04/2024 12:29	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:29	WG2257500
Magnesium	44500		73.5	1000	1	04/04/2024 12:29	WG2257500
Molybdenum	58.4		0.348	5.00	1	04/04/2024 12:29	WG2257500
Potassium	7190		108	2000	1	04/04/2024 12:29	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:29	WG2257500
Sodium	35800		376	2000	1	04/04/2024 12:29	WG2257500
Thallium	0.141	J	0.121	2.00	1	04/04/2024 12:29	WG2257500
Lithium	12.5		0.695	2.00	1	04/04/2024 12:29	WG2257500

MW-10 SAMPLE RESULTS - 13

Client Sample ID: MW-10 Matrix: Water Date Collected: 03/28/24 14:05 Date Received: 04/01/24 13:40

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	359000		10000	1	04/02/2024 22:24	WG2258342

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	256000		8450	20000	1	04/01/2024 11:58	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 11:58	WG2257634

Sample Narrative:

L1720134-13 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	58300		379	1000	1	04/07/2024 06:31	WG2258445
Fluoride	132	J	64.0	150	1	04/07/2024 06:31	WG2258445
Sulfate	21500		594	5000	1	04/07/2024 06:31	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:16	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:33	WG2257500
Arsenic	14.0		0.180	2.00	1	04/04/2024 12:33	WG2257500
Barium	158		0.381	2.00	1	04/04/2024 12:33	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:33	WG2257500
Boron	74.4		9.63	30.0	1	04/04/2024 13:33	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:33	WG2257500
Calcium	64100		93.6	1000	1	04/04/2024 12:33	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:33	WG2257500
Cobalt	0.0660	J	0.0596	2.00	1	04/04/2024 12:33	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:33	WG2257500
Magnesium	22600		73.5	1000	1	04/04/2024 12:33	WG2257500
Molybdenum	4.65	J	0.348	5.00	1	04/04/2024 12:33	WG2257500
Potassium	3630		108	2000	1	04/04/2024 12:33	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:33	WG2257500
Sodium	36500		376	2000	1	04/04/2024 12:33	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:33	WG2257500
Lithium	2.22		0.695	2.00	1	04/04/2024 12:33	WG2257500

MW-11 SAMPLE RESULTS - 14

L1720134-14 Collected by Nathan Hall 03/28/24 13:00 Received 04/02/24 08:00 Field Prep Not Specified

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	274000		10000	1	04/02/2024 22:24	WG2258342

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	192000		8450	20000	1	04/01/2024 12:03	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:03	WG2257634

Sample Narrative:

L1720134-14 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	40100		379	1000	1	04/07/2024 06:43	WG2258445
Fluoride	112	J	64.0	150	1	04/07/2024 06:43	WG2258445
Sulfate	18800		594	5000	1	04/07/2024 06:43	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:18	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:36	WG2257500
Arsenic	8.01		0.180	2.00	1	04/04/2024 12:36	WG2257500
Barium	215		0.381	2.00	1	04/04/2024 12:36	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:36	WG2257500
Boron	54.5		9.63	30.0	1	04/04/2024 13:36	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:36	WG2257500
Calcium	53900		93.6	1000	1	04/04/2024 12:36	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:36	WG2257500
Cobalt	0.612	J	0.0596	2.00	1	04/04/2024 12:36	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:36	WG2257500
Magnesium	16500		73.5	1000	1	04/04/2024 12:36	WG2257500
Molybdenum	4.27	J	0.348	5.00	1	04/04/2024 12:36	WG2257500
Potassium	2930		108	2000	1	04/04/2024 12:36	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:36	WG2257500
Sodium	23100		376	2000	1	04/04/2024 12:36	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:36	WG2257500
Lithium	2.94		0.695	2.00	1	04/04/2024 12:36	WG2257500

MW-12 SAMPLE RESULTS - 15

Client Sample ID: MW-12 Matrix: Water Collected: 03/27/2024 07:30 Project: 7217-17-003D L1720134

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	808000		20000	1	04/01/2024 11:57	WG2257464

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	85100		8450	20000	1	04/01/2024 12:07	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:07	WG2257634

Sample Narrative:

L1720134-15 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	194000		379	1000	1	04/07/2024 06:56	WG2258445
Fluoride	U		64.0	150	1	04/07/2024 06:56	WG2258445
Sulfate	288000		5940	50000	10	04/07/2024 07:09	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.429		0.100	0.200	1	03/31/2024 17:21	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:39	WG2257500
Arsenic	0.201	J	0.180	2.00	1	04/04/2024 12:39	WG2257500
Barium	16.4		0.381	2.00	1	04/04/2024 12:39	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:39	WG2257500
Boron	6530		482	1500	50	04/04/2024 13:39	WG2257500
Cadmium	0.991	J	0.150	1.00	1	04/04/2024 12:39	WG2257500
Calcium	150000		93.6	1000	1	04/04/2024 12:39	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:39	WG2257500
Cobalt	2.74		0.0596	2.00	1	04/04/2024 12:39	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:39	WG2257500
Magnesium	48000		73.5	1000	1	04/04/2024 12:39	WG2257500
Molybdenum	U		0.348	5.00	1	04/04/2024 12:39	WG2257500
Potassium	700	J	108	2000	1	04/04/2024 12:39	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:39	WG2257500
Sodium	40100		376	2000	1	04/04/2024 12:39	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:39	WG2257500
Lithium	2.94		0.695	2.00	1	04/04/2024 12:39	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	214000		10000	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	128000		8450	20000	1	04/01/2024 12:10	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:10	WG2257634

Sample Narrative:

L1720134-16 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	25200		379	1000	1	04/07/2024 07:22	WG2258445
Fluoride	146	J	64.0	150	1	04/07/2024 07:22	WG2258445
Sulfate	42000		594	5000	1	04/07/2024 07:22	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:23	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:42	WG2257500
Arsenic	8.34		0.180	2.00	1	04/04/2024 12:42	WG2257500
Barium	137		0.381	2.00	1	04/04/2024 12:42	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:42	WG2257500
Boron	56.2		9.63	30.0	1	04/04/2024 13:43	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:42	WG2257500
Calcium	41400		93.6	1000	1	04/04/2024 12:42	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:42	WG2257500
Cobalt	0.271	J	0.0596	2.00	1	04/04/2024 12:42	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:42	WG2257500
Magnesium	11400		73.5	1000	1	04/04/2024 12:42	WG2257500
Molybdenum	12.2		0.348	5.00	1	04/04/2024 12:42	WG2257500
Potassium	2250		108	2000	1	04/04/2024 12:42	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:42	WG2257500
Sodium	21700		376	2000	1	04/04/2024 12:42	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:42	WG2257500
Lithium	4.53		0.695	2.00	1	04/04/2024 12:42	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	230000		10000	1	04/02/2024 22:24	WG2258342

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	130000		8450	20000	1	04/01/2024 12:15	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:15	WG2257634

Sample Narrative:

L1720134-17 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	25800		379	1000	1	04/07/2024 07:35	WG2258445
Fluoride	85.8	J	64.0	150	1	04/07/2024 07:35	WG2258445
Sulfate	48600		594	5000	1	04/07/2024 07:35	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:31	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:46	WG2257500
Arsenic	0.607	J	0.180	2.00	1	04/04/2024 12:46	WG2257500
Barium	40.4		0.381	2.00	1	04/04/2024 12:46	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:46	WG2257500
Boron	60.4		9.63	30.0	1	04/04/2024 13:46	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:46	WG2257500
Calcium	42500		93.6	1000	1	04/04/2024 12:46	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:46	WG2257500
Cobalt	0.506	J	0.0596	2.00	1	04/04/2024 12:46	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:46	WG2257500
Magnesium	11000		73.5	1000	1	04/04/2024 12:46	WG2257500
Molybdenum	6.19		0.348	5.00	1	04/04/2024 12:46	WG2257500
Potassium	2500		108	2000	1	04/04/2024 12:46	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:46	WG2257500
Sodium	21000		376	2000	1	04/04/2024 12:46	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:46	WG2257500
Lithium	3.74		0.695	2.00	1	04/04/2024 12:46	WG2257500

SAMPLE RESULTS - 18

MW-15 Collected by/date/time: 03/26/24 07:05 L1720134

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	681000		13300	1	04/02/2024 12:40	WG2258418

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	345000		8450	20000	1	04/01/2024 13:36	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:36	WG2257875

Sample Narrative:

L1720134-18 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	195000		3790	10000	10	04/07/2024 08:00	WG2258445
Fluoride	106	J	64.0	150	1	04/07/2024 07:47	WG2258445
Sulfate	8930		594	5000	1	04/07/2024 07:47	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:33	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:49	WG2257500
Arsenic	0.596	J	0.180	2.00	1	04/04/2024 12:49	WG2257500
Barium	81.8		0.381	2.00	1	04/04/2024 12:49	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:49	WG2257500
Boron	504		48.2	150	5	04/04/2024 13:50	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:49	WG2257500
Calcium	118000		93.6	1000	1	04/04/2024 12:49	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:49	WG2257500
Cobalt	1.92	J	0.0596	2.00	1	04/04/2024 12:49	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:49	WG2257500
Magnesium	34400		73.5	1000	1	04/04/2024 12:49	WG2257500
Molybdenum	21.6		0.348	5.00	1	04/04/2024 12:49	WG2257500
Potassium	3410		108	2000	1	04/04/2024 12:49	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:49	WG2257500
Sodium	84900		376	2000	1	04/04/2024 12:49	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:49	WG2257500
Lithium	6.81		0.695	2.00	1	04/04/2024 12:49	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	812000		20000	1	04/01/2024 13:09	WG2257457

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	474000		8450	20000	1	04/01/2024 12:32	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:32	WG2257634

Sample Narrative:

L1720134-19 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	103000		379	1000	1	04/07/2024 08:13	WG2258445
Fluoride	U		64.0	150	1	04/07/2024 08:13	WG2258445
Sulfate	182000		5940	50000	10	04/07/2024 08:26	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:36	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 12:52	WG2257500
Arsenic	0.226	J	0.180	2.00	1	04/04/2024 12:52	WG2257500
Barium	67.2		0.381	2.00	1	04/04/2024 12:52	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 12:52	WG2257500
Boron	60.3		9.63	30.0	1	04/04/2024 13:53	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 12:52	WG2257500
Calcium	186000		93.6	1000	1	04/04/2024 12:52	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 12:52	WG2257500
Cobalt	0.479	J	0.0596	2.00	1	04/04/2024 12:52	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 12:52	WG2257500
Magnesium	59700		73.5	1000	1	04/04/2024 12:52	WG2257500
Molybdenum	0.491	J	0.348	5.00	1	04/04/2024 12:52	WG2257500
Potassium	3930		108	2000	1	04/04/2024 12:52	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 12:52	WG2257500
Sodium	37900		376	2000	1	04/04/2024 12:52	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 12:52	WG2257500
Lithium	10.6		0.695	2.00	1	04/04/2024 12:52	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	555000		13300	1	04/03/2024 14:28	WG2257765

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	403000		8450	20000	1	04/01/2024 12:36	WG2257634
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 12:36	WG2257634

Sample Narrative:

L1720134-20 WG2257634: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	67100	J6	379	1000	1	04/07/2024 09:04	WG2258445
Fluoride	197	P1	64.0	150	1	04/07/2024 09:04	WG2258445
Sulfate	81600	J6	594	5000	1	04/07/2024 09:04	WG2258445

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 17:38	WG2256788

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	1.28	B J	1.03	4.00	1	04/04/2024 13:15	WG2257500
Arsenic	0.280	J	0.180	2.00	1	04/04/2024 13:15	WG2257500
Barium	53.9		0.381	2.00	1	04/04/2024 13:15	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 13:15	WG2257500
Boron	50.3		9.63	30.0	1	04/04/2024 14:03	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 13:15	WG2257500
Calcium	139000		93.6	1000	1	04/04/2024 13:15	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 13:15	WG2257500
Cobalt	1.76	J	0.0596	2.00	1	04/04/2024 13:15	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 13:15	WG2257500
Magnesium	44700		73.5	1000	1	04/04/2024 13:15	WG2257500
Molybdenum	3.36	J	0.348	5.00	1	04/04/2024 13:15	WG2257500
Potassium	1580	J	108	2000	1	04/04/2024 13:15	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 13:15	WG2257500
Sodium	16200		376	2000	1	04/04/2024 13:15	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 13:15	WG2257500
Lithium	10.1		0.695	2.00	1	04/04/2024 13:15	WG2257500

MW-19 SAMPLE RESULTS - 21

Client Sample ID: MW-19 Matrix: Water Collected: 03/25/24 07:00 L1720134

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	547000		13300	1	03/31/2024 13:28	WG2257437

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	448000		8450	20000	1	04/01/2024 13:43	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:43	WG2257875

Sample Narrative:

L1720134-21 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	33600		379	1000	1	04/02/2024 12:11	WG2258451
Fluoride	75.5	J	64.0	150	1	04/02/2024 12:11	WG2258451
Sulfate	57000		594	5000	1	04/02/2024 12:11	WG2258451

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 22:52	WG2256791

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 13:18	WG2257500
Arsenic	0.255	J	0.180	2.00	1	04/04/2024 13:18	WG2257500
Barium	124		0.381	2.00	1	04/04/2024 13:18	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 13:18	WG2257500
Boron	84.7		9.63	30.0	1	04/04/2024 14:06	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 13:18	WG2257500
Calcium	138000		93.6	1000	1	04/04/2024 13:18	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 13:18	WG2257500
Cobalt	0.758	J	0.0596	2.00	1	04/04/2024 13:18	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 13:18	WG2257500
Magnesium	40800		73.5	1000	1	04/04/2024 13:18	WG2257500
Molybdenum	2.48	J	0.348	5.00	1	04/04/2024 13:18	WG2257500
Potassium	1700	J	108	2000	1	04/04/2024 13:18	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 13:18	WG2257500
Sodium	13300		376	2000	1	04/04/2024 13:18	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 13:18	WG2257500
Lithium	6.24		0.695	2.00	1	04/04/2024 13:18	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1230000		20000	1	04/01/2024 11:57	WG2257464

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	284000		8450	20000	1	04/01/2024 13:49	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:49	WG2257875

Sample Narrative:

L1720134-22 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	198000	V	1900	5000	5	04/02/2024 12:24	WG2258451
Fluoride	U		320	750	5	04/02/2024 12:24	WG2258451
Sulfate	511000	V	2970	25000	5	04/02/2024 12:24	WG2258451

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 22:55	WG2256791

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 13:22	WG2257500
Arsenic	1.05	J	0.180	2.00	1	04/04/2024 13:22	WG2257500
Barium	66.1		0.381	2.00	1	04/04/2024 13:22	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 13:22	WG2257500
Boron	8500		482	1500	50	04/04/2024 14:10	WG2257500
Cadmium	0.273	J	0.150	1.00	1	04/04/2024 13:22	WG2257500
Calcium	190000		93.6	1000	1	04/04/2024 13:22	WG2257500
Chromium	3.63		1.24	2.00	1	04/04/2024 13:22	WG2257500
Cobalt	6.65		0.0596	2.00	1	04/04/2024 13:22	WG2257500
Lead	1.29	J	0.849	2.00	1	04/04/2024 13:22	WG2257500
Magnesium	114000		73.5	1000	1	04/04/2024 13:22	WG2257500
Molybdenum	15.6		0.348	5.00	1	04/04/2024 13:22	WG2257500
Potassium	5400		108	2000	1	04/04/2024 13:22	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 13:22	WG2257500
Sodium	48100		376	2000	1	04/04/2024 13:22	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 13:22	WG2257500
Lithium	8.56		0.695	2.00	1	04/04/2024 13:22	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1180000		20000	1	04/03/2024 14:28	WG2257765

Sample Narrative:
L1720134-23 WG2257765: Achieving a constant weight is not possible due to sample matrix

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	236000		8450	20000	1	04/01/2024 13:54	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 13:54	WG2257875

Sample Narrative:
L1720134-23 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	134000		379	1000	1	04/02/2024 13:15	WG2258451
Fluoride	884		64.0	150	1	04/02/2024 13:15	WG2258451
Sulfate	612000		2970	25000	5	04/02/2024 13:53	WG2258451

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 22:57	WG2256791

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 13:25	WG2257500
Arsenic	90.7		0.180	2.00	1	04/04/2024 13:25	WG2257500
Barium	22.6		0.381	2.00	1	04/04/2024 13:25	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 13:25	WG2257500
Boron	10700		963	3000	100	04/04/2024 14:13	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 13:25	WG2257500
Calcium	185000		93.6	1000	1	04/04/2024 13:25	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 13:25	WG2257500
Cobalt	U		0.0596	2.00	1	04/04/2024 13:25	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 13:25	WG2257500
Magnesium	102000		73.5	1000	1	04/04/2024 13:25	WG2257500
Molybdenum	168		0.348	5.00	1	04/04/2024 13:25	WG2257500
Potassium	9600		108	2000	1	04/04/2024 13:25	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 13:25	WG2257500
Sodium	32200		376	2000	1	04/04/2024 13:25	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 13:25	WG2257500
Lithium	80.3		0.695	2.00	1	04/04/2024 13:25	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	647000		13300	1	04/02/2024 12:40	WG2258418

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	360000		8450	20000	1	04/01/2024 14:10	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 14:10	WG2257875

Sample Narrative:

L1720134-24 WG2257875: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	192000		379	1000	1	04/03/2024 02:11	WG2258459
Fluoride	243		64.0	150	1	04/03/2024 02:11	WG2258459
Sulfate	9130		594	5000	1	04/03/2024 02:11	WG2258459

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 22:59	WG2256791

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 13:28	WG2257500
Arsenic	0.571	J	0.180	2.00	1	04/04/2024 13:28	WG2257500
Barium	83.5		0.381	2.00	1	04/04/2024 13:28	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 13:28	WG2257500
Boron	583		48.2	150	5	04/04/2024 14:17	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 13:28	WG2257500
Calcium	119000		93.6	1000	1	04/04/2024 13:28	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 13:28	WG2257500
Cobalt	1.90	J	0.0596	2.00	1	04/04/2024 13:28	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 13:28	WG2257500
Magnesium	34700		73.5	1000	1	04/04/2024 13:28	WG2257500
Molybdenum	21.8		0.348	5.00	1	04/04/2024 13:28	WG2257500
Potassium	3350		108	2000	1	04/04/2024 13:28	WG2257500
Selenium	U		0.300	2.00	1	04/04/2024 13:28	WG2257500
Sodium	84300		376	2000	1	04/04/2024 13:28	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 13:28	WG2257500
Lithium	6.66		0.695	2.00	1	04/04/2024 13:28	WG2257500

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	994000		20000	1	03/31/2024 13:28	WG2257437

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	207000		8450	20000	1	04/01/2024 14:17	WG2257875
Alkalinity,Carbonate	U		8450	20000	1	04/01/2024 14:17	WG2257875

Sample Narrative:

L1720134-25 WG2257875: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	34300		379	1000	1	04/03/2024 02:42	WG2258459
Fluoride	217		64.0	150	1	04/03/2024 02:42	WG2258459
Sulfate	581000		5940	50000	10	04/03/2024 02:58	WG2258459

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/31/2024 23:02	WG2256791

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/04/2024 13:32	WG2257500
Arsenic	0.246	J	0.180	2.00	1	04/04/2024 13:32	WG2257500
Barium	47.7		0.381	2.00	1	04/04/2024 13:32	WG2257500
Beryllium	U		0.190	2.00	1	04/04/2024 13:32	WG2257500
Boron	4820		193	600	20	04/04/2024 14:20	WG2257500
Cadmium	U		0.150	1.00	1	04/04/2024 13:32	WG2257500
Calcium	216000		93.6	1000	1	04/04/2024 13:32	WG2257500
Chromium	U		1.24	2.00	1	04/04/2024 13:32	WG2257500
Cobalt	0.0638	J	0.0596	2.00	1	04/04/2024 13:32	WG2257500
Lead	U		0.849	2.00	1	04/04/2024 13:32	WG2257500
Magnesium	58800		73.5	1000	1	04/04/2024 13:32	WG2257500
Molybdenum	7.32		0.348	5.00	1	04/04/2024 13:32	WG2257500
Potassium	4970		108	2000	1	04/04/2024 13:32	WG2257500
Selenium	4.13		0.300	2.00	1	04/04/2024 13:32	WG2257500
Sodium	27600		376	2000	1	04/04/2024 13:32	WG2257500
Thallium	U		0.121	2.00	1	04/04/2024 13:32	WG2257500
Lithium	16.2		0.695	2.00	1	04/04/2024 13:32	WG2257500

Method Blank (MB)

(MB) R4052457-1 03/31/24 13:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1720134-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1720134-07 03/31/24 13:28 • (DUP) R4052457-4 03/31/24 13:28

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1260000	1380000	1	9.47		10

Laboratory Control Sample (LCS)

(LCS) R4052457-2 03/31/24 13:28

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8490000	96.5	85.0-115	

Method Blank (MB)

(MB) R4053966-1 04/01/24 13:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1720134-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1720134-08 04/01/24 13:09 • (DUP) R4053966-3 04/01/24 13:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1900000	1970000	1	3.88		10

L1720134-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1720134-09 04/01/24 13:09 • (DUP) R4053966-4 04/01/24 13:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	484000	503000	1	3.78		10

Laboratory Control Sample (LCS)

(LCS) R4053966-2 04/01/24 13:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8650000	98.3	85.0-115	

Method Blank (MB)

(MB) R4053474-1 04/01/24 11:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1719651-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1719651-02 04/01/24 11:57 • (DUP) R4053474-3 04/01/24 11:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2720000	2990000	1	9.46		10

L1719651-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1719651-06 04/01/24 11:57 • (DUP) R4053474-4 04/01/24 11:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2820000	3060000	1	8.16		10

Laboratory Control Sample (LCS)

(LCS) R4053474-2 04/01/24 11:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8510000	96.7	85.0-115	

Method Blank (MB)

(MB) R4054411-1 04/03/24 14:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1720146-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1720146-03 04/03/24 14:28 • (DUP) R4054411-3 04/03/24 14:28

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	367000	376000	1	2.42		10

L1720146-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1720146-09 04/03/24 14:28 • (DUP) R4054411-4 04/03/24 14:28

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	596000	607000	1	1.77		10

Laboratory Control Sample (LCS)

(LCS) R4054411-2 04/03/24 14:28

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8390000	95.3	85.0-115	

Method Blank (MB)

(MB) R4053971-1 04/02/24 22:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1719777-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1719777-01 04/02/24 22:24 • (DUP) R4053971-3 04/02/24 22:24

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	922000	1000000	1	8.32		10

L1719937-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1719937-03 04/02/24 22:24 • (DUP) R4053971-4 04/02/24 22:24

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1020000	1120000	1	9.35		10

Laboratory Control Sample (LCS)

(LCS) R4053971-2 04/02/24 22:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8490000	96.5	85.0-115	

Method Blank (MB)

(MB) R4053952-1 04/02/24 14:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Dissolved Solids	U		10000	10000

L1719587-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1719587-01 04/02/24 14:30 • (DUP) R4053952-3 04/02/24 14:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	2480000	2470000	1	0.202		10

L1720111-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1720111-03 04/02/24 14:30 • (DUP) R4053952-4 04/02/24 14:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	1090000	1120000	1	2.35		10

Laboratory Control Sample (LCS)

(LCS) R4053952-2 04/02/24 14:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8520000	96.8	85.0-115	

L1720134-18,24

Method Blank (MB)

(MB) R4053462-1 04/02/24 12:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1719044-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1719044-01 04/02/24 12:40 • (DUP) R4053462-3 04/02/24 12:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	ND	ND	1	0.000		10

L1720134-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1720134-18 04/02/24 12:40 • (DUP) R4053462-4 04/02/24 12:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	681000	693000	1	1.75		10

Laboratory Control Sample (LCS)

(LCS) R4053462-2 04/02/24 12:40

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8640000	98.2	85.0-115	

Method Blank (MB)

(MB) R4052181-2 04/01/24 08:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

Method Blank (MB)

(MB) R4052181-3 04/01/24 09:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1720047-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1720047-01 04/01/24 09:21 • (DUP) R4052181-5 04/01/24 09:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	63200	63400	1	0.310		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1720116-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1720116-01 04/01/24 11:05 • (DUP) R4052181-7 04/01/24 11:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	256000	265000	1	3.59		20
Alkalinity,Carbonate	U	U	1	0.000		20

L1720116-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1720116-01 04/01/24 11:05 • (DUP) R4052181-7 04/01/24 11:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R4052188-2 04/01/24 09:00

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1720047-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1720047-03 04/01/24 09:22 • (DUP) R4052188-3 04/01/24 09:24

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	U	9170	1	200	J P1	20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1720047-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1720047-07 04/01/24 11:13 • (DUP) R4052188-4 04/01/24 11:18

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	U	U	1	0.000		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20

Method Blank (MB)

(MB) R4052260-2 04/01/24 11:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1720102-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1720102-01 04/01/24 11:45 • (DUP) R4052260-3 04/01/24 11:49

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	64300	65300	1	1.67		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1720102-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1720102-03 04/01/24 13:30 • (DUP) R4052260-4 04/01/24 13:35

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	51000	52000	1	2.02		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R4052311-2 04/01/24 12:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1720047-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1720047-02 04/01/24 12:20 • (DUP) R4052311-3 04/01/24 12:24

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	60600	62700	1	3.34		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1720102-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1720102-02 04/01/24 14:28 • (DUP) R4052311-4 04/01/24 14:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	91300	91000	1	0.288		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MFS-257-115

Method Blank (MB)

(MB) R4054932-1 04/06/24 12:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	835	J	379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1720134-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1720134-02 04/07/24 01:48 • (DUP) R4054932-6 04/07/24 02:01

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	178000	177000	1	0.574		15
Fluoride	667	630	1	5.74		15

L1720134-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1720134-20 04/07/24 09:04 • (DUP) R4054932-9 04/07/24 09:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	67100	66900	1	0.318		15
Fluoride	197	161	1	20.3	P1	15
Sulfate	81600	76400	1	6.54		15

Laboratory Control Sample (LCS)

(LCS) R4054932-2 04/06/24 12:55

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38500	96.3	80.0-120	
Fluoride	8000	7950	99.4	80.0-120	
Sulfate	40000	38900	97.1	80.0-120	

L1720134-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720134-02 04/07/24 01:48 • (MS) R4054932-7 04/07/24 02:14 • (MSD) R4054932-8 04/07/24 02:27

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40000	178000	184000	183000	15.7	12.0	1	80.0-120	V	V	0.805	15
Fluoride	8000	667	7670	7520	87.6	85.6	1	80.0-120			2.06	15

L1720134-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720134-02 04/07/24 01:48 • (MS) R4054932-7 04/07/24 02:14 • (MSD) R4054932-8 04/07/24 02:27

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %

Sample Narrative:

MS: CL/SO4 spike failed due to sample matrix

MSD: CL/SO4 spike failed due to sample matrix

L1720134-20 Original Sample (OS) • Matrix Spike (MS)

(OS) L1720134-20 04/07/24 09:04 • (MS) R4054932-10 04/07/24 09:30

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	67100	90600	58.7	1	80.0-120	J6
Fluoride	8000	197	7400	90.1	1	80.0-120	
Sulfate	40000	81600	99900	45.7	1	80.0-120	J6

Sample Narrative:

MS: CL/SO4 spike failed due to sample matrix

Method Blank (MB)

(MB) R4054382-1 04/02/24 09:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1720134-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1720134-22 04/02/24 12:24 • (DUP) R4054382-3 04/02/24 12:36

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	198000	193000	5	2.54		15
Fluoride	U	U	5	0.000		15
Sulfate	511000	493000	5	3.61		15

L1720332-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1720332-15 04/02/24 19:39 • (DUP) R4054382-6 04/02/24 19:52

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	15400	14800	1	3.83		15
Fluoride	583	539	1	7.95		15

Laboratory Control Sample (LCS)

(LCS) R4054382-2 04/02/24 09:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38700	96.8	80.0-120	
Fluoride	8000	8150	102	80.0-120	
Sulfate	40000	35900	89.8	80.0-120	

L1720134-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720134-22 04/02/24 12:24 • (MS) R4054382-4 04/02/24 12:49 • (MSD) R4054382-5 04/02/24 13:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40000	198000	205000	199000	15.5	2.53	5	80.0-120	V	V	2.56	15
Fluoride	8000	U	8210	7670	103	95.9	5	80.0-120			6.77	15

L1720134-21,22,23

L1720134-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720134-22 04/02/24 12:24 • (MS) R4054382-4 04/02/24 12:49 • (MSD) R4054382-5 04/02/24 13:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	511000	497000	480000	0.000	0.000	5	80.0-120	V	V	3.40	15

L1720332-15 Original Sample (OS) • Matrix Spike (MS)

(OS) L1720332-15 04/02/24 19:39 • (MS) R4054382-7 04/02/24 20:05

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	15400	53200	94.4	1	80.0-120	
Fluoride	8000	583	8710	102	1	80.0-120	

Method Blank (MB)

(MB) R4054674-1 04/03/24 01:37

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1720146-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1720146-03 04/03/24 05:22 • (DUP) R4054674-5 04/03/24 05:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6250	6250	1	0.0880		15
Fluoride	211	205	1	3.08		15
Sulfate	9340	9410	1	0.738		15

L1720146-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1720146-17 04/03/24 11:44 • (DUP) R4054674-6 04/03/24 12:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5030	5010	1	0.273		15
Fluoride	299	290	1	3.13		15
Sulfate	21200	21300	1	0.313		15

Laboratory Control Sample (LCS)

(LCS) R4054674-2 04/03/24 01:53

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38400	96.1	80.0-120	
Fluoride	8000	8250	103	80.0-120	
Sulfate	40000	41300	103	80.0-120	

L1720134-24,25

L1720146-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720146-02 04/03/24 03:47 • (MS) R4054674-3 04/03/24 04:02 • (MSD) R4054674-4 04/03/24 04:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Fluoride	8000	263	8210	8130	99.3	98.3	1	80.0-120			0.964	15
Sulfate	40000	U	40500	40200	101	101	1	80.0-120			0.705	15

L1720146-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L1720146-17 04/03/24 11:44 • (MS) R4054674-7 04/03/24 12:16

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	5030	41600	91.3	1	80.0-120	
Fluoride	8000	299	8120	97.7	1	80.0-120	
Sulfate	40000	21200	58100	92.3	1	80.0-120	

Method Blank (MB)

(MB) R4055384-1 04/08/24 22:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Fluoride	U		64.0	150

L1722347-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1722347-01 04/08/24 23:59 • (DUP) R4055384-3 04/09/24 00:16

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	637	636	1	0.126		15

L1722347-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1722347-17 04/09/24 06:27 • (DUP) R4055384-6 04/09/24 06:44

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	702	697	1	0.672		15

Laboratory Control Sample (LCS)

(LCS) R4055384-2 04/08/24 23:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	8000	8480	106	80.0-120	

L1722347-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1722347-08 04/09/24 02:48 • (MS) R4055384-4 04/09/24 03:05 • (MSD) R4055384-5 04/09/24 03:22

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Fluoride	8000	666	8810	8850	102	102	1	80.0-120			0.406	15

L1722347-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1722347-17 04/09/24 06:27 • (MS) R4055384-7 04/09/24 07:01 • (MSD) R4055384-8 04/09/24 07:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Fluoride	8000	702	8780	8830	101	102	1	80.0-120			0.611	15

Method Blank (MB)

(MB) R4055304-1 04/08/24 09:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	690	J	594	5000

L1722655-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1722655-01 04/09/24 00:05 • (DUP) R4055304-5 04/09/24 00:43

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	8410	7980	1	5.20		15

L1722763-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1722763-03 04/09/24 01:46 • (DUP) R4055304-6 04/09/24 01:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	34600	34600	1	0.0234		15

Laboratory Control Sample (LCS)

(LCS) R4055304-2 04/08/24 09:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	40700	102	80.0-120	

L1720102-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720102-03 04/08/24 22:50 • (MS) R4055304-3 04/08/24 23:02 • (MSD) R4055304-4 04/08/24 23:15

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	2240000	1790000	1800000	0.000	0.000	10	80.0-120	V	V	0.320	15

Sample Narrative:

OS: NO3 QC failure on original run. Did not confirm with original run.

MS: spike failed due to sample matrix

MSD: spike failed due to sample matrix

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MES-257-115

L1722763-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1722763-03 04/09/24 01:46 • (MS) R4055304-7 04/09/24 02:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	34600	69500	87.2	1	80.0-120	

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MFS-257-115

Method Blank (MB)

(MB) R4051989-1 03/31/24 16:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4051989-2 03/31/24 16:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.99	99.7	80.0-120	

L1720134-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720134-01 03/31/24 16:31 • (MS) R4051989-4 03/31/24 16:36 • (MSD) R4051989-5 03/31/24 16:38

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	U	2.63	2.55	87.8	85.1	1	75.0-125			3.11	20

Method Blank (MB)

(MB) R4052018-1 03/31/24 22:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4052018-2 03/31/24 22:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.19	106	80.0-120	

L1720102-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720102-03 03/31/24 22:13 • (MS) R4052018-4 03/31/24 22:18 • (MSD) R4052018-5 03/31/24 22:20

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	U	1.65	1.71	54.8	56.8	1	75.0-125	J6	J6	3.58	20

Method Blank (MB)

(MB) R4053480-1 04/03/24 18:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	1.12		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Boron	U		9.63	30.0
Cadmium	U		0.150	1.00
Calcium	U		93.6	1000
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Magnesium	U		73.5	1000
Molybdenum	U		0.348	5.00
Potassium	U		108	2000
Selenium	U		0.300	2.00
Sodium	U		376	2000
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4053480-2 04/03/24 18:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	52.4	105	80.0-120	
Arsenic	50.0	53.1	106	80.0-120	
Barium	50.0	50.3	101	80.0-120	
Beryllium	50.0	52.1	104	80.0-120	
Boron	50.0	55.6	111	80.0-120	
Cadmium	50.0	52.9	106	80.0-120	
Calcium	5000	5330	107	80.0-120	
Chromium	50.0	53.5	107	80.0-120	
Cobalt	50.0	54.0	108	80.0-120	
Lead	50.0	51.3	103	80.0-120	
Magnesium	5000	5080	102	80.0-120	
Molybdenum	50.0	50.1	100	80.0-120	
Potassium	5000	4980	99.6	80.0-120	
Selenium	50.0	51.7	103	80.0-120	
Sodium	5000	5190	104	80.0-120	
Thallium	50.0	50.5	101	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4053480-2 04/03/24 18:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lithium	50.0	52.7	105	80.0-120	

L1720102-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720102-03 04/03/24 18:24 • (MS) R4053480-4 04/03/24 18:36 • (MSD) R4053480-5 04/03/24 18:40

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	U	52.5	50.6	105	101	5	75.0-125			3.73	20
Arsenic	50.0	U	50.6	48.8	101	97.7	5	75.0-125			3.48	20
Barium	50.0	12.4	60.4	60.5	96.1	96.2	5	75.0-125			0.107	20
Beryllium	50.0	U	50.1	48.8	100	97.7	5	75.0-125			2.48	20
Boron	50.0	2140	2010	1990	0.000	0.000	5	75.0-125	V	V	0.954	20
Cadmium	50.0	U	48.6	47.9	97.2	95.8	5	75.0-125			1.40	20
Calcium	5000	385000	373000	358000	0.000	0.000	5	75.0-125	V	V	4.05	20
Chromium	50.0	U	50.5	48.3	101	96.6	5	75.0-125			4.52	20
Cobalt	50.0	U	48.8	47.7	97.6	95.3	5	75.0-125			2.34	20
Lead	50.0	U	46.9	45.7	93.7	91.4	5	75.0-125			2.47	20
Magnesium	5000	275000	271000	268000	0.000	0.000	5	75.0-125	V	V	1.03	20
Molybdenum	50.0	8.88	58.8	57.3	99.8	96.8	5	75.0-125			2.59	20
Potassium	5000	14100	18000	17800	79.1	74.1	5	75.0-125		J6	1.39	20
Selenium	50.0	31.7	79.5	78.4	95.7	93.3	5	75.0-125			1.49	20
Sodium	5000	2640000	2450000	2420000	0.000	0.000	5	75.0-125	V	V	1.33	20
Thallium	50.0	U	45.8	44.0	91.5	88.1	5	75.0-125			3.83	20
Lithium	50.0	549	557	546	16.7	0.000	5	75.0-125	V	V	2.01	20

Method Blank (MB)

(MB) R4053730-1 04/04/24 11:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	1.32	J	1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Boron	U		9.63	30.0
Cadmium	U		0.150	1.00
Calcium	U		93.6	1000
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Magnesium	U		73.5	1000
Molybdenum	U		0.348	5.00
Potassium	U		108	2000
Selenium	U		0.300	2.00
Sodium	U		376	2000
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4053730-3 04/04/24 11:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	56.1	112	80.0-120	
Arsenic	50.0	51.7	103	80.0-120	
Barium	50.0	52.1	104	80.0-120	
Beryllium	50.0	49.1	98.3	80.0-120	
Boron	50.0	55.9	112	80.0-120	
Cadmium	50.0	52.3	105	80.0-120	
Calcium	5000	5220	104	80.0-120	
Chromium	50.0	51.7	103	80.0-120	
Cobalt	50.0	51.4	103	80.0-120	
Lead	50.0	53.3	107	80.0-120	
Magnesium	5000	5160	103	80.0-120	
Molybdenum	50.0	51.5	103	80.0-120	
Potassium	5000	5110	102	80.0-120	
Selenium	50.0	53.1	106	80.0-120	
Sodium	5000	5250	105	80.0-120	
Thallium	50.0	52.8	106	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4053730-3 04/04/24 11:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lithium	50.0	50.8	102	80.0-120	

L1720146-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720146-03 04/04/24 11:38 • (MS) R4053730-4 04/04/24 11:47 • (MSD) R4053730-5 04/04/24 11:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	U	56.4	57.4	113	115	1	75.0-125			1.64	20
Arsenic	50.0	1.86	53.3	53.4	103	103	1	75.0-125			0.303	20
Barium	50.0	185	229	229	87.6	87.6	1	75.0-125			0.00376	20
Beryllium	50.0	U	48.2	47.6	96.4	95.2	1	75.0-125			1.28	20
Boron	50.0	170	224	224	109	108	1	75.0-125			0.332	20
Cadmium	50.0	0.186	53.2	53.9	106	107	1	75.0-125			1.35	20
Calcium	5000	80000	83300	83300	65.9	64.2	1	75.0-125	V	V	0.107	20
Chromium	50.0	U	51.8	51.9	104	104	1	75.0-125			0.200	20
Cobalt	50.0	0.217	50.9	51.4	101	102	1	75.0-125			1.06	20
Lead	50.0	U	51.2	52.1	102	104	1	75.0-125			1.81	20
Magnesium	5000	36500	40700	39800	84.0	66.0	1	75.0-125		V	2.23	20
Molybdenum	50.0	0.544	53.7	54.5	106	108	1	75.0-125			1.50	20
Potassium	5000	948	6170	6070	104	102	1	75.0-125			1.52	20
Selenium	50.0	U	54.1	55.2	108	110	1	75.0-125			1.99	20
Sodium	5000	19900	24700	24900	96.6	101	1	75.0-125			0.863	20
Thallium	50.0	U	50.9	52.1	102	104	1	75.0-125			2.41	20
Lithium	50.0	7.47	55.8	54.5	96.8	94.0	1	75.0-125			2.48	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MFS-257-115

Company Name/Address: S&ME - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com

Report to: Vince Epps
Email To: vepps@smeinc.com

Project Description: Miami Fort Station
City/State Collected: North Bend, OH
Please Circle: PT MT CT (ET)

Phone: 513-771-8471
Client Project # 7217-17-003D
Lab Project # LITEGNTN-MIAMI

Collected by (print): Carter Harlem
Site/Facility ID # MFS Unit 115 (Plant)
P.O. #

Collected by (signature): Carter Harlem
Immediately Packed on Ice N ___ Y X
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Quote #
Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-Nc	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
A-1 Pond	Grab	GW	NA	3/28/24	1610	5	X	X	X	X	X		-01
B-1 Pond	Grab	GW	NA	3/28/24	1615	5	X	X	X	X	X		-02
MW-01	Grab	GW	NA	3/26/24	1625	5	X	X	X	X	X		-03
MW-02	Grab	GW	NA	3/28/24	1535	5	X	X	X	X	X		-04
MW-03A	Grab	GW	NA	3/28/24	1205	5	X	X	X	X	X		-05
MW-04	Grab	GW	NA	3/28/24	1115	5	X	X	X	X	X		-06
MW-4A	Grab	GW	NA	3/26/24	1020	5	X	X	X	X	X		-07
MW-05	Grab	GW	NA	3/26/24	1240	5	X	X	X	X	X		-08
MW-06	Grab	GW	NA	3/26/24	1135	5	X	X	X	X	X		-09
MW-07	Grab	GW	NA	3/27/24	0935	5	X	X	X	X	X		-10

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1720184
A034
Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Carter Harlem S&ME	3/28/24	1830	To FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Laura Burchfield

Trip Blank Received: Yes (No) HCL / MeoH TBR
Temp: °C Bottles Received: 130
Date: 3/29/24 Time: 9:30

PH-10BDH5021 TRC-23623[illegible] CR6-20221V

Hold: Condition: NCF / (OK)

Chain of Custody Page 2 of 3

Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1720134

Table #

Acctnum: LITEGNTN

Template: T181344

Prelogin: P1063309

PM: 134

PB:

Shipped Via:

Company Name: S&ME - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com

Pres Chk

Report to: Vince Epps

Email To: vepps@smeinc.com

Project Description: Miami Fort Station

City/State Collected: North Bend, OH

Please Circle: PT MT CT ET

Phone: 513-771-8471

Client Project # 7217-17-003D

Lab Project # LITEGNTN-MIAMI

Collected by (print): Carter Harlan

Site/Facility ID # MFS Unit 115 (Plant)

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-Nc	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-08	Grab	GW	NA	3/27/24	1145	5	X	X	X	X	X		-11
MW-09	Grab	GW	NA	3/27/24	1310	5	X	X	X	X	X		-12
MW-10	Grab	GW	NA	3/28/24	1415	5	X	X	X	X	X		-13
MW-11	Grab	GW	NA	3/28/24	1310	5	X	X	X	X	X		-14
MW-12	Grab	GW	NA	3/27/24	1510	5	X	X	X	X	X		-15
MW-13	Grab	GW	NA	3/27/24	1625	5	X	X	X	X	X		-16
MW-14	Grab	GW	NA	3/28/24	0945	5	X	X	X	X	X		-17
MW-15	Grab	GW	NA	3/26/24	1515	5	X	X	X	X	X		-18
MW-16	Grab	GW	NA	3/26/24	1400	5	X	X	X	X	X		-19
MW-17	Grab	GW	NA	3/27/24	1035	5	X	X	X	X	X		-20

Analysis / Container / Preservative

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Carter Harlan S&ME	3/28/24	1830	Shipped via FedEx	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 130
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/29/24 Time: 9:30

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address: S&ME Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com
Pres Chk

Report to: Vince Epps
Email To: vepps@smeinc.com

Project Description: Miami Fort Station
City/State Collected: North Bend, OH
Please Circle: PT MT CT ET

Phone: 513-771-8471
Client Project # 7217-17-003D
Lab Project # LITEGNTN-MIAMI

Collected by (print): Carter Harden
Site/Facility ID # MFS Unit 115 (Plant)
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-N	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-19	Grab	GW	NA	3/25/24	1600	5	X	X	X	X	X		-21
4A Production Well	Grab	GW	NA	3/26/24	0930	5	X	X	X	X	X		-22
XPW-01	Grab	GW	NA	3/27/24	1410	5	X	X	X	X	X		-23
DUP-1	Grab	GW	NA	3/26/24	—	5	X	X	X	X	X		-24
DUP-2	Grab	GW	NA	3/27/24	—		X	X	X	X	X		-25
MS/MSD	Grab	GW	NA	3/26/24	0930	5	X	X	X	X	X		-22

Chain of Custody Page 3 of 3

Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1720134
Table #
Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Carter Harden S&ME	3/28/24	1830	Shipped Via FedEx	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 130
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Laura Burchfield	Date: 3/29/24 Time: 9:00

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

LT20134

Tracking Numbers	Temperature
7320 9667 6734	2.3 + 0.1 = 2.4 TL ΔT
7320 9667 6701	1.4 + 0.1 = 1.5 TL ΔT
7320 9667 6712	0.5 + 0.1 = 0.6 TL ΔT
7320 9667 6697	0.3 + 0.1 = 0.4 TL ΔT
7320 9667 6723	5.6 + 0.1 = 5.7 TL ΔT
7320 9667 6745	1.6 + 0.1 = 1.7 TL ΔT
7320 9667 6686	0.9 + 0.1 = 1.0 TL ΔT

Name

Date

Pace Analytical®

ANALYTICAL REPORT

April 30, 2024

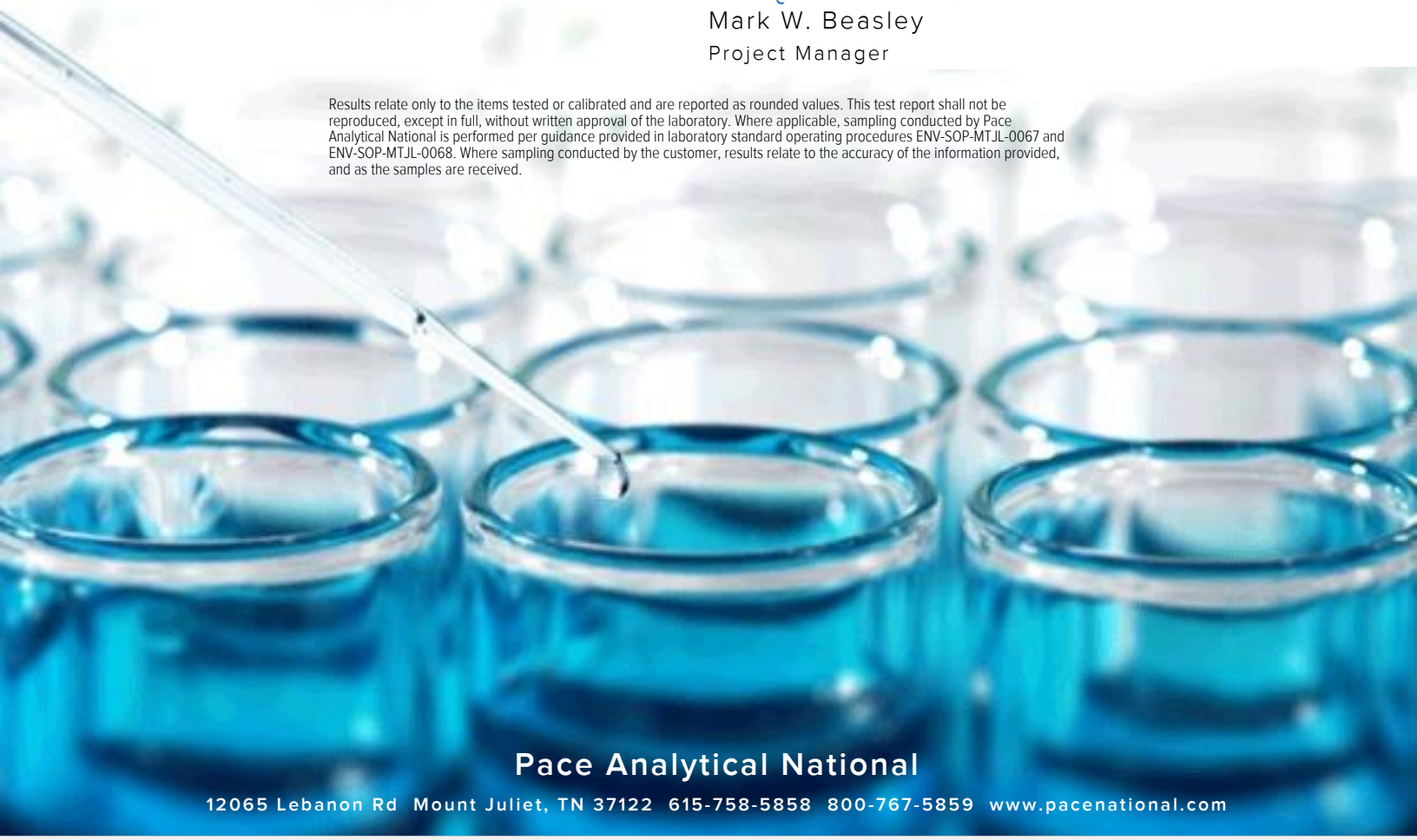
S&ME - Nashville, TN

Sample Delivery Group:	L1720135
Samples Received:	03/29/2024
Project Number:	7217-17-003D
Description:	Miami Fort Station - North Bend, OH
Site:	MIAMI (SITE 115)
Report To:	Vince Epps 862 East Crescentville Road Cincinnati, OH 45246

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

A-1 POND L1720135-01 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 16:40 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2268247	1	04/16/24 22:33	04/19/24 22:17	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/19/24 22:17	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

B-1 POND L1720135-02 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 16:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2268247	1	04/16/24 22:33	04/19/24 22:17	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/19/24 22:17	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-01 L1720135-03 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 16:25 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2268247	1	04/16/24 22:33	04/19/24 22:17	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/19/24 22:17	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-02 L1720135-04 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 15:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2268247	1	04/16/24 22:33	04/19/24 18:04	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/19/24 18:04	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-03A L1720135-05 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 12:05 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-04 L1720135-06 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 11:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

MW-4A L1720135-07 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 10:20 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-05 L1720135-08 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 10:40 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-06 L1720135-09 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 11:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-07 L1720135-10 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/27/24 09:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-08 L1720135-11 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/27/24 11:45 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-09 L1720135-12 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/27/24 13:10 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

MW-10 L1720135-13 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 14:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-11 L1720135-14 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 13:10 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-12 L1720135-15 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/27/24 15:10 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2261156	1	04/05/24 12:55	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2261156	1	04/05/24 12:55	04/08/24 22:54	ZRG	Mt. Juliet, TN

MW-13 L1720135-16 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/27/24 16:25 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

MW-14 L1720135-17 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/28/24 09:45 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

MW-15 L1720135-18 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 15:15 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

MW-16 L1720135-19 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 14:00 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

MW-17 L1720135-20 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/27/24 10:35 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

MW-19 L1720135-21 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/25/24 16:00 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:59	ZRG	Mt. Juliet, TN

4A PRODUCTION WELL L1720135-22 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 09:30 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

XPW-01 L1720135-23 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/27/24 14:10 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

DUP-1 L1720135-24 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 03/26/24 00:00 | Received date/time: 03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2270635	1	04/20/24 10:56	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/24/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

DUP-2 L1720135-25 Non-Potable Water

Collected by	Collected date/time	Received date/time
Carter Harlan	03/27/24 00:00	03/29/24 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2271106	1	04/22/24 17:56	04/25/24 17:17	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2262616	1	04/09/24 16:29	04/25/24 17:17	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2262616	1	04/09/24 16:29	04/10/24 23:57	ZRG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MFS-257-115

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.631		0.238	0.415	0.421	0.221	04/19/2024 22:17	WG2268247
(T) Barium	*117*					*30.0-143*	*04/19/2024 22:17*	WG2268247
(T) Yttrium	*101*					*30.0-136*	*04/19/2024 22:17*	WG2268247

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.717		0.307	0.526	04/19/2024 22:17	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0861	U	0.194	0.0798	0.316	0.212	04/08/2024 22:54	WG2261156
(T) Barium-133	*94.6*					*30.0-143*	*04/08/2024 22:54*	WG2261156

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MFS-257-115

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.669		0.206	0.349	0.360	0.191	04/19/2024 22:17	WG2268247
(T) Barium	*113*					*30.0-143*	*04/19/2024 22:17*	WG2268247
(T) Yttrium	*100*					*30.0-136*	*04/19/2024 22:17*	WG2268247

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.20		0.354	0.438	04/19/2024 22:17	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.534		0.288	0.138	0.249	0.176	04/08/2024 22:54	WG2261156
(T) Barium-133	*95.6*					*30.0-143*	*04/08/2024 22:54*	WG2261156

SAMPLE RESULTS - 03

MW-01 Collected: 03/26/2024 07:20 L1720135

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.674		0.254	0.430	0.450	0.236	04/19/2024 22:17	WG2268247
(T) Barium	*123*					*30.0-143*	*04/19/2024 22:17*	WG2268247
(T) Yttrium	*90.7*					*30.0-136*	*04/19/2024 22:17*	WG2268247

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.888		0.357	0.568	04/19/2024 22:17	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.214	J	0.251	0.104	0.346	0.237	04/08/2024 22:54	WG2261156
(T) Barium-133	*89.2*					*30.0-143*	*04/08/2024 22:54*	WG2261156

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.889		0.421	0.621	0.733	0.382	04/19/2024 18:04	WG2268247
(T) Barium	*118*					*30.0-143*	*04/19/2024 18:04*	WG2268247
(T) Yttrium	*90.0*					*30.0-136*	*04/19/2024 18:04*	WG2268247

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.22		0.503	0.800	04/19/2024 18:04	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.336		0.276	0.126	0.321	0.222	04/08/2024 22:54	WG2261156
(T) Barium-133	*94.8*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.262	J	0.279	1.07	0.520	0.272	04/24/2024 21:56	WG2270635
(T) Barium	*111*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*85.9*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.421	J	0.383	0.654	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.159	J	0.262	0.105	0.396	0.261	04/08/2024 22:54	WG2261156
(T) Barium-133	*90.8*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.476	J	0.260	0.524	0.477	0.249	04/24/2024 21:56	WG2270635
(T) Barium	*109*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*99.7*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.605	J	0.382	0.648	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.129	U	0.280	0.109	0.439	0.285	04/08/2024 22:54	WG2261156
(T) Barium-133	*90.6*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.853		0.314	0.474	0.568	0.296	04/24/2024 21:56	WG2270635
(T) Barium	*106*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*89.2*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.15		0.420	0.666	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.300	J	0.279	0.118	0.347	0.238	04/08/2024 22:54	WG2261156
(T) Barium-133	*89.2*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.333	J	0.328	1.07	0.609	0.318	04/24/2024 21:56	WG2270635
(T) Barium	*106*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*77.5*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.481	J	0.412	0.719	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.148	J	0.250	0.0998	0.383	0.257	04/08/2024 22:54	WG2261156
(T) Barium-133	*89.9*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.146	U	0.300	1.19	0.563	0.295	04/24/2024 21:56	WG2270635
(T) Barium	*124*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*79.5*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.794		0.496	0.699	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.648		0.395	0.171	0.414	0.273	04/08/2024 22:54	WG2261156
(T) Barium-133	*89.1*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.359	J	0.273	0.750	0.504	0.263	04/24/2024 21:56	WG2270635
(T) Barium	*116*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*93.9*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.585		0.352	0.572	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.226	J	0.222	0.0952	0.270	0.200	04/08/2024 22:54	WG2261156
(T) Barium-133	*88.1*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.883		0.272	0.404	0.487	0.256	04/24/2024 21:56	WG2270635
(T) Barium	*111*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*83.1*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.29		0.389	0.549	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.410		0.278	0.124	0.253	0.192	04/08/2024 22:54	WG2261156
(T) Barium-133	*88.8*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.232	J	0.209	0.784	0.391	0.207	04/24/2024 21:56	WG2270635
(T) Barium	*99.0*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*90.9*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.527		0.332	0.493	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.295	J	0.258	0.114	0.301	0.216	04/08/2024 22:54	WG2261156
(T) Barium-133	*90.8*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.741		0.308	0.498	0.559	0.291	04/24/2024 21:56	WG2270635
(T) Barium	*119*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*85.2*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.02		0.410	0.657	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.274	J	0.271	0.113	0.346	0.240	04/08/2024 22:54	WG2261156
(T) Barium-133	*88.4*					*30.0-143*	*04/08/2024 22:54*	WG2261156

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.485		0.221	0.440	0.403	0.212	04/24/2024 21:56	WG2270635
(T) Barium	*120*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*95.4*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.03		0.359	0.438	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.548		0.283	0.134	0.171	0.141	04/08/2024 22:54	WG2261156
(T) Barium-133	*91.9*					*30.0-143*	*04/08/2024 22:54*	WG2261156

SAMPLE RESULTS - 15

MW-12 Collected: 03/27/2024 07:20 Received: 04/02/2024 L1720135

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0483	U	0.281	1.18	0.529	0.276	04/24/2024 21:56	WG2270635
(T) Barium	*103*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*87.3*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0483	U	0.283	0.554	04/24/2024 21:56	WG2261156

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	-0.00720	U	0.0315	0.00668	0.166	0.137	04/08/2024 22:54	WG2261156
(T) Barium-133	*92.8*					*30.0-143*	*04/08/2024 22:54*	WG2261156

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.480	U	0.258	1.13	0.503	0.263	04/24/2024 21:56	WG2270635
(T) Barium	*106*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*97.8*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.320	J	0.358	0.548	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.320		0.248	0.101	0.217	0.179	04/10/2024 23:57	WG2262616
(T) Barium-133	*80.4*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.703		0.276	0.458	0.500	0.262	04/24/2024 21:56	WG2270635
(T) Barium	*123*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*88.2*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.28		0.415	0.536	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.580		0.310	0.130	0.194	0.160	04/10/2024 23:57	WG2262616
(T) Barium-133	*81.6*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.407	U	0.273	1.20	0.528	0.275	04/24/2024 21:56	WG2270635
(T) Barium	*129*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*92.8*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.159	U	0.315	0.559	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.159	J	0.158	0.0712	0.183	0.144	04/10/2024 23:57	WG2262616
(T) Barium-133	*90.8*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0775	U	0.189	0.714	0.360	0.191	04/24/2024 21:56	WG2270635
(T) Barium	*108*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*97.2*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.669		0.350	0.399	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.592		0.295	0.139	0.173	0.143	04/10/2024 23:57	WG2262616
(T) Barium-133	*90.9*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.252	J	0.218	0.766	0.407	0.215	04/24/2024 21:56	WG2270635
(T) Barium	*106*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*89.3*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.446	J	0.283	0.448	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.194		0.181	0.0752	0.187	0.154	04/10/2024 23:57	WG2262616
(T) Barium-133	*82.5*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0115	U	0.196	0.734	0.376	0.199	04/24/2024 21:56	WG2270635
(T) Barium	*111*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*94.5*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.244	J	0.284	0.435	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.232		0.206	0.0844	0.219	0.172	04/10/2024 23:59	WG2262616
(T) Barium-133	*82.2*					*30.0-143*	*04/10/2024 23:59*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.435	J	0.280	0.642	0.516	0.270	04/24/2024 21:56	WG2270635
(T) Barium	*110*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*91.4*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.692		0.354	0.555	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.257		0.216	0.0845	0.204	0.169	04/10/2024 23:57	WG2262616
(T) Barium-133	*77.2*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.988		0.205	0.287	0.351	0.187	04/24/2024 21:56	WG2270635
(T) Barium	*106*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*94.1*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.988		0.208	0.394	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	-0.00775	U	0.0340	0.00664	0.179	0.148	04/10/2024 23:57	WG2262616
(T) Barium-133	*85.6*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.590		0.249	0.450	0.452	0.237	04/24/2024 21:56	WG2270635
(T) Barium	*109*					*30.0-143*	*04/24/2024 21:56*	WG2270635
(T) Yttrium	*100*					*30.0-136*	*04/24/2024 21:56*	WG2270635

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.737		0.293	0.486	04/24/2024 21:56	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.147	J	0.155	0.0672	0.178	0.147	04/10/2024 23:57	WG2262616
(T) Barium-133	*86.4*					*30.0-143*	*04/10/2024 23:57*	WG2262616

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DUP-2 | Collected by | 04/22/24 10:00 | Received | 04/23/24 13:30

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.147	U	0.286	1.19	0.530	0.277	04/25/2024 17:17	WG2271106
(T) Barium	*97.4*					*30.0-143*	*04/25/2024 17:17*	WG2271106
(T) Yttrium	*92.0*					*30.0-136*	*04/25/2024 17:17*	WG2271106

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.604		0.416	0.558	04/25/2024 17:17	WG2262616

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.604		0.302	0.136	0.176	0.146	04/10/2024 23:57	WG2262616
(T) Barium-133	*87.5*					*30.0-143*	*04/10/2024 23:57*	WG2262616

Method Blank (MB)

(MB) R4060519-1 04/19/24 18:04

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.0161	U	0.157	0.285	0.150
(T) Barium	*121*		*121*		
(T) Yttrium	*93.9*		*93.9*		

L1720135-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1720135-04 04/19/24 18:04 • (DUP) R4060519-5 04/19/24 18:04

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.889	0.421	0.733	0.382	0.145	0.410	0.733	0.382	144	1.27	U	20	3
(T) Barium	*118*				*119*	*119*							
(T) Yttrium	*90.0*				*94.3*	*94.3*							

Laboratory Control Sample (LCS)

(LCS) R4060519-2 04/19/24 18:04

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.40	88.0	80.0-120	
(T) Barium			*116*		
(T) Yttrium			*105*		

L1719737-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1719737-29 04/19/24 18:04 • (MS) R4060519-3 04/19/24 18:04 • (MSD) R4060519-4 04/19/24 18:04

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.394	12.3	13.8	71.2	80.3	1	70.0-130			11.6		20
(T) Barium		*114*			*114*	*127*							
(T) Yttrium		*108*			*104*	*94.5*							

Method Blank (MB)

(MB) R4063500-1 04/24/24 21:56

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.130	U	0.148	0.287	0.151
(T) Barium	*117*		*117*		
(T) Yttrium	*93.8*		*93.8*		

L1720135-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1720135-08 04/24/24 21:56 • (DUP) R4063500-5 04/24/24 21:56

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.333	0.328	0.609	0.318	-0.332	0.278	0.533	0.277	200	1.55	U	20	3
(T) Barium	*106*				*108*	*108*							
(T) Yttrium	*77.5*				*93.4*	*93.4*							

Laboratory Control Sample (LCS)

(LCS) R4063500-2 04/24/24 21:56

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.17	103	80.0-120	
(T) Barium			*104*		
(T) Yttrium			*89.0*		

L1720135-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720135-22 04/24/24 21:56 • (MS) R4063500-3 04/24/24 21:56 • (MSD) R4063500-4 04/24/24 21:56

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.435	8.82	8.94	83.9	85.1	1	70.0-130			1.35		20
(T) Barium		*110*			*113*	*111*							
(T) Yttrium		*91.4*			*97.7*	*103*							

Method Blank (MB)

(MB) R4063532-1 04/25/24 17:17

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.0148	U	0.174	0.319	0.167
(T) Barium	*110*		*110*		
(T) Yttrium	*99.5*		*99.5*		

L1720148-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1720148-09 04/25/24 17:17 • (DUP) R4063532-5 04/25/24 17:17

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	-0.259	0.224	0.426	0.225	0.0773	0.394	0.720	0.375	200	0.742	U	20	3
(T) Barium	*117*				*105*	*105*							
(T) Yttrium	*90.0*				*97.9*	*97.9*							

Laboratory Control Sample (LCS)

(LCS) R4063532-2 04/25/24 17:17

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.51	110	80.0-120	
(T) Barium			*119*		
(T) Yttrium			*82.1*		

L1720148-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720148-02 04/25/24 17:17 • (MS) R4063532-3 04/25/24 17:17 • (MSD) R4063532-4 04/25/24 17:17

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	-0.159	16.1	17.2	96.1	103	1	70.0-130			7.09		20
(T) Barium		*109*			*118*	*119*							
(T) Yttrium		*96.1*			*101*	*90.1*							

RT: 01,02,03,04,05,06,07,08,09,10,11,12,13,14,15

Method Blank (MB)

(MB) R4057825-1 04/08/24 22:54

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.00197	U	0.0465	0.0889	0.0593
(T) Barium-133	*88.2*		*88.2*		

L1720135-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1720135-07 04/08/24 22:54 • (DUP) R4057825-5 04/08/24 22:54

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.300	0.279	0.347	0.238	0.559	0.322	0.335	0.217	60.1	0.606		20	3
(T) Barium-133	*89.2*				*91.6*	*91.6*							

Laboratory Control Sample (LCS)

(LCS) R4057825-2 04/08/24 22:54

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.72	114	80.0-120	
(T) Barium-133			*87.5*		

L1722466-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1722466-17 04/08/24 22:54 • (MS) R4057825-3 04/08/24 22:54 • (MSD) R4057825-4 04/08/24 22:54

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.531	20.4	20.3	99.2	98.9	1	75.0-125			0.246		20
(T) Barium-133		*93.4*			*83.9*	*84.6*							

L1720135-1,6,8,18,19,20,21,22,23,24,25

Method Blank (MB)

(MB) R4059789-1 04/10/24 23:57

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0243	U	0.0421	0.0686	0.0509
(T) Barium-133	*85.2*		*85.2*		

L1720135-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1720135-16 04/10/24 23:57 • (DUP) R4059789-5 04/10/24 23:57

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.320	0.248	0.217	0.179	0.288	0.233	0.231	0.181	10.5	0.0937		20	3
(T) Barium-133	*80.4*				*89.4*	*89.4*							

Laboratory Control Sample (LCS)

(LCS) R4059789-2 04/10/24 23:57

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.28	106	80.0-120	
(T) Barium-133			*66.1*		

L1720135-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1720135-22 04/10/24 23:57 • (MS) R4059789-3 04/10/24 23:57 • (MSD) R4059789-4 04/10/24 23:57

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.257	22.4	21.9	110	108	1	75.0-125			2.13		20
(T) Barium-133		*77.2*			*86.4*	*81.9*							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company: SMEINC - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com

Report to: Vince Epps
Email To: vepps@smeinc.com

Project Description: Miami Fort Station
City/State Collected: North Bend, OH
Please Circle: PT MT CT (ET)

Phone: 513-771-8471
Client Project # 7217-17-003D
Lab Project # LITEGNTN-MIAMI

Collected by (print): Carter Harlem
Site/Facility ID # MFS Unit 115 (Plant)
P.O. #

Collected by (signature): Carter Harlem
Immediately Packed on Ice N ___ Y X
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Quote #
Date Results Needed

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1720135
A034
Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-No	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
A-1 Pond	Grab	GW	NA	3/28/24	1640	5	X	X	X	X	X		-01
B-1 Pond	Grab	GW	NA	3/28/24	1615	5	X	X	X	X	X		-02
MW-01	Grab	GW	NA	3/26/24	1625	5	X	X	X	X	X		-03
MW-02	Grab	GW	NA	3/28/24	1535	5	X	X	X	X	X		-04
MW-03A	Grab	GW	NA	3/28/24	1205	5	X	X	X	X	X		-05
MW-04	Grab	GW	NA	3/28/24	1115	5	X	X	X	X	X		-06
MW-4A	Grab	GW	NA	3/26/24	1020	5	X	X	X	X	X		-07
MW-05	Grab	GW	NA	3/26/24	1240	5	X	X	X	X	X		-08
MW-06	Grab	GW	NA	3/26/24	1135	5	X	X	X	X	X		-09
MW-07	Grab	GW	NA	3/27/24	0935	5	X	X	X	X	X		-10

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: X Y __N
RAD Screen <0.5 mR/hr: X Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Carter Harlem SME	3/28/24	1830	To Fed Ex
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Laura Beardsley

Trip Blank Received: Yes (No) HCL / MeoH TBR
Temp: °C Bottles Received: 130
Date: 3/29/24 Time: 9:30

If p PH-10BDH5021 TRC-21623 CR6-20221V Date/Time
Hold:
Condition: NCF / OK

Company Name/Address: **S&ME - Cincinnati**
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: **Accounts Payable**
smeinc_invoice@concursolutions.com
Pres Chk

Report to: **Vince Epps**
Email To: **vepps@smeinc.com**

Project Description: **Miami Fort Station**
City/State Collected: **North Bend, OH**
Please Circle: PT MT CT ET

Phone: **513-771-8471**
Client Project # **7217-17-003D**
Lab Project # **LITEGNTN-MIAMI**

Collected by (print): **Carter Harlan**
Site/Facility ID # **MFS Unit 115 (Plant)**
P.O. #

Collected by (signature): **Carter Harlan**
Immediately Packed on Ice N ___ Y X
Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day
Quote #
Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-Nc	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres						Remarks	Sample # (lab only)
MW-08	Grab	GW	NA	3/27/24	1145	5	X	X	X	X	X							-11
MW-09	Grab	GW	NA	3/27/24	1310	5	X	X	X	X	X							-12
MW-10	Grab	GW	NA	3/28/24	1415	5	X	X	X	X	X							-13
MW-11	Grab	GW	NA	3/28/24	1310	5	X	X	X	X	X							-14
MW-12	Grab	GW	NA	3/27/24	1510	5	X	X	X	X	X							-15
MW-13	Grab	GW	NA	3/27/24	1625	5	X	X	X	X	X							-16
MW-14	Grab	GW	NA	3/28/24	0945	5	X	X	X	X	X							-17
MW-15	Grab	GW	NA	3/26/24	1515	5	X	X	X	X	X							-18
MW-16	Grab	GW	NA	3/26/24	1400	5	X	X	X	X	X							-19
MW-17	Grab	GW	NA	3/27/24	1035	5	X	X	X	X	X							-20

Chain of Custody Page 2 of 3

Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
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SDG # L1720135
Table #
Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP (Y) N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Carter Harlan SME	3/28/24	1830	Shipped via FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes (No) HCL / MeoH TBR
Temp: °C Bottles Received: 130
Date: 3/29/24 Time: 9:30
If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

Company Name/Address: S&ME - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com

Report to: Vince Epps
Email To: vepps@smeinc.com

Project Description: Miami Fort Station
City/State Collected: North Bend, OH
Please Circle: PT MT CT ET

Phone: 513-771-8471
Client Project # 7217-17-003D
Lab Project # LITEGNTN-MIAMI

Collected by (print): Carter Harlan
Site/Facility ID # MFS Unit 115 (Plant)
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Chain of Custody Page 3 of 3

Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1720135
Table #
Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-No	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres						Remarks	Sample # (lab only)
							Pres Chk											
								(2)	(2)	(2)								
MW-19	Grab	GW	NA	3/25/24	1600	5	X	X	X	X	X							-21
4A Production Well	Grab	GW	NA	3/26/24	0930	5	X	X	X	X	X							-22
XPW-01	Grab	GW	NA	3/27/24	1410	5	X	X	X	X	X							-23
DUP-1	Grab	GW	NA	3/26/24	—	5	X	X	X	X	X							-24
DUP-2	Grab	GW	NA	3/27/24	—		X	X	X	X	X							-25
MS/MSD	Grab	GW	NA	3/26/24	0930	5	X	X	X	X	X							-22

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP 0Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: X Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Carter Harlan S&ME	3/28/24	1830	Shipped Via FedEx	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 130
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Laura Burchfield	Date: 3/29/24 Time: 9:00

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

LT720135

Tracking Numbers	Temperature
7320 9667 6734	2.3 +0.1 = 2.4 TL ΔT7
7320 9667 6701	1.4+0.1 = 1.5 TL ΔT7
7320 9667 6712	0.5+0.1 = 0.6 TL ΔT7
7320 9667 6697	0.3+0.1 = 0.4 TL ΔT7
7320 9667 6723	5.6+0.1 = 5.7 TL ΔT7
7320 9667 6745	1.6+0.1 = 1.7 TL ΔT7
7320 9667 6686	0.9+0.1 = 1.0 TL ΔT7

Name

Date

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 26, 2024
Source Well:	MW-01	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 26, 2024
Sampled By:	Carter Harlan and Amber Lacy	Sample Time:	16:25
Weather:	Overcast	Air Temp:	64F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				48.29	ft-TOC
Total Well Depth:				62.76	ft-TOC
Height of Water Column:				14.47	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.4	Gal
3 * Well Volume	7.08	Gal
5 * Well Volume	11.81	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	15:55	End Time:	16:20
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.9		Gallons			
Final Volume Purge Rate:		300		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	15:55	0.0	---	---	---	---	---	---	---	---	Start Purging
	16:00	0.3	250	48.31	26.3	7.1	0.945	1.5	80	0.27	Clear, odorless
	16:05	0.7	300	48.29	28.9	7.0	0.973	0.8	72	0.26	Clear, odorless
	16:10	1.1	300	48.30	29.1	7.0	0.976	0.6	67	0.29	Clear, odorless
	16:15	1.5	300	48.30	28.0	7.0	0.978	0.7	62	0.26	Clear, odorless
	16:20	1.9	300	48.31	29.0	7.0	0.975	0.6	59	0.20	Clear, odorless
Final:	16:20	1.9	300	48.31	29.0	7.0	0.975	0.6	59	0.2	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:25 Sample End Time: 16:40

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	MW-02	Purge Time:	60 Minutes
Locked?:	Yes	Sample Date:	March 28, 2024
Sampled By:	Amber Lacy and Carter Harlan	Sample Time:	15:35
Weather:	Sunny	Air Temp:	55F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				18.24	ft-TOC
Total Well Depth:				39.96	ft-TOC
Height of Water Column:				21.72	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.5	Gal
3 * Well Volume	10.63	Gal
5 * Well Volume	17.72	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	14:35	End Time:	15:35
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		2.9		Gallons			
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	14:35	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:40	0.4	300	19.89	14.2	6.6	1.285	0.6	-98	28.5	Black specs, no
	14:45	0.7	200	21.25	14.1	6.7	1.262	1.0	-97	29.4	Black specs, no
	14:50	0.8	100	20.94	14.2	6.7	1.255	1.1	-92	38.1	Black specs, no
	14:55	0.9	100	20.95	13.7	6.7	1.254	1.0	-89	43.0	Black specs, no
	15:00	1.1	100	20.31	13.7	6.7	1.265	0.9	-91	63.8	Black specs, no
	15:05	1.3	200	20.60	14.0	6.7	1.225	0.9	-93	73.3	Black specs, no
	15:10	1.6	200	21.06	14.0	6.7	1.228	1.1	-90	61.7	Black specs, no
	15:15	1.8	200	21.31	13.9	6.7	1.216	1.1	-88	59.7	Black specs, no
	15:20	2.1	200	21.47	14.0	6.8	1.205	2.0	-84	53.9	Black specs, no
	15:25	2.4	200	21.47	14.0	6.8	1.194	2.0	-82	56.1	Black specs, no
	15:30	2.6	200	21.44	14.0	6.8	1.175	1.8	-82	51.9	Black specs, no
	15:35	2.9	200	21.45	14.0	6.8	1.168	2.0	-81	52.3	Black specs, no
Final:	15:35	2.9	200	21.45	14.0	6.8	1.168	2.0	-81	52.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:35 Sample End Time: 15:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	MW-03A	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 28, 2024
Sampled By:	Amber Lacy and Carter Harlan	Sample Time:	12:05
Weather:	Sunny	Air Temp:	48F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				17.59	ft-TOC
Total Well Depth:				52.04	ft-TOC
Height of Water Column:				34.45	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	5.6	Gal
3 * Well Volume	16.87	Gal
5 * Well Volume	28.11	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	11:35	End Time:	12:00
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.3		Gallons			
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	11:35	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:40	0.3	200	17.60	14.4	7.1	0.500	-0.1	-94	4.79	Clear, odorless
	11:45	0.5	200	17.60	14.4	7.1	0.510	-0.1	-110	4.06	Clear, odorless
	11:50	0.8	200	17.60	14.5	7.1	0.505	-0.1	-120	1.19	Clear, odorless
	11:55	1.1	200	17.60	14.5	7.1	0.502	0.0	-126	0.45	Clear, odorless
	12:00	1.3	200	17.60	14.5	7.1	0.500	-0.1	-129	1.19	Clear, odorless
Final:	12:00	1.3	200	17.60	14.5	7.1	0.500	-0.1	-129	1.2	End of Purging

Sample Method: Bladder Pump Sample Start Time: 12:05 Sample End Time: 12:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	MW-04	Purge Time:	55 Minutes
Locked?:	Yes	Sample Date:	March 28, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	11:15
Weather:	Sunny	Air Temp:	40F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				24.40	ft-TOC
Total Well Depth:				45.00	ft-TOC
Height of Water Column:				20.60	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.4	Gal
3 * Well Volume	10.09	Gal
5 * Well Volume	16.81	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	10:15	End Time:	11:10	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**			
Final Volume Purged:		4.2		Gallons				
Final Volume Purge Rate:		300		mL/min				
Well Purged Dry?:		No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	10:15	0.0	---	---	---	---	---	---	---	---	Start Purging
	10:20	0.4	300	24.40	15.5	5.5	2.565	0.2	48	183	Cloudy, no odor
	10:25	0.8	300	24.40	15.2	5.5	2.645	0.0	63	105	Cloudy, no odor
	10:30	1.1	250	24.40	15.4	5.5	2.657	0.1	67	74.0	Cloudy, no odor
	10:35	1.5	250	24.40	15.3	5.5	2.654	0.1	68	52.1	Cloudy, no odor
	10:40	1.8	250	24.40	15.2	5.5	2.662	0.1	68	46.3	Cloudy, no odor
	10:45	2.2	300	24.40	15.3	5.5	2.631	0.1	67	41.7	Cloudy, no odor
	10:50	2.6	300	24.40	15.5	5.5	2.583	0.1	65	40.6	Cloudy, no odor
	10:55	3.0	300	24.40	15.6	5.6	2.567	0.0	64	36.8	Cloudy, no odor
	11:00	3.4	300	24.40	15.6	5.6	2.419	0.0	59	30.0	Clear, no odor
	11:05	3.8	300	24.40	15.7	5.7	2.307	0.0	55	31.2	Clear, no odor
	11:10	4.2	300	24.40	15.6	5.7	2.222	0.0	52	31.3	Clear, no odor
Final:	11:10	4.2	300	24.40	15.6	5.7	2.222	0.0	52	31.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:15 Sample End Time: 11:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 26, 2024
Source Well:	MW-04A	Purge Time:	25 Minutes
Locked?:	No	Sample Date:	March 26, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	10:20
Weather:	Overcast	Air Temp:	45F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				36.26	ft-TOC
Total Well Depth:				45.00	ft-TOC
Height of Water Column:				8.74	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.4	Gal
3 * Well Volume	4.28	Gal
5 * Well Volume	7.13	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	9:55	End Time:	10:20
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.3		Gallons	Flush mount well		
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	09:55	0.0	---	---	---	---	---	---	---	---	Start Purging
	10:00	0.3	200	36.26	15.8	7.0	1.905	0.5	129	11.0	Clear, no odor
	10:05	0.5	200	36.14	15.9	7.0	1.898	0.2	126	3.62	Clear, no odor
	10:10	0.8	200	36.22	15.8	7.0	1.893	0.2	121	4.65	Clear, no odor
	10:15	1.1	200	36.24	15.8	7.0	1.892	0.2	117	6.44	Clear, no odor
	10:20	1.3	200	36.32	16.0	7.0	1.892	0.2	112	8.88	Clear, no odor
Final:	10:20	1.3	200	36.32	16.0	7.0	1.892	0.2	112	8.9	End of Purging

Sample Method: Bladder Pump Sample Start Time: 10:20 Sample End Time: 10:40

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 26, 2024
Source Well:	MW-05	Purge Time:	30 Minutes
Locked?:	No	Sample Date:	March 26, 2024
Sampled By:	Amber Lacy, Carter Harlan	Sample Time:	12:40
Weather:	Overcast	Air Temp:	59F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				53.99	ft-TOC
Total Well Depth:				75.41	ft-TOC
Height of Water Column:				21.42	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.5	Gal
3 * Well Volume	10.49	Gal
5 * Well Volume	17.48	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	12:05	End Time:	12:35
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.6		Gallons	Flush mount well		
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	12:05	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:10	0.3	200	54.00	17.1	7.0	3.122	0.6	53	3.06	Clear, odorless
	12:15	0.5	200	54.00	18.5	6.9	3.177	1.6	51	19.9	Clear, odorless
	12:20	0.8	200	54.00	18.8	6.8	3.137	0.7	50	11.2	Clear, odorless
	12:25	1.1	200	54.00	18.7	6.8	3.123	0.4	50	8.01	Clear, odorless
	12:30	1.3	200	54.00	18.7	6.8	3.109	0.3	50	5.49	Clear, odorless
	12:35	1.6	200	54.00	18.9	6.8	3.104	0.2	51	4.27	Clear, odorless
Final:	12:35	1.6	200	54.00	18.9	6.8	3.104	0.2	51	4.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 12:40 Sample End Time: 13:00

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 26, 2024
Source Well:	MW-06	Purge Time:	25 Minutes
Locked?:	No	Sample Date:	March 26, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	11:35
Weather:	Overcast	Air Temp:	52F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				52.11	ft-TOC
Total Well Depth:				74.99	ft-TOC
Height of Water Column:				22.88	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.7	Gal
3 * Well Volume	11.20	Gal
5 * Well Volume	18.67	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	11:05	End Time:	11:30
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.3		Gallons	Flush mount well		
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	11:05	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:10	0.3	200	52.14	16.4	7.4	1.036	2.5	10	5.38	Clear, no odor
	11:15	0.7	300	52.17	15.9	7.3	0.960	0.4	-92	2.40	Clear, no odor
	11:20	0.9	200	52.11	15.7	7.4	0.948	0.2	-107	1.02	Clear, no odor
	11:25	1.1	100	52.13	15.5	7.4	0.938	0.1	-113	1.31	Clear, no odor
	11:30	1.3	200	52.12	15.9	7.4	0.939	0.1	-117	0.90	Clear, no odor
Final:	11:30	1.3	200	52.12	15.9	7.4	0.939	0.1	-117	0.9	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:35 Sample End Time: 11:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 27, 2024
Source Well:	MW-07	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	March 27, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	9:35
Weather:	Overcast	Air Temp:	41F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				55.05	ft-TOC
Total Well Depth:				64.24	ft-TOC
Height of Water Column:				9.19	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.5	Gal
3 * Well Volume	4.50	Gal
5 * Well Volume	7.50	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	9:00	End Time:	9:30	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**			
Final Volume Purged:		1.4		Gallons				
Final Volume Purge Rate:		200		mL/min				
Well Purged Dry?:		No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	09:00	0.0	---	---	---	---	---	---	---	---	Start Purging
	09:05	0.1	100	55.03	12.9	7.0	0.726	5.9	111	4.23	Clear, no odor
	09:10	0.4	200	55.03	13.2	6.9	0.748	5.6	112	3.04	Clear, no odor
	09:15	0.7	200	55.03	13.3	6.9	0.750	5.8	112	1.72	Clear, no odor
	09:20	0.9	150	55.03	13.2	6.9	0.750	5.5	112	0.94	Clear, no odor
	09:25	1.1	200	55.03	13.3	6.9	0.750	5.6	112	0.64	Clear, no odor
	09:30	1.4	200	55.03	13.3	6.9	0.749	5.6	113	0.46	Clear, no odor
Final:	09:30	1.4	200	55.03	13.3	6.9	0.749	5.6	113	0.5	End of Purging

Sample Method: Bladder Pump Sample Start Time: 09:35 Sample End Time: 09:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 27, 2024
Source Well:	MW-08	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	March 27, 2024
Sampled By:	Amber Lacy, Carter Harlan	Sample Time:	11:45
Weather:	Overcast	Air Temp:	44F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				38.69	ft-TOC
Total Well Depth:				47.16	ft-TOC
Height of Water Column:				8.47	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.4	Gal
3 * Well Volume	4.15	Gal
5 * Well Volume	6.91	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	11:10	End Time:	11:40
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		2.4		Gallons	Duplicate sample collected (DUP-2).		
Final Volume Purge Rate:		300		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	11:10	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:15	0.4	300	38.68	24.4	7.0	1.425	4.8	79	1.41	Clear, odorless
	11:20	0.8	300	38.70	25.0	7.0	1.442	5.3	84	0.78	Clear, odorless
	11:25	1.2	300	38.69	24.9	7.0	1.448	4.8	87	0.66	Clear, odorless
	11:30	1.6	300	38.69	24.7	7.0	1.448	4.8	90	0.22	Clear, odorless
	11:35	2.0	300	38.69	25.2	7.0	1.449	4.7	92	0.24	Clear, odorless
	11:40	2.4	300	38.69	25.2	7.0	1.447	4.8	94	0.57	Clear, odorless
Final:	11:40	2.4	300	38.69	25.2	7.0	1.447	4.8	94	0.6	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:45 Sample End Time: 12:05

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: Collected duplicate sample(DUP-2)

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 27, 2024
Source Well:	MW-09	Purge Time:	60 Minutes
Locked?:	Yes	Sample Date:	March 27, 2024
Sampled By:	Amber Lacy, Carter Harlan	Sample Time:	13:10
Weather:	Overcast	Air Temp:	47F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	19.30	ft-TOC
			Total Well Depth:	29.55	ft-TOC
			Height of Water Column:	10.25	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.7	Gal
3 * Well Volume	5.02	Gal
5 * Well Volume	8.36	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	12:10	End Time:	13:10
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
	Pump Intake Depth from Top of Casing:			ft-TOC			
	Water Column Above Pump Intake:			feet	Flow Through Cell Vol:	200	mL
	DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**		
	Final Volume Purged:	4.8		Gallons	DO did not stabilize within one hour of purge start.		
	Final Volume Purge Rate:	300		mL/min			
	Well Purged Dry?:	No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	12:10	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:15	0.4	300	19.31	22.5	7.0	1.298	0.0	50	3.05	Clear, odorless
	12:20	0.8	300	19.31	22.6	6.9	1.308	0.2	55	1.70	Clear, odorless
	12:25	1.2	300	19.35	22.8	6.9	1.315	1.4	55	1.02	Clear, odorless
	12:30	1.6	300	19.34	22.6	6.9	1.322	1.6	55	0.93	Clear, odorless
	12:35	2.0	300	19.34	22.5	7.0	1.327	5.1	54	0.49	Clear, odorless
	12:40	2.4	300	19.34	22.4	7.0	1.329	4.8	55	0.50	Clear, odorless
	12:45	2.8	300	19.36	22.3	7.0	1.333	4.5	55	0.39	Clear, odorless
	12:50	3.2	300	19.35	22.4	7.0	1.337	4.1	54	0.45	Clear, odorless
	12:55	3.6	300	19.37	22.4	7.0	1.341	3.8	54	0.41	Clear, odorless
	13:00	4.0	300	19.37	22.4	7.0	1.346	3.6	53	0.48	Clear, odorless
	13:05	4.4	300	19.37	22.5	7.0	1.350	3.4	53	0.24	Clear, odorless
	13:10	4.8	300	19.37	22.5	7.0	1.356	3.0	51	0.08	Clear, odorless
Final:	13:10	4.8	300	19.37	22.5	7.0	1.356	3.0	51	0.1	End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:10 Sample End Time: 13:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	MW-10	Purge Time:	40 Minutes
Locked?:	Yes	Sample Date:	March 28, 2024
Sampled By:	Amber Lacy and Carter	Sample Time:	14:15
Weather:	Sunny	Air Temp:	54F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				18.76	ft-TOC
Total Well Depth:				29.78	ft-TOC
Height of Water Column:				11.02	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.8	Gal
3 * Well Volume	5.40	Gal
5 * Well Volume	8.99	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	13:30	End Time:	14:10
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		2.8		Gallons			
Final Volume Purge Rate:		300		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	13:30	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:35	0.4	300	18.71	14.3	7.6	0.582	0.2	-119	2.19	Clear,odorless
	13:40	0.7	250	18.71	14.2	7.6	0.695	-0.1	-134	0.74	Clear,odorless
	13:45	1.1	250	18.74	14.2	7.6	0.939	-0.1	-144	0.85	Clear,odorless
	13:50	1.4	250	18.73	14.3	7.6	0.922	-0.1	-148	0.42	Clear,odorless
	13:55	1.7	250	18.73	14.3	7.6	0.698	-0.1	-151	0.38	Clear,odorless
	14:00	2.0	250	18.74	14.3	7.6	0.699	-0.1	-153	0.54	Clear,odorless
	14:05	2.4	300	18.71	14.2	7.6	0.699	-0.1	-154	0.33	Clear,odorless
	14:10	2.8	300	18.72	14.4	7.6	0.700	-0.1	-155	0.58	Clear,odorless
Final:	14:10	2.8	300	18.72	14.4	7.6	0.700	-0.1	-155	0.6	End of Purging

Sample Method: Bladder Pump Sample Start Time: 14:15 Sample End Time: 14:30

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	MW-11	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 28, 2024
Sampled By:	Amber Lacy and Carter Harlan	Sample Time:	13:10
Weather:	Sunny	Air Temp:	52F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	19.80	ft-TOC
			Total Well Depth:	29.78	ft-TOC
			Height of Water Column:	9.98	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.6	Gal
3 * Well Volume	4.89	Gal
5 * Well Volume	8.14	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	12:40	End Time:	13:05
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
	Pump Intake Depth from Top of Casing:			ft-TOC			
	Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200 mL
	DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**		
	Final Volume Purged:	1.7		Gallons			
	Final Volume Purge Rate:	250		mL/min			
	Well Purged Dry?:	No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	12:40	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:45	0.3	250	19.80	14.0	7.5	0.519	0.3	-45	7.14	Clear and odorless
	12:50	0.7	250	19.84	14.0	7.6	0.521	0.1	-80	3.12	Clear and odorless
	12:55	1.0	250	19.87	14.0	7.7	0.522	0.1	-94	1.78	Clear and odorless
	13:00	1.3	250	19.89	14.0	7.7	0.522	0.1	-101	0.77	Clear and odorless
	13:05	1.7	250	19.81	14.1	7.7	0.522	0.1	-107	1.31	Clear and odorless
Final:	13:05	1.7	250	19.81	14.1	7.7	0.522	0.1	-107	1.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:10 Sample End Time: 13:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 27, 2024
Source Well:	MW-12	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 27, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	15:10
Weather:	Overcast	Air Temp:	45F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				53.34	ft-TOC
Total Well Depth:				65.17	ft-TOC
Height of Water Column:				11.83	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.9	Gal
3 * Well Volume	5.79	Gal
5 * Well Volume	9.65	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	14:40	End Time:	15:05
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.3		Gallons			
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	14:40	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:45	0.3	200	53.33	15.6	5.7	1.323	0.7	71	2.17	Clear, no odor
	14:50	0.5	200	53.33	15.7	5.7	1.325	0.7	97	1.39	Clear, no odor
	14:55	0.8	200	53.33	15.1	5.7	1.323	0.8	108	0.90	Clear, no odor
	15:00	1.1	200	53.33	15.6	5.7	1.326	0.6	117	0.67	Clear, no odor
	15:05	1.3	200	53.33	15.6	5.7	1.323	0.6	121	0.75	Clear, no odor
Final:	15:05	1.3	200	53.33	15.6	5.7	1.323	0.6	121	0.8	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:10 Sample End Time: 15:30

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 27, 2024
Source Well:	MW-13	Purge Time:	40 Minutes
Locked?:	Yes	Sample Date:	March 27, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	16:25
Weather:	Overcast	Air Temp:	45F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				25.45	ft-TOC
Total Well Depth:				34.26	ft-TOC
Height of Water Column:				8.81	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.4	Gal
3 * Well Volume	4.31	Gal
5 * Well Volume	7.19	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	15:40	End Time:	16:20
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		2.8		Gallons			
Final Volume Purge Rate:		300		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	15:40	0.0	---	---	---	---	---	---	---	---	Start Purging
	15:45	0.3	250	25.45	13.8	7.6	0.400	1.3	-58	68.2	Clear, no odor
	15:50	0.7	250	25.45	14.0	7.6	3.995	1.4	-68	31.4	Clear, no odor
	15:55	1.1	300	25.45	14.2	7.7	3.992	0.9	-77	26.2	Clear, no odor
	16:00	1.5	300	25.45	14.1	7.7	3.992	0.8	-82	17.8	Clear, no odor
	16:05	1.8	300	25.45	14.0	7.7	4.000	0.9	-84	10.6	Clear, no odor
	16:10	2.1	200	25.45	13.8	7.7	3.991	0.9	-80	8.04	Clear, no odor
	16:15	2.4	200	25.45	14.0	7.7	3.995	0.7	-81	4.00	Clear, no odor
	16:20	2.8	300	25.45	14.2	7.7	4.001	0.9	-86	3.98	Clear, no odor
Final:	16:20	2.8	300	25.45	14.2	7.7	4.001	0.9	-86	4.0	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:25 Sample End Time: 16:40

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	MW-14	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	March 28, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	9:45
Weather:	Sunny	Air Temp:	35F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				24.25	ft-TOC
Total Well Depth:				34.26	ft-TOC
Height of Water Column:				10.01	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.6	Gal
3 * Well Volume	4.90	Gal
5 * Well Volume	8.17	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	9:10	End Time:	9:40
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.6		Gallons			
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	09:10	0.0	---	---	---	---	---	---	---	---	Start Purging
	09:15	0.3	200	24.22	13.8	7.5	0.428	1.8	59	1.00	Clear, no odor
	09:20	0.5	200	24.22	14.3	7.7	0.422	1.0	33	1.39	Clear, no odor
	09:25	0.8	200	24.22	14.7	7.8	0.422	0.5	-16	0.90	Clear, no odor
	09:30	1.1	200	24.22	13.0	7.8	0.418	0.6	-37	0.67	Clear, no odor
	09:35	1.3	200	24.22	14.7	7.8	0.420	0.5	-55	0.47	Clear, no odor
	09:40	1.6	200	24.22	14.5	7.8	0.420	0.5	-67	0.38	Clear, no odor
Final:	09:40	1.6	200	24.22	14.5	7.8	0.420	0.5	-67	0.4	End of Purging

Sample Method: Bladder Pump Sample Start Time: 09:45 Sample End Time: 10:05

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 26, 2024
Source Well:	MW-15	Purge Time:	45 Minutes
Locked?:	Yes	Sample Date:	March 26, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	15:15
Weather:	Overcast	Air Temp:	55F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				41.07	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	14:25	End Time:	15:10
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		2.8		Gallons	Duplicate sample collected (DUP-1).		
Final Volume Purge Rate:		250		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	14:25	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:30	0.3	200	41.95	16.9	7.0	1.375	1.3	59	1.80	Clear, no odor
	14:35	0.5	200	40.88	16.2	7.0	1.273	1.0	45	1.94	Clear, no odor
	14:40	0.9	250	40.90	16.2	7.0	1.275	0.7	37	0.94	Clear, no odor
	14:45	1.2	250	40.90	16.3	7.0	1.272	0.6	25	1.18	Clear, no odor
	14:50	1.5	250	40.90	16.3	7.0	1.268	1.8	18	0.77	Clear, no odor
	15:00	2.2	250	40.90	16.3	7.0	1.264	1.6	16	0.69	Clear, no odor
	15:05	2.5	250	40.90	16.2	7.0	1.264	1.6	18	0.80	Clear, no odor
	15:10	2.8	250	40.90	16.2	7.0	1.259	1.5	18	0.62	Clear, no odor
Final:	15:10	2.8	250	40.90	16.2	7.0	1.259	1.5	18	0.6	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:15 Sample End Time: 15:45

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: Duplicate sample collected (DUP-1).

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 26, 2024
Source Well:	MW-16	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 26, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	14:00
Weather:	Overcast	Air Temp:	57F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				41.12	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	13:30	End Time:	13:55
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.3		Gallons			
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	13:30	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:35	0.3	200	41.05	15.8	6.9	1.393	0.3	-45	2.59	Clear, odorless
	13:40	0.5	200	41.05	15.8	6.8	1.427	0.4	1	4.27	Clear, odorless
	13:45	0.8	200	41.07	15.8	6.8	1.420	0.3	17	5.46	Clear, odorless
	13:50	1.1	200	41.02	15.9	6.8	1.420	0.1	26	4.49	Clear, odorless
	13:55	1.3	200	41.05	15.9	6.8	1.418	0.1	33	4.99	Clear, odorless
Final:	13:55	1.3	200	41.05	15.9	6.8	1.418	0.1	33	5.0	End of Purging

Sample Method: Bladder Pump Sample Start Time: 14:00 Sample End Time: 14:20

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 27, 2024
Source Well:	MW-17	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	March 27, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	10:35
Weather:	Overcast	Air Temp:	45F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				55.55	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	10:00	End Time:	10:30
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	55 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.5		Gallons			
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	10:00	0.0	---	---	---	---	---	---	---	---	Start Purging
	10:05	0.1	100	55.55	12.8	7.4	0.819	5.0	-9	1.62	Clear, no odor
	10:10	0.4	200	55.52	13.2	7.0	0.985	1.1	-80	3.17	Clear, no odor
	10:15	0.7	200	55.53	12.7	7.0	1.020	1.2	-30	2.70	Clear, no odor
	10:20	0.9	200	55.54	13.3	7.0	1.020	0.9	-9	1.07	Clear, no odor
	10:25	1.2	200	55.55	13.3	7.0	1.021	0.9	1	1.06	Clear, no odor
	10:30	1.5	200	55.54	13.3	7.0	1.020	0.8	10	0.73	Clear, no odor
Final:	10:30	1.5	200	55.54	13.3	7.0	1.020	0.8	10	0.7	End of Purging

Sample Method: Bladder Pump Sample Start Time: 10:35 Sample End Time: 10:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 25, 2024
Source Well:	MW-19	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	March 25, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	16:00
Weather:	Sunny	Air Temp:	70F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				43.87	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	15:25	End Time:	16:00
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		1.9		Gallons			
Final Volume Purge Rate:		200		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	15:25	0.0	---	---	---	---	---	---	---	---	Start Purging
	15:30	0.3	200	43.87	16.7	6.9	0.956	1.2	105	2.50	Clear, no odor
	15:35	0.5	200	43.87	16.9	6.9	0.960	1.0	97	2.07	Clear, no odor
	15:40	0.9	250	43.87	16.8	6.9	0.960	0.8	91	0.95	Clear, no odor
	15:45	1.1	200	43.87	16.7	6.9	0.960	0.7	86	0.90	Clear, no odor
	15:50	1.4	200	43.87	16.7	6.9	0.962	0.5	81	0.65	Clear, no odor
	15:55	1.7	200	43.87	16.6	6.9	0.963	0.3	79	0.25	Clear, no odor
	16:00	1.9	200	43.87	16.7	6.9	0.963	0.3	74	0.16	Clear, no odor
Final:	16:00	1.9	200	43.87	16.7	6.9	0.963	0.3	74	0.2	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:00 Sample End Time: 16:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 27, 2024
Source Well:	XPW-01	Purge Time:	15 Minutes
Locked?:	Yes	Sample Date:	March 27, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	14:10
Weather:	Overcast	Air Temp:	45F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				8.19	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	13:50	End Time:	14:05
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		0.9		Gallons			
Final Volume Purge Rate:		250		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	13:50	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:55	0.3	200	8.39	15.6	6.9	1.754	0.7	90	>100	Cloudy, no odor
	14:00	0.5	200	8.41	16.2	6.9	1.744	0.4	12	>100	Cloudy, no odor
	14:05	0.9	250	8.37	16.8	6.9	1.719	0.2	-55	>100	Cloudy, no odor
Final:	14:05	0.9	250	8.37	16.8	6.9	1.719	0.2	-55	#N/A	End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 14:10 Sample End Time: 14:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 25, 2024
Source Well:	4A Production Well	Purge Time:	0 Minutes
Locked?:	No	Sample Date:	March 26, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	9:30
Weather:	Sunny	Air Temp:	55F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:					ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:				Start Time:	9:30	End Time:	9:30
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		#VALUE!		Gallons	MS/MSD. Production well turned on previous afternoon.		
Final Volume Purge Rate:		#N/A		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
09:30	0.0	---	---	---	---	---	---	---	---	Start Purging
09:30	#VALUE!	Unknown	N/A	18.7	7.0	1.852	0.5	165	-	Cloudy, mild odor
Final:	09:30	#VALUE!	#N/A	#N/A	18.7	7.0	1.852	0.5	165	#N/A	End of Purging

Sample Method: Submersible Pump Sample Start Time: 09:30 Sample End Time: 09:40

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: MS/MSD

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	Basin A Source	Purge Time:	5 Minutes
Locked?:	No	Sample Date:	March 28, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	16:40
Weather:	Sunny	Air Temp:	55F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				N/A	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	16:35	End Time:	16:40
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		0.5		Gallons			
Final Volume Purge Rate:		400		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	16:35	0.0	---	---	---	---	---	---	---	---	Start Purging
	16:40	0.5	400	N/A	13.4	8.8	1.646	12.0	-1	-	Cloudy, odor
Final:	16:40	0.5	400	#N/A	13.4	8.8	1.646	12.0	-1	#N/A	End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 16:40 Sample End Time: 16:50

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 28, 2024
Source Well:	Basin B Source	Purge Time:	5 Minutes
Locked?:	No	Sample Date:	March 28, 2024
Sampled By:	Carter Harlan & Amber Lacy	Sample Time:	16:10
Weather:	Sunny	Air Temp:	55F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:					ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	16:05	End Time:	16:10
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		0.5		Gallons			
Final Volume Purge Rate:		400		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	16:05	0.0	---	---	---	---	---	---	---	---	Start Purging
	16:10	0.5	400	N/A	15.8	8.8	1.160	11.6	-30	-	Cloudy, odor
Final:	16:10	0.5	400	#N/A	15.8	8.8	1.160	11.6	-30	#N/A	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:10 Sample End Time: 16:20

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

Miami Fort Station				
Well ID	**Date**	**Time**	**Depth to Water**	
Basin A and B Combined - Unit 115				
MW-01	3/25/2024	12:33	48.33	
MW-02	3/25/2024	13:12	17.69	
MW-03A	3/25/2024	13:32	18.02	
MW-04	3/25/2024	13:44	22.57	
MW-04A	3/26/2024	10:00	36.21	
MW-05	3/25/2024	14:20	54.67	
MW-06	3/25/2024	14:28	52.22	
MW-07	3/25/2024	12:19	54.80	
MW-08	3/25/2024	12:40	38.52	
MW-09	3/25/2024	12:46	19.03	
MW-10S	3/25/2024	13:20	10.72	
MW-10	3/25/2024	13:18	18.73	
MW-11S	3/25/2024	13:26	11.22	
MW-11	3/25/2024	13:24	19.83	
MW-12	3/25/2024	14:03	52.23	
MW-13	3/25/2024	13:53	25.50	
MW-13S	3/25/2024	13:56	20.00	
MW-14	3/25/2024	13:46	24.43	
MW-15	3/25/2024	10:19	41.04	
MW-16	3/25/2024	10:24	40.79	
MW-17	3/25/2024	12:23	55.25	
MW-18	3/25/2024	12:10	55.21	
MW-19	3/25/2024	12:02	43.86	
XPW-01	3/25/2024	13:56	8.00	
Gypsum Recycle Pond - Former Unit 114				
MW-GP1	3/25/2024	11:34	19.84	
MW-GP2	3/25/2024	11:37	15.40	
MW-GP3	3/25/2024	11:42	30.89	
MW-GP4	3/25/2024			Does not open
MW-GP5	3/25/2024	11:49	23.63	

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ANALYTICAL REPORT

October 01, 2024

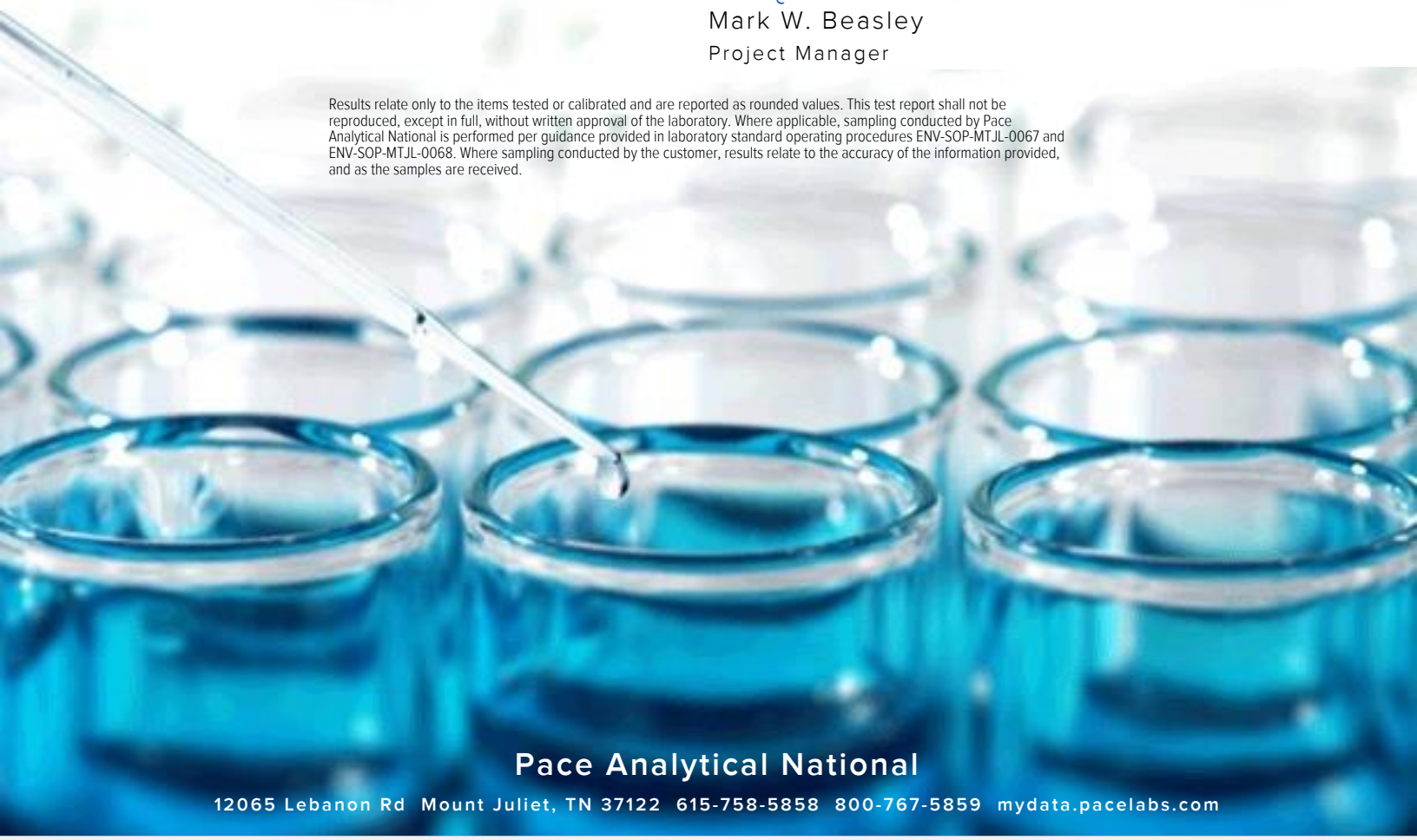
S&ME - Nashville, TN

Sample Delivery Group:	L1777468
Samples Received:	09/13/2024
Project Number:	7217-17-003D
Description:	Miami Fort Station
Site:	MFS UNIT 115 (PLANT)
Report To:	Vince Epps
	862 East Crescentville Road
	Cincinnati, OH 45246

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

A-1 POND L1777468-01 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 12:40 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 12:09	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 09:35	09/15/24 09:35	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/16/24 18:57	09/16/24 18:57	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	10	09/16/24 19:11	09/16/24 19:11	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362373	1	09/14/24 20:59	09/17/24 19:26	NDL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	1	09/26/24 22:43	09/27/24 21:34	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	25	09/26/24 22:43	09/28/24 15:15	JPD	Mt. Juliet, TN

B-1 POND L1777468-02 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 13:00 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 12:09	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362905	1	09/15/24 13:54	09/15/24 13:54	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	5	09/16/24 19:24	09/16/24 19:24	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362373	1	09/14/24 20:59	09/17/24 19:29	NDL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	1	09/26/24 22:43	09/27/24 21:37	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	25	09/26/24 22:43	09/28/24 15:18	JPD	Mt. Juliet, TN

MW-01 L1777468-03 GW

Collected by: Carter Harlan | Collected date/time: 09/10/24 15:00 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 12:09	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362905	1	09/15/24 14:02	09/15/24 14:02	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/16/24 19:51	09/16/24 19:51	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	10	09/16/24 20:45	09/16/24 20:45	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 18:49	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	1	09/26/24 22:43	09/27/24 21:40	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	5	09/26/24 22:43	09/28/24 15:21	JPD	Mt. Juliet, TN

MW-02 L1777468-04 GW

Collected by: Carter Harlan | Collected date/time: 09/10/24 16:30 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362905	1	09/15/24 14:06	09/15/24 14:06	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/16/24 21:12	09/16/24 21:12	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 18:57	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	1	09/26/24 22:43	09/27/24 21:44	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365643	5	09/26/24 22:43	09/28/24 15:25	JPD	Mt. Juliet, TN

MW-03A L1777468-05 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 11:00 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362565	1	09/14/24 09:33	09/17/24 13:04	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 09:41	09/15/24 09:41	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/16/24 21:53	09/16/24 21:53	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:00	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 15:33	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/30/24 18:06	LD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-04 L1777468-06 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 12:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362565	1	09/14/24 09:33	09/17/24 13:04	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 09:46	09/15/24 09:46	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	5	09/16/24 22:06	09/16/24 22:06	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:03	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 15:36	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/30/24 18:09	LD	Mt. Juliet, TN

MW-4A L1777468-07 GW

Collected by: Carter Harlan | Collected date/time: 09/10/24 11:45 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 09:59	09/15/24 09:59	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	5	09/16/24 23:00	09/16/24 23:00	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:05	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 15:39	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	50	09/26/24 19:53	09/30/24 18:13	LD	Mt. Juliet, TN

MW-05 L1777468-08 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 10:35 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362565	1	09/14/24 09:33	09/17/24 13:04	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:03	09/15/24 10:03	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	5	09/16/24 23:27	09/16/24 23:27	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:08	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 15:49	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	100	09/26/24 19:53	09/30/24 18:16	LD	Mt. Juliet, TN

MW-06 L1777468-09 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 11:40 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362565	1	09/14/24 09:33	09/17/24 13:04	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362905	1	09/15/24 14:11	09/15/24 14:11	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/16/24 23:54	09/16/24 23:54	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:11	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 15:52	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	10	09/26/24 19:53	09/30/24 18:19	LD	Mt. Juliet, TN

MW-07 L1777468-10 GW

Collected by: Carter Harlan | Collected date/time: 09/09/24 15:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:08	09/15/24 10:08	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 00:08	09/17/24 00:08	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 18:39	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 14:40	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/30/24 17:43	LD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-08 L1777468-11 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 09:05 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362565	1	09/14/24 09:33	09/17/24 13:04	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:12	09/15/24 10:12	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 00:21	09/17/24 00:21	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	10	09/17/24 00:35	09/17/24 00:35	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:13	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 15:55	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	5	09/26/24 19:53	09/30/24 18:22	LD	Mt. Juliet, TN

MW-09 L1777468-12 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 10:10 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 09:41	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:16	09/15/24 10:16	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 00:48	09/17/24 00:48	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	10	09/17/24 01:02	09/17/24 01:02	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:16	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 15:58	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	20	09/26/24 19:53	09/30/24 18:26	LD	Mt. Juliet, TN

MW-10 L1777468-13 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 14:55 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 09:41	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362887	1	09/15/24 11:22	09/15/24 11:22	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 01:42	09/17/24 01:42	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:19	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/29/24 16:01	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365644	1	09/26/24 19:53	09/30/24 18:29	LD	Mt. Juliet, TN

MW-11 L1777468-14 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 15:30 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362565	1	09/14/24 09:33	09/17/24 13:04	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362905	1	09/15/24 14:37	09/15/24 14:37	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 01:56	09/17/24 01:56	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:21	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/23/24 20:06	LD	Mt. Juliet, TN

MW-12 L1777468-15 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 09:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 09:41	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362905	1	09/15/24 14:42	09/15/24 14:42	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 02:09	09/17/24 02:09	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	10	09/17/24 02:23	09/17/24 02:23	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:29	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 17:28	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 20:40	LD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-12 L1777468-15 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 09:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2365646	10	09/23/24 14:33	09/23/24 19:15	LD	Mt. Juliet, TN

MW-13 L1777468-16 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 14:40 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 09:41	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362905	1	09/15/24 14:47	09/15/24 14:47	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 02:36	09/17/24 02:36	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:32	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/23/24 20:09	LD	Mt. Juliet, TN

MW-14 L1777468-17 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 13:40 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 09:41	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:20	09/15/24 10:20	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 02:50	09/17/24 02:50	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:35	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/23/24 20:13	LD	Mt. Juliet, TN

MW-15 L1777468-18 GW

Collected by: Carter Harlan | Collected date/time: 09/10/24 09:15 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:26	09/15/24 10:26	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 03:03	09/17/24 03:03	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	5	09/17/24 03:17	09/17/24 03:17	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:37	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 17:32	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 20:43	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	10	09/23/24 14:33	09/23/24 19:25	LD	Mt. Juliet, TN

MW-16 L1777468-19 GW

Collected by: Carter Harlan | Collected date/time: 09/10/24 10:24 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:31	09/15/24 10:31	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 03:30	09/17/24 03:30	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:40	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/23/24 20:19	LD	Mt. Juliet, TN

SAMPLE SUMMARY

MW-17 L1777468-20 GW

Collected by: Carter Harlan | Collected date/time: 09/10/24 13:10 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 10:35	09/15/24 10:35	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362460	1	09/17/24 03:44	09/17/24 03:44	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:43	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/23/24 20:22	LD	Mt. Juliet, TN

MW-19 L1777468-21 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 16:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 09:41	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362887	1	09/15/24 11:29	09/15/24 11:29	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2363031	1	09/18/24 00:46	09/18/24 00:46	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:45	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/23/24 20:25	LD	Mt. Juliet, TN

XPW-01 L1777468-22 GW

Collected by: Carter Harlan | Collected date/time: 09/12/24 13:50 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362568	1	09/14/24 09:41	09/16/24 16:47	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 11:15	09/15/24 11:15	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2363031	1	09/18/24 01:40	09/18/24 01:40	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2363031	10	09/18/24 02:21	09/18/24 02:21	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2362375	1	09/14/24 20:57	09/17/24 19:48	AKB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 17:35	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 20:46	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	10	09/23/24 14:33	09/23/24 19:38	LD	Mt. Juliet, TN

DUP-1 L1777468-23 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 00:00 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 11:19	09/15/24 11:19	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362554	1	09/14/24 13:43	09/14/24 13:43	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362554	10	09/14/24 14:37	09/14/24 14:37	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2362544	1	09/15/24 14:29	09/17/24 16:07	NDL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 17:38	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/24/24 20:49	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	10	09/23/24 14:33	09/23/24 19:41	LD	Mt. Juliet, TN

DUP-2 L1777468-24 GW

Collected by: Carter Harlan | Collected date/time: 09/11/24 00:00 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2362653	1	09/14/24 12:01	09/16/24 14:20	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2362889	1	09/15/24 11:24	09/15/24 11:24	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2362554	1	09/14/24 15:04	09/14/24 15:04	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2362544	1	09/15/24 14:29	09/17/24 16:09	NDL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2365646	1	09/23/24 14:33	09/23/24 20:29	LD	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	964000		20000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	146000		8450	20000	1	09/15/2024 09:35	WG2362889
Alkalinity,Bicarbonate	129000		8450	20000	1	09/15/2024 09:35	WG2362889
Alkalinity,Carbonate	17000	J	8450	20000	1	09/15/2024 09:35	WG2362889

Sample Narrative:

L1777468-01 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	226000		5470	10000	10	09/16/2024 19:11	WG2362460
Fluoride	1110		76.1	150	1	09/16/2024 18:57	WG2362460
Sulfate	276000		6370	50000	10	09/16/2024 19:11	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:26	WG2362373

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	1.20	J	1.03	4.00	1	09/27/2024 21:34	WG2365643
Arsenic	35.2		0.180	2.00	1	09/27/2024 21:34	WG2365643
Barium	255		0.381	2.00	1	09/27/2024 21:34	WG2365643
Beryllium	2.43		0.190	2.00	1	09/27/2024 21:34	WG2365643
Boron	8430		241	750	25	09/28/2024 15:15	WG2365643
Cadmium	9.76		0.150	1.00	1	09/27/2024 21:34	WG2365643
Calcium	100000		93.6	1000	1	09/27/2024 21:34	WG2365643
Chromium	40.9		1.24	2.00	1	09/27/2024 21:34	WG2365643
Cobalt	18.7		0.0596	2.00	1	09/27/2024 21:34	WG2365643
Lead	23.7		0.849	2.00	1	09/27/2024 21:34	WG2365643
Magnesium	111000		73.5	1000	1	09/27/2024 21:34	WG2365643
Molybdenum	12.5		0.348	5.00	1	09/27/2024 21:34	WG2365643
Potassium	8010		108	2000	1	09/27/2024 21:34	WG2365643
Selenium	14.6		0.300	2.00	1	09/27/2024 21:34	WG2365643
Sodium	75900		376	2000	1	09/27/2024 21:34	WG2365643
Thallium	2.28		0.121	2.00	1	09/27/2024 21:34	WG2365643
Lithium	28.3		0.695	2.00	1	09/27/2024 21:34	WG2365643

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	990000		20000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	151000		8450	20000	1	09/15/2024 13:54	WG2362905
Alkalinity,Bicarbonate	123000		8450	20000	1	09/15/2024 13:54	WG2362905
Alkalinity,Carbonate	27400		8450	20000	1	09/15/2024 13:54	WG2362905

Sample Narrative:

L1777468-02 WG2362905: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	222000		2740	5000	5	09/16/2024 19:24	WG2362460
Fluoride	1020		380	750	5	09/16/2024 19:24	WG2362460
Sulfate	290000		3180	25000	5	09/16/2024 19:24	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:29	WG2362373

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/27/2024 21:37	WG2365643
Arsenic	8.95		0.180	2.00	1	09/27/2024 21:37	WG2365643
Barium	109		0.381	2.00	1	09/27/2024 21:37	WG2365643
Beryllium	U		0.190	2.00	1	09/27/2024 21:37	WG2365643
Boron	8280		241	750	25	09/28/2024 15:18	WG2365643
Cadmium	0.449	J	0.150	1.00	1	09/27/2024 21:37	WG2365643
Calcium	91700		93.6	1000	1	09/27/2024 21:37	WG2365643
Chromium	2.76		1.24	2.00	1	09/27/2024 21:37	WG2365643
Cobalt	0.405	J	0.0596	2.00	1	09/27/2024 21:37	WG2365643
Lead	U		0.849	2.00	1	09/27/2024 21:37	WG2365643
Magnesium	106000		73.5	1000	1	09/27/2024 21:37	WG2365643
Molybdenum	24.8		0.348	5.00	1	09/27/2024 21:37	WG2365643
Potassium	7040		108	2000	1	09/27/2024 21:37	WG2365643
Selenium	15.5		0.300	2.00	1	09/27/2024 21:37	WG2365643
Sodium	74200		376	2000	1	09/27/2024 21:37	WG2365643
Thallium	1.40	J	0.121	2.00	1	09/27/2024 21:37	WG2365643
Lithium	22.7		0.695	2.00	1	09/27/2024 21:37	WG2365643

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	827000		13300	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	192000		8450	20000	1	09/15/2024 14:02	WG2362905
Alkalinity,Bicarbonate	192000		8450	20000	1	09/15/2024 14:02	WG2362905
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 14:02	WG2362905

Sample Narrative:

L1777468-03 WG2362905: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	39500	J6	547	1000	1	09/16/2024 19:51	WG2362460
Fluoride	383		76.1	150	1	09/16/2024 19:51	WG2362460
Sulfate	363000		6370	50000	10	09/16/2024 20:45	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 18:49	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/27/2024 21:40	WG2365643
Arsenic	0.212	J	0.180	2.00	1	09/27/2024 21:40	WG2365643
Barium	55.2		0.381	2.00	1	09/27/2024 21:40	WG2365643
Beryllium	U		0.190	2.00	1	09/27/2024 21:40	WG2365643
Boron	978		48.2	150	5	09/28/2024 15:21	WG2365643
Cadmium	0.262	J	0.150	1.00	1	09/27/2024 21:40	WG2365643
Calcium	170000		93.6	1000	1	09/27/2024 21:40	WG2365643
Chromium	U		1.24	2.00	1	09/27/2024 21:40	WG2365643
Cobalt	0.0845	J	0.0596	2.00	1	09/27/2024 21:40	WG2365643
Lead	U		0.849	2.00	1	09/27/2024 21:40	WG2365643
Magnesium	33000		73.5	1000	1	09/27/2024 21:40	WG2365643
Molybdenum	81.5		0.348	5.00	1	09/27/2024 21:40	WG2365643
Potassium	8120		108	2000	1	09/27/2024 21:40	WG2365643
Selenium	U		0.300	2.00	1	09/27/2024 21:40	WG2365643
Sodium	36900		376	2000	1	09/27/2024 21:40	WG2365643
Thallium	0.245	J	0.121	2.00	1	09/27/2024 21:40	WG2365643
Lithium	34.6		0.695	2.00	1	09/27/2024 21:40	WG2365643

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	571000		13300	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	533000		8450	20000	1	09/15/2024 14:06	WG2362905
Alkalinity,Bicarbonate	533000		8450	20000	1	09/15/2024 14:06	WG2362905
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 14:06	WG2362905

Sample Narrative:

L1777468-04 WG2362905: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	37300		547	1000	1	09/16/2024 21:12	WG2362460
Fluoride	107	J P1	76.1	150	1	09/16/2024 21:12	WG2362460
Sulfate	15600		637	5000	1	09/16/2024 21:12	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 18:57	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/27/2024 21:44	WG2365643
Arsenic	40.5		0.180	2.00	1	09/27/2024 21:44	WG2365643
Barium	374		0.381	2.00	1	09/27/2024 21:44	WG2365643
Beryllium	U		0.190	2.00	1	09/27/2024 21:44	WG2365643
Boron	563	B	48.2	150	5	09/28/2024 15:25	WG2365643
Cadmium	U		0.150	1.00	1	09/27/2024 21:44	WG2365643
Calcium	118000		93.6	1000	1	09/27/2024 21:44	WG2365643
Chromium	U		1.24	2.00	1	09/27/2024 21:44	WG2365643
Cobalt	0.375	J	0.0596	2.00	1	09/27/2024 21:44	WG2365643
Lead	U		0.849	2.00	1	09/27/2024 21:44	WG2365643
Magnesium	52900		73.5	1000	1	09/27/2024 21:44	WG2365643
Molybdenum	2.50	J	0.348	5.00	1	09/27/2024 21:44	WG2365643
Potassium	936	J	108	2000	1	09/27/2024 21:44	WG2365643
Selenium	U		0.300	2.00	1	09/27/2024 21:44	WG2365643
Sodium	22300		376	2000	1	09/27/2024 21:44	WG2365643
Thallium	U		0.121	2.00	1	09/27/2024 21:44	WG2365643
Lithium	1.09	J	0.695	2.00	1	09/27/2024 21:44	WG2365643

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	250000		10000	1	09/17/2024 13:04	WG2362565

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	189000		8450	20000	1	09/15/2024 09:41	WG2362889
Alkalinity,Bicarbonate	189000		8450	20000	1	09/15/2024 09:41	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 09:41	WG2362889

Sample Narrative:

L1777468-05 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	23500		547	1000	1	09/16/2024 21:53	WG2362460
Fluoride	126	J	76.1	150	1	09/16/2024 21:53	WG2362460
Sulfate	4900	J	637	5000	1	09/16/2024 21:53	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:00	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 15:33	WG2365644
Arsenic	8.22		0.180	2.00	1	09/29/2024 15:33	WG2365644
Barium	118		0.381	2.00	1	09/29/2024 15:33	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 15:33	WG2365644
Boron	54.1		9.63	30.0	1	09/30/2024 18:06	WG2365644
Cadmium	U		0.150	1.00	1	09/29/2024 15:33	WG2365644
Calcium	47700		93.6	1000	1	09/29/2024 15:33	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 15:33	WG2365644
Cobalt	U		0.0596	2.00	1	09/29/2024 15:33	WG2365644
Lead	0.938	J	0.849	2.00	1	09/29/2024 15:33	WG2365644
Magnesium	12800		73.5	1000	1	09/29/2024 15:33	WG2365644
Molybdenum	0.829	J	0.348	5.00	1	09/29/2024 15:33	WG2365644
Potassium	2100		108	2000	1	09/29/2024 15:33	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 15:33	WG2365644
Sodium	19800		376	2000	1	09/29/2024 15:33	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 15:33	WG2365644
Lithium	1.23	J	0.695	2.00	1	09/29/2024 15:33	WG2365644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1140000		20000	1	09/17/2024 13:04	WG2362565

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	139000		8450	20000	1	09/15/2024 09:46	WG2362889
Alkalinity,Bicarbonate	139000		8450	20000	1	09/15/2024 09:46	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 09:46	WG2362889

Sample Narrative:

L1777468-06 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	24800		2740	5000	5	09/16/2024 22:06	WG2362460
Fluoride	U		380	750	5	09/16/2024 22:06	WG2362460
Sulfate	693000		3180	25000	5	09/16/2024 22:06	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:03	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 15:36	WG2365644
Arsenic	1.16	J	0.180	2.00	1	09/29/2024 15:36	WG2365644
Barium	12.6		0.381	2.00	1	09/29/2024 15:36	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 15:36	WG2365644
Boron	311		9.63	30.0	1	09/30/2024 18:09	WG2365644
Cadmium	0.466	J	0.150	1.00	1	09/29/2024 15:36	WG2365644
Calcium	215000		93.6	1000	1	09/29/2024 15:36	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 15:36	WG2365644
Cobalt	9.74		0.0596	2.00	1	09/29/2024 15:36	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 15:36	WG2365644
Magnesium	67700		73.5	1000	1	09/29/2024 15:36	WG2365644
Molybdenum	1.06	J	0.348	5.00	1	09/29/2024 15:36	WG2365644
Potassium	867	J	108	2000	1	09/29/2024 15:36	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 15:36	WG2365644
Sodium	22300		376	2000	1	09/29/2024 15:36	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 15:36	WG2365644
Lithium	4.32		0.695	2.00	1	09/29/2024 15:36	WG2365644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1360000		20000	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	281000		8450	20000	1	09/15/2024 09:59	WG2362889
Alkalinity,Bicarbonate	281000		8450	20000	1	09/15/2024 09:59	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 09:59	WG2362889

Sample Narrative:

L1777468-07 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	351000		2740	5000	5	09/16/2024 23:00	WG2362460
Fluoride	U		380	750	5	09/16/2024 23:00	WG2362460
Sulfate	812000		3180	25000	5	09/16/2024 23:00	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:05	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 15:39	WG2365644
Arsenic	0.208	J	0.180	2.00	1	09/29/2024 15:39	WG2365644
Barium	57.3		0.381	2.00	1	09/29/2024 15:39	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 15:39	WG2365644
Boron	7470		482	1500	50	09/30/2024 18:13	WG2365644
Cadmium	0.280	J	0.150	1.00	1	09/29/2024 15:39	WG2365644
Calcium	196000		93.6	1000	1	09/29/2024 15:39	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 15:39	WG2365644
Cobalt	4.24		0.0596	2.00	1	09/29/2024 15:39	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 15:39	WG2365644
Magnesium	121000		73.5	1000	1	09/29/2024 15:39	WG2365644
Molybdenum	12.0		0.348	5.00	1	09/29/2024 15:39	WG2365644
Potassium	4320		108	2000	1	09/29/2024 15:39	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 15:39	WG2365644
Sodium	48300		376	2000	1	09/29/2024 15:39	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 15:39	WG2365644
Lithium	8.76		0.695	2.00	1	09/29/2024 15:39	WG2365644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1730000		25000	1	09/17/2024 13:04	WG2362565

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	312000		8450	20000	1	09/15/2024 10:03	WG2362889
Alkalinity,Bicarbonate	312000		8450	20000	1	09/15/2024 10:03	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:03	WG2362889

Sample Narrative:

L1777468-08 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	460000		2740	5000	5	09/16/2024 23:27	WG2362460
Fluoride	U		380	750	5	09/16/2024 23:27	WG2362460
Sulfate	463000		3180	25000	5	09/16/2024 23:27	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:08	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 15:49	WG2365644
Arsenic	0.445	J	0.180	2.00	1	09/29/2024 15:49	WG2365644
Barium	51.6		0.381	2.00	1	09/29/2024 15:49	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 15:49	WG2365644
Boron	18100		963	3000	100	09/30/2024 18:16	WG2365644
Cadmium	0.159	J	0.150	1.00	1	09/29/2024 15:49	WG2365644
Calcium	296000		93.6	1000	1	09/29/2024 15:49	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 15:49	WG2365644
Cobalt	0.461	J	0.0596	2.00	1	09/29/2024 15:49	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 15:49	WG2365644
Magnesium	129000		73.5	1000	1	09/29/2024 15:49	WG2365644
Molybdenum	60.4		0.348	5.00	1	09/29/2024 15:49	WG2365644
Potassium	6550		108	2000	1	09/29/2024 15:49	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 15:49	WG2365644
Sodium	71100		376	2000	1	09/29/2024 15:49	WG2365644
Thallium	0.137	J	0.121	2.00	1	09/29/2024 15:49	WG2365644
Lithium	10.1		0.695	2.00	1	09/29/2024 15:49	WG2365644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	525000		10000	1	09/17/2024 13:04	WG2362565

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	398000		8450	20000	1	09/15/2024 14:11	WG2362905
Alkalinity,Bicarbonate	398000		8450	20000	1	09/15/2024 14:11	WG2362905
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 14:11	WG2362905

Sample Narrative:

L1777468-09 WG2362905: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	104000		547	1000	1	09/16/2024 23:54	WG2362460
Fluoride	584		76.1	150	1	09/16/2024 23:54	WG2362460
Sulfate	2700	J	637	5000	1	09/16/2024 23:54	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:11	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 15:52	WG2365644
Arsenic	13.9		0.180	2.00	1	09/29/2024 15:52	WG2365644
Barium	1100		0.381	2.00	1	09/29/2024 15:52	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 15:52	WG2365644
Boron	1110		96.3	300	10	09/30/2024 18:19	WG2365644
Cadmium	U		0.150	1.00	1	09/29/2024 15:52	WG2365644
Calcium	53600		93.6	1000	1	09/29/2024 15:52	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 15:52	WG2365644
Cobalt	0.829	J	0.0596	2.00	1	09/29/2024 15:52	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 15:52	WG2365644
Magnesium	70200		73.5	1000	1	09/29/2024 15:52	WG2365644
Molybdenum	152		0.348	5.00	1	09/29/2024 15:52	WG2365644
Potassium	3550		108	2000	1	09/29/2024 15:52	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 15:52	WG2365644
Sodium	48000		376	2000	1	09/29/2024 15:52	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 15:52	WG2365644
Lithium	8.98		0.695	2.00	1	09/29/2024 15:52	WG2365644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	456000		10000	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	360000		8450	20000	1	09/15/2024 10:08	WG2362889
Alkalinity,Bicarbonate	360000		8450	20000	1	09/15/2024 10:08	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:08	WG2362889

Sample Narrative:

L1777468-10 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2780		547	1000	1	09/17/2024 00:08	WG2362460
Fluoride	136	J	76.1	150	1	09/17/2024 00:08	WG2362460
Sulfate	41100		637	5000	1	09/17/2024 00:08	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 18:39	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 14:40	WG2365644
Arsenic	U		0.180	2.00	1	09/29/2024 14:40	WG2365644
Barium	92.2		0.381	2.00	1	09/29/2024 14:40	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 14:40	WG2365644
Boron	77.0		9.63	30.0	1	09/30/2024 17:43	WG2365644
Cadmium	U		0.150	1.00	1	09/29/2024 14:40	WG2365644
Calcium	110000		93.6	1000	1	09/29/2024 14:40	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 14:40	WG2365644
Cobalt	U		0.0596	2.00	1	09/29/2024 14:40	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 14:40	WG2365644
Magnesium	34400		73.5	1000	1	09/29/2024 14:40	WG2365644
Molybdenum	0.844	J	0.348	5.00	1	09/29/2024 14:40	WG2365644
Potassium	1290	J	108	2000	1	09/29/2024 14:40	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 14:40	WG2365644
Sodium	4450		376	2000	1	09/29/2024 14:40	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 14:40	WG2365644
Lithium	4.20		0.695	2.00	1	09/29/2024 14:40	WG2365644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	638000		10000	1	09/17/2024 13:04	WG2362565

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	192000		8450	20000	1	09/15/2024 10:12	WG2362889
Alkalinity,Bicarbonate	192000		8450	20000	1	09/15/2024 10:12	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:12	WG2362889

Sample Narrative:

L1777468-11 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	45300		547	1000	1	09/17/2024 00:21	WG2362460
Fluoride	237		76.1	150	1	09/17/2024 00:21	WG2362460
Sulfate	221000		6370	50000	10	09/17/2024 00:35	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:13	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 15:55	WG2365644
Arsenic	0.362	J	0.180	2.00	1	09/29/2024 15:55	WG2365644
Barium	36.0		0.381	2.00	1	09/29/2024 15:55	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 15:55	WG2365644
Boron	1100		48.2	150	5	09/30/2024 18:22	WG2365644
Cadmium	U		0.150	1.00	1	09/29/2024 15:55	WG2365644
Calcium	119000		93.6	1000	1	09/29/2024 15:55	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 15:55	WG2365644
Cobalt	U		0.0596	2.00	1	09/29/2024 15:55	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 15:55	WG2365644
Magnesium	31200		73.5	1000	1	09/29/2024 15:55	WG2365644
Molybdenum	9.21		0.348	5.00	1	09/29/2024 15:55	WG2365644
Potassium	5740		108	2000	1	09/29/2024 15:55	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 15:55	WG2365644
Sodium	33900		376	2000	1	09/29/2024 15:55	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 15:55	WG2365644
Lithium	14.2		0.695	2.00	1	09/29/2024 15:55	WG2365644

MW-09 SAMPLE RESULTS - 12

Client Sample ID: MW-09 L1777468-12

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	946000		20000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	207000		8450	20000	1	09/15/2024 10:16	WG2362889
Alkalinity,Bicarbonate	207000		8450	20000	1	09/15/2024 10:16	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:16	WG2362889

Sample Narrative:

L1777468-12 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	89300		547	1000	1	09/17/2024 00:48	WG2362460
Fluoride	324		76.1	150	1	09/17/2024 00:48	WG2362460
Sulfate	390000		6370	50000	10	09/17/2024 01:02	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:16	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 15:58	WG2365644
Arsenic	0.298	J	0.180	2.00	1	09/29/2024 15:58	WG2365644
Barium	86.7		0.381	2.00	1	09/29/2024 15:58	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 15:58	WG2365644
Boron	3870		193	600	20	09/30/2024 18:26	WG2365644
Cadmium	U		0.150	1.00	1	09/29/2024 15:58	WG2365644
Calcium	186000		93.6	1000	1	09/29/2024 15:58	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 15:58	WG2365644
Cobalt	0.174	J	0.0596	2.00	1	09/29/2024 15:58	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 15:58	WG2365644
Magnesium	46600		73.5	1000	1	09/29/2024 15:58	WG2365644
Molybdenum	61.8		0.348	5.00	1	09/29/2024 15:58	WG2365644
Potassium	7320		108	2000	1	09/29/2024 15:58	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 15:58	WG2365644
Sodium	37100		376	2000	1	09/29/2024 15:58	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 15:58	WG2365644
Lithium	14.4		0.695	2.00	1	09/29/2024 15:58	WG2365644

MW-10 SAMPLE RESULTS - 13

Client Sample ID: MW-10 L1777468-13

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	275000		10000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	211000		8450	20000	1	09/15/2024 11:22	WG2362887
Alkalinity,Bicarbonate	211000		8450	20000	1	09/15/2024 11:22	WG2362887
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 11:22	WG2362887

Sample Narrative:

L1777468-13 WG2362887: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	26600		547	1000	1	09/17/2024 01:42	WG2362460
Fluoride	178		76.1	150	1	09/17/2024 01:42	WG2362460
Sulfate	18100		637	5000	1	09/17/2024 01:42	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:19	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/29/2024 16:01	WG2365644
Arsenic	26.5		0.180	2.00	1	09/29/2024 16:01	WG2365644
Barium	154		0.381	2.00	1	09/29/2024 16:01	WG2365644
Beryllium	U		0.190	2.00	1	09/29/2024 16:01	WG2365644
Boron	77.4		9.63	30.0	1	09/30/2024 18:29	WG2365644
Cadmium	0.194	J	0.150	1.00	1	09/29/2024 16:01	WG2365644
Calcium	48700		93.6	1000	1	09/29/2024 16:01	WG2365644
Chromium	U		1.24	2.00	1	09/29/2024 16:01	WG2365644
Cobalt	U		0.0596	2.00	1	09/29/2024 16:01	WG2365644
Lead	U		0.849	2.00	1	09/29/2024 16:01	WG2365644
Magnesium	17000		73.5	1000	1	09/29/2024 16:01	WG2365644
Molybdenum	4.71	J	0.348	5.00	1	09/29/2024 16:01	WG2365644
Potassium	3160		108	2000	1	09/29/2024 16:01	WG2365644
Selenium	U		0.300	2.00	1	09/29/2024 16:01	WG2365644
Sodium	26100		376	2000	1	09/29/2024 16:01	WG2365644
Thallium	U		0.121	2.00	1	09/29/2024 16:01	WG2365644
Lithium	1.91	J	0.695	2.00	1	09/29/2024 16:01	WG2365644

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	367000		10000	1	09/17/2024 13:04	WG2362565

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	220000		8450	20000	1	09/15/2024 14:37	WG2362905
Alkalinity,Bicarbonate	220000		8450	20000	1	09/15/2024 14:37	WG2362905
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 14:37	WG2362905

Sample Narrative:

L1777468-14 WG2362905: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	54700		547	1000	1	09/17/2024 01:56	WG2362460
Fluoride	133	J	76.1	150	1	09/17/2024 01:56	WG2362460
Sulfate	30000		637	5000	1	09/17/2024 01:56	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:21	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/23/2024 20:06	WG2365646
Arsenic	8.99		0.180	2.00	1	09/23/2024 20:06	WG2365646
Barium	272		0.381	2.00	1	09/23/2024 20:06	WG2365646
Beryllium	U		0.190	2.00	1	09/23/2024 20:06	WG2365646
Boron	54.9		9.63	30.0	1	09/23/2024 20:06	WG2365646
Cadmium	U		0.150	1.00	1	09/23/2024 20:06	WG2365646
Calcium	61600		93.6	1000	1	09/23/2024 20:06	WG2365646
Chromium	U		1.24	2.00	1	09/23/2024 20:06	WG2365646
Cobalt	0.688	J	0.0596	2.00	1	09/23/2024 20:06	WG2365646
Lead	U		0.849	2.00	1	09/23/2024 20:06	WG2365646
Magnesium	19400		73.5	1000	1	09/23/2024 20:06	WG2365646
Molybdenum	3.64	J	0.348	5.00	1	09/23/2024 20:06	WG2365646
Potassium	3170		108	2000	1	09/23/2024 20:06	WG2365646
Selenium	U		0.300	2.00	1	09/23/2024 20:06	WG2365646
Sodium	29400		376	2000	1	09/23/2024 20:06	WG2365646
Thallium	U		0.121	2.00	1	09/23/2024 20:06	WG2365646
Lithium	3.38		0.695	2.00	1	09/23/2024 20:06	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	867000		13300	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	98600		8450	20000	1	09/15/2024 14:42	WG2362905
Alkalinity,Bicarbonate	98600		8450	20000	1	09/15/2024 14:42	WG2362905
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 14:42	WG2362905

Sample Narrative:

L1777468-15 WG2362905: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	187000		547	1000	1	09/17/2024 02:09	WG2362460
Fluoride	126	J	76.1	150	1	09/17/2024 02:09	WG2362460
Sulfate	293000		6370	50000	10	09/17/2024 02:23	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.252		0.100	0.200	1	09/17/2024 19:29	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/24/2024 17:28	WG2365646
Arsenic	0.211	J	0.180	2.00	1	09/24/2024 17:28	WG2365646
Barium	15.1		0.381	2.00	1	09/24/2024 17:28	WG2365646
Beryllium	U		0.190	2.00	1	09/24/2024 17:28	WG2365646
Boron	5140		96.3	300	10	09/23/2024 19:15	WG2365646
Cadmium	1.00		0.150	1.00	1	09/24/2024 17:28	WG2365646
Calcium	148000		93.6	1000	1	09/24/2024 17:28	WG2365646
Chromium	U		1.24	2.00	1	09/24/2024 17:28	WG2365646
Cobalt	2.45		0.0596	2.00	1	09/24/2024 17:28	WG2365646
Lead	U		0.849	2.00	1	09/24/2024 17:28	WG2365646
Magnesium	46500		73.5	1000	1	09/24/2024 17:28	WG2365646
Molybdenum	0.671	J	0.348	5.00	1	09/24/2024 17:28	WG2365646
Potassium	904	J	108	2000	1	09/24/2024 17:28	WG2365646
Selenium	U		0.300	2.00	1	09/24/2024 17:28	WG2365646
Sodium	36700		376	2000	1	09/24/2024 17:28	WG2365646
Thallium	U		0.121	2.00	1	09/24/2024 17:28	WG2365646
Lithium	3.36		0.695	2.00	1	09/24/2024 20:40	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	229000		10000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	125000		8450	20000	1	09/15/2024 14:47	WG2362905
Alkalinity,Bicarbonate	125000		8450	20000	1	09/15/2024 14:47	WG2362905
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 14:47	WG2362905

Sample Narrative:

L1777468-16 WG2362905: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	26100		547	1000	1	09/17/2024 02:36	WG2362460
Fluoride	126	J	76.1	150	1	09/17/2024 02:36	WG2362460
Sulfate	44600		637	5000	1	09/17/2024 02:36	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:32	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/23/2024 20:09	WG2365646
Arsenic	10.6		0.180	2.00	1	09/23/2024 20:09	WG2365646
Barium	144		0.381	2.00	1	09/23/2024 20:09	WG2365646
Beryllium	U		0.190	2.00	1	09/23/2024 20:09	WG2365646
Boron	56.8		9.63	30.0	1	09/23/2024 20:09	WG2365646
Cadmium	U		0.150	1.00	1	09/23/2024 20:09	WG2365646
Calcium	40000		93.6	1000	1	09/23/2024 20:09	WG2365646
Chromium	U		1.24	2.00	1	09/23/2024 20:09	WG2365646
Cobalt	0.281	J	0.0596	2.00	1	09/23/2024 20:09	WG2365646
Lead	U		0.849	2.00	1	09/23/2024 20:09	WG2365646
Magnesium	11400		73.5	1000	1	09/23/2024 20:09	WG2365646
Molybdenum	12.3		0.348	5.00	1	09/23/2024 20:09	WG2365646
Potassium	2340		108	2000	1	09/23/2024 20:09	WG2365646
Selenium	U		0.300	2.00	1	09/23/2024 20:09	WG2365646
Sodium	29600		376	2000	1	09/23/2024 20:09	WG2365646
Thallium	U		0.121	2.00	1	09/23/2024 20:09	WG2365646
Lithium	5.00		0.695	2.00	1	09/23/2024 20:09	WG2365646

MW-14 SAMPLE RESULTS - 17

Client Sample ID: MW-14 Report ID: L1777468

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	247000		10000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	121000		8450	20000	1	09/15/2024 10:20	WG2362889
Alkalinity,Bicarbonate	121000		8450	20000	1	09/15/2024 10:20	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:20	WG2362889

Sample Narrative:

L1777468-17 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	29400		547	1000	1	09/17/2024 02:50	WG2362460
Fluoride	112	J	76.1	150	1	09/17/2024 02:50	WG2362460
Sulfate	48200		637	5000	1	09/17/2024 02:50	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:35	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/23/2024 20:13	WG2365646
Arsenic	0.548	J	0.180	2.00	1	09/23/2024 20:13	WG2365646
Barium	43.9		0.381	2.00	1	09/23/2024 20:13	WG2365646
Beryllium	U		0.190	2.00	1	09/23/2024 20:13	WG2365646
Boron	58.0		9.63	30.0	1	09/23/2024 20:13	WG2365646
Cadmium	U		0.150	1.00	1	09/23/2024 20:13	WG2365646
Calcium	41700		93.6	1000	1	09/23/2024 20:13	WG2365646
Chromium	U		1.24	2.00	1	09/23/2024 20:13	WG2365646
Cobalt	0.509	J	0.0596	2.00	1	09/23/2024 20:13	WG2365646
Lead	U		0.849	2.00	1	09/23/2024 20:13	WG2365646
Magnesium	11400		73.5	1000	1	09/23/2024 20:13	WG2365646
Molybdenum	5.87		0.348	5.00	1	09/23/2024 20:13	WG2365646
Potassium	2570		108	2000	1	09/23/2024 20:13	WG2365646
Selenium	U		0.300	2.00	1	09/23/2024 20:13	WG2365646
Sodium	21000		376	2000	1	09/23/2024 20:13	WG2365646
Thallium	U		0.121	2.00	1	09/23/2024 20:13	WG2365646
Lithium	4.01		0.695	2.00	1	09/23/2024 20:13	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	686000		20000	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	326000		8450	20000	1	09/15/2024 10:26	WG2362889
Alkalinity,Bicarbonate	326000		8450	20000	1	09/15/2024 10:26	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:26	WG2362889

Sample Narrative:

L1777468-18 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	219000		2740	5000	5	09/17/2024 03:17	WG2362460
Fluoride	229		76.1	150	1	09/17/2024 03:03	WG2362460
Sulfate	5650		637	5000	1	09/17/2024 03:03	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:37	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/24/2024 17:32	WG2365646
Arsenic	0.633	J	0.180	2.00	1	09/24/2024 17:32	WG2365646
Barium	83.1		0.381	2.00	1	09/24/2024 17:32	WG2365646
Beryllium	U		0.190	2.00	1	09/24/2024 17:32	WG2365646
Boron	472		96.3	300	10	09/23/2024 19:25	WG2365646
Cadmium	U		0.150	1.00	1	09/24/2024 17:32	WG2365646
Calcium	117000		93.6	1000	1	09/24/2024 17:32	WG2365646
Chromium	U		1.24	2.00	1	09/24/2024 17:32	WG2365646
Cobalt	2.00	J	0.0596	2.00	1	09/24/2024 17:32	WG2365646
Lead	U		0.849	2.00	1	09/24/2024 17:32	WG2365646
Magnesium	34600		73.5	1000	1	09/24/2024 17:32	WG2365646
Molybdenum	22.4		0.348	5.00	1	09/24/2024 17:32	WG2365646
Potassium	3350		108	2000	1	09/24/2024 17:32	WG2365646
Selenium	U		0.300	2.00	1	09/24/2024 17:32	WG2365646
Sodium	86400		376	2000	1	09/24/2024 17:32	WG2365646
Thallium	U		0.121	2.00	1	09/24/2024 17:32	WG2365646
Lithium	7.81		0.695	2.00	1	09/24/2024 20:43	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	900000		20000	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	467000		8450	20000	1	09/15/2024 10:31	WG2362889
Alkalinity,Bicarbonate	467000		8450	20000	1	09/15/2024 10:31	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:31	WG2362889

Sample Narrative:

L1777468-19 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	105000		547	1000	1	09/17/2024 03:30	WG2362460
Fluoride	114	J	76.1	150	1	09/17/2024 03:30	WG2362460
Sulfate	199000		637	5000	1	09/17/2024 03:30	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:40	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/23/2024 20:19	WG2365646
Arsenic	U		0.180	2.00	1	09/23/2024 20:19	WG2365646
Barium	76.2		0.381	2.00	1	09/23/2024 20:19	WG2365646
Beryllium	U		0.190	2.00	1	09/23/2024 20:19	WG2365646
Boron	57.4		9.63	30.0	1	09/23/2024 20:19	WG2365646
Cadmium	U		0.150	1.00	1	09/23/2024 20:19	WG2365646
Calcium	176000		93.6	1000	1	09/23/2024 20:19	WG2365646
Chromium	U		1.24	2.00	1	09/23/2024 20:19	WG2365646
Cobalt	0.453	J	0.0596	2.00	1	09/23/2024 20:19	WG2365646
Lead	U		0.849	2.00	1	09/23/2024 20:19	WG2365646
Magnesium	56700		73.5	1000	1	09/23/2024 20:19	WG2365646
Molybdenum	0.389	J	0.348	5.00	1	09/23/2024 20:19	WG2365646
Potassium	4800		108	2000	1	09/23/2024 20:19	WG2365646
Selenium	U		0.300	2.00	1	09/23/2024 20:19	WG2365646
Sodium	37100		376	2000	1	09/23/2024 20:19	WG2365646
Thallium	U		0.121	2.00	1	09/23/2024 20:19	WG2365646
Lithium	12.3		0.695	2.00	1	09/23/2024 20:19	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	579000		13300	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	425000		8450	20000	1	09/15/2024 10:35	WG2362889
Alkalinity,Bicarbonate	425000		8450	20000	1	09/15/2024 10:35	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 10:35	WG2362889

Sample Narrative:

L1777468-20 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	50000		547	1000	1	09/17/2024 03:44	WG2362460
Fluoride	170		76.1	150	1	09/17/2024 03:44	WG2362460
Sulfate	64100		637	5000	1	09/17/2024 03:44	WG2362460

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:43	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/23/2024 20:22	WG2365646
Arsenic	0.227	J	0.180	2.00	1	09/23/2024 20:22	WG2365646
Barium	52.8		0.381	2.00	1	09/23/2024 20:22	WG2365646
Beryllium	U		0.190	2.00	1	09/23/2024 20:22	WG2365646
Boron	45.7		9.63	30.0	1	09/23/2024 20:22	WG2365646
Cadmium	U		0.150	1.00	1	09/23/2024 20:22	WG2365646
Calcium	127000		93.6	1000	1	09/23/2024 20:22	WG2365646
Chromium	U		1.24	2.00	1	09/23/2024 20:22	WG2365646
Cobalt	1.66	J	0.0596	2.00	1	09/23/2024 20:22	WG2365646
Lead	U		0.849	2.00	1	09/23/2024 20:22	WG2365646
Magnesium	42100		73.5	1000	1	09/23/2024 20:22	WG2365646
Molybdenum	3.12	J	0.348	5.00	1	09/23/2024 20:22	WG2365646
Potassium	1500	J	108	2000	1	09/23/2024 20:22	WG2365646
Selenium	U		0.300	2.00	1	09/23/2024 20:22	WG2365646
Sodium	16600		376	2000	1	09/23/2024 20:22	WG2365646
Thallium	U		0.121	2.00	1	09/23/2024 20:22	WG2365646
Lithium	10.4		0.695	2.00	1	09/23/2024 20:22	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	566000		10000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	467000		8450	20000	1	09/15/2024 11:29	WG2362887
Alkalinity,Bicarbonate	467000		8450	20000	1	09/15/2024 11:29	WG2362887
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 11:29	WG2362887

Sample Narrative:

L1777468-21 WG2362887: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	34600	J6	547	1000	1	09/18/2024 00:46	WG2363031
Fluoride	78.4	J P1	76.1	150	1	09/18/2024 00:46	WG2363031
Sulfate	43500	J6	637	5000	1	09/18/2024 00:46	WG2363031

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:45	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/23/2024 20:25	WG2365646
Arsenic	0.183	J	0.180	2.00	1	09/23/2024 20:25	WG2365646
Barium	133		0.381	2.00	1	09/23/2024 20:25	WG2365646
Beryllium	U		0.190	2.00	1	09/23/2024 20:25	WG2365646
Boron	79.4		9.63	30.0	1	09/23/2024 20:25	WG2365646
Cadmium	U		0.150	1.00	1	09/23/2024 20:25	WG2365646
Calcium	132000		93.6	1000	1	09/23/2024 20:25	WG2365646
Chromium	U		1.24	2.00	1	09/23/2024 20:25	WG2365646
Cobalt	0.561	J	0.0596	2.00	1	09/23/2024 20:25	WG2365646
Lead	U		0.849	2.00	1	09/23/2024 20:25	WG2365646
Magnesium	38300		73.5	1000	1	09/23/2024 20:25	WG2365646
Molybdenum	2.29	J	0.348	5.00	1	09/23/2024 20:25	WG2365646
Potassium	1610	J	108	2000	1	09/23/2024 20:25	WG2365646
Selenium	U		0.300	2.00	1	09/23/2024 20:25	WG2365646
Sodium	12000		376	2000	1	09/23/2024 20:25	WG2365646
Thallium	U		0.121	2.00	1	09/23/2024 20:25	WG2365646
Lithium	6.59		0.695	2.00	1	09/23/2024 20:25	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1240000		20000	1	09/16/2024 16:47	WG2362568

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	222000		8450	20000	1	09/15/2024 11:15	WG2362889
Alkalinity,Bicarbonate	222000		8450	20000	1	09/15/2024 11:15	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 11:15	WG2362889

Sample Narrative:

L1777468-22 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	150000	J6	547	1000	1	09/18/2024 01:40	WG2363031
Fluoride	795		76.1	150	1	09/18/2024 01:40	WG2363031
Sulfate	542000		6370	50000	10	09/18/2024 02:21	WG2363031

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 19:48	WG2362375

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/24/2024 17:35	WG2365646
Arsenic	76.6		0.180	2.00	1	09/24/2024 17:35	WG2365646
Barium	25.0		0.381	2.00	1	09/24/2024 17:35	WG2365646
Beryllium	U		0.190	2.00	1	09/24/2024 17:35	WG2365646
Boron	5620		96.3	300	10	09/23/2024 19:38	WG2365646
Cadmium	U		0.150	1.00	1	09/24/2024 17:35	WG2365646
Calcium	203000		93.6	1000	1	09/24/2024 17:35	WG2365646
Chromium	U		1.24	2.00	1	09/24/2024 17:35	WG2365646
Cobalt	U		0.0596	2.00	1	09/24/2024 17:35	WG2365646
Lead	U		0.849	2.00	1	09/24/2024 17:35	WG2365646
Magnesium	86300		73.5	1000	1	09/24/2024 17:35	WG2365646
Molybdenum	138		0.348	5.00	1	09/24/2024 17:35	WG2365646
Potassium	9330		108	2000	1	09/24/2024 17:35	WG2365646
Selenium	U		0.300	2.00	1	09/24/2024 17:35	WG2365646
Sodium	34600		376	2000	1	09/24/2024 17:35	WG2365646
Thallium	U		0.121	2.00	1	09/24/2024 17:35	WG2365646
Lithium	88.1		0.695	2.00	1	09/24/2024 20:46	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	643000		10000	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	185000		8450	20000	1	09/15/2024 11:19	WG2362889
Alkalinity,Bicarbonate	185000		8450	20000	1	09/15/2024 11:19	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 11:19	WG2362889

Sample Narrative:

L1777468-23 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	44700	J6	547	1000	1	09/14/2024 13:43	WG2362554
Fluoride	189		76.1	150	1	09/14/2024 13:43	WG2362554
Sulfate	254000	J3	6370	50000	10	09/14/2024 14:37	WG2362554

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 16:07	WG2362544

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/24/2024 17:38	WG2365646
Arsenic	0.431	J	0.180	2.00	1	09/24/2024 17:38	WG2365646
Barium	33.7		0.381	2.00	1	09/24/2024 17:38	WG2365646
Beryllium	U		0.190	2.00	1	09/24/2024 17:38	WG2365646
Boron	1190		96.3	300	10	09/23/2024 19:41	WG2365646
Cadmium	U		0.150	1.00	1	09/24/2024 17:38	WG2365646
Calcium	115000		93.6	1000	1	09/24/2024 17:38	WG2365646
Chromium	U		1.24	2.00	1	09/24/2024 17:38	WG2365646
Cobalt	0.0638	J	0.0596	2.00	1	09/24/2024 17:38	WG2365646
Lead	U		0.849	2.00	1	09/24/2024 17:38	WG2365646
Magnesium	28900		73.5	1000	1	09/24/2024 17:38	WG2365646
Molybdenum	8.84		0.348	5.00	1	09/24/2024 17:38	WG2365646
Potassium	5810		108	2000	1	09/24/2024 17:38	WG2365646
Selenium	0.361	J	0.300	2.00	1	09/24/2024 17:38	WG2365646
Sodium	31700		376	2000	1	09/24/2024 17:38	WG2365646
Thallium	U		0.121	2.00	1	09/24/2024 17:38	WG2365646
Lithium	14.5		0.695	2.00	1	09/24/2024 20:49	WG2365646

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	368000		10000	1	09/16/2024 14:20	WG2362653

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	215000		8450	20000	1	09/15/2024 11:24	WG2362889
Alkalinity,Bicarbonate	215000		8450	20000	1	09/15/2024 11:24	WG2362889
Alkalinity,Carbonate	U		8450	20000	1	09/15/2024 11:24	WG2362889

Sample Narrative:

L1777468-24 WG2362889: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	54900		547	1000	1	09/14/2024 15:04	WG2362554
Fluoride	147	J	76.1	150	1	09/14/2024 15:04	WG2362554
Sulfate	30400		637	5000	1	09/14/2024 15:04	WG2362554

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/17/2024 16:09	WG2362544

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/23/2024 20:29	WG2365646
Arsenic	9.36		0.180	2.00	1	09/23/2024 20:29	WG2365646
Barium	283		0.381	2.00	1	09/23/2024 20:29	WG2365646
Beryllium	U		0.190	2.00	1	09/23/2024 20:29	WG2365646
Boron	59.4		9.63	30.0	1	09/23/2024 20:29	WG2365646
Cadmium	U		0.150	1.00	1	09/23/2024 20:29	WG2365646
Calcium	63500		93.6	1000	1	09/23/2024 20:29	WG2365646
Chromium	U		1.24	2.00	1	09/23/2024 20:29	WG2365646
Cobalt	0.689	J	0.0596	2.00	1	09/23/2024 20:29	WG2365646
Lead	U		0.849	2.00	1	09/23/2024 20:29	WG2365646
Magnesium	19400		73.5	1000	1	09/23/2024 20:29	WG2365646
Molybdenum	3.83	J	0.348	5.00	1	09/23/2024 20:29	WG2365646
Potassium	3310		108	2000	1	09/23/2024 20:29	WG2365646
Selenium	U		0.300	2.00	1	09/23/2024 20:29	WG2365646
Sodium	30000		376	2000	1	09/23/2024 20:29	WG2365646
Thallium	U		0.121	2.00	1	09/23/2024 20:29	WG2365646
Lithium	3.48		0.695	2.00	1	09/23/2024 20:29	WG2365646

Method Blank (MB)

(MB) R4122024-1 09/17/24 13:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1777447-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777447-01 09/17/24 13:04 • (DUP) R4122024-3 09/17/24 13:04

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	85000	87000	1	2.33		10

L1777533-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1777533-02 09/17/24 13:04 • (DUP) R4122024-4 09/17/24 13:04

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3270000	3460000	1	5.65		10

Laboratory Control Sample (LCS)

(LCS) R4122024-2 09/17/24 13:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8830000	100	85.0-115	

1,2,3,4,5,6,7,8,9,10,11,12,13,15,16,17,21,22

Method Blank (MB)

(MB) R4121390-1 09/16/24 16:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1777447-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1777447-11 09/16/24 16:47 • (DUP) R4121390-3 09/16/24 16:47

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	ND	ND	1	200	P1	10

L1777468-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-22 09/16/24 16:47 • (DUP) R4121390-4 09/16/24 16:47

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1240000	1260000	1	1.76		10

Laboratory Control Sample (LCS)

(LCS) R4121390-2 09/16/24 16:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8660000	98.4	85.0-115	

Method Blank (MB)

(MB) R4121398-1 09/16/24 14:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1777533-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1777533-06 09/16/24 14:20 • (DUP) R4121398-4 09/16/24 14:20

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2910000	2960000	1	1.71		10

Laboratory Control Sample (LCS)

(LCS) R4121398-2 09/16/24 14:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8750000	99.4	85.0-115	

Method Blank (MB)

(MB) R4120007-2 09/15/24 09:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		8450	20000
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1775578-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1775578-13 09/15/24 09:13 • (DUP) R4120007-4 09/15/24 09:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	U	U	1	0.000		20
Alkalinity,Bicarbonate	U	U	1	0.000		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1777446-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1777446-15 09/15/24 11:04 • (DUP) R4120007-6 09/15/24 11:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	526000	536000	1	1.84		20
Alkalinity,Bicarbonate	526000	536000	1	1.84		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MES-257-15

L1777468-13,21

Laboratory Control Sample (LCS)

(LCS) R4120007-1 09/15/24 09:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	108000	108	90.0-110	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R4120012-2 09/15/24 09:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		8450	20000
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1777446-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1777446-07 09/15/24 09:16 • (DUP) R4120012-3 09/15/24 09:20

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	425000	428000	1	0.565		20
Alkalinity,Bicarbonate	425000	428000	1	0.565		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1777446-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1777446-09 09/15/24 11:05 • (DUP) R4120012-4 09/15/24 11:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	425000	427000	1	0.668		20
Alkalinity,Bicarbonate	402000	404000	1	0.675		20
Alkalinity,Carbonate	22900	23000	1	0.547		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R4120012-1 09/15/24 09:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	104000	104	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R4120008-2 09/15/24 12:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		8450	20000
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1777446-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1777446-01 09/15/24 12:12 • (DUP) R4120008-3 09/15/24 12:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	336000	343000	1	1.85		20
Alkalinity,Bicarbonate	336000	343000	1	1.85		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1777446-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1777446-11 09/15/24 14:26 • (DUP) R4120008-4 09/15/24 14:32

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	403000	406000	1	0.737		20
Alkalinity,Bicarbonate	403000	406000	1	0.737		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MES-257-15

L1777468-01,02,03,04,09,14,15,16

Laboratory Control Sample (LCS)

(LCS) R4120008-1 09/15/24 11:55

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	105000	105	90.0-110	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R4122277-1 09/16/24 18:30

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	U		76.1	150
Sulfate	U		637	5000

L1777468-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-03 09/16/24 19:51 • (DUP) R4122277-3 09/16/24 20:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	39500	39200	1	0.905		15
Fluoride	383	387	1	0.936		15
Sulfate	385000	384000	1	0.246	E	15

L1777468-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-03 09/16/24 20:45 • (DUP) R4122277-6 09/16/24 20:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	363000	363000	10	0.0316		15

L1777468-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-04 09/16/24 21:12 • (DUP) R4122277-7 09/16/24 21:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	37300	37300	1	0.00215		15
Fluoride	107	131	1	19.9	J P1	15
Sulfate	15600	15700	1	0.996		15

Laboratory Control Sample (LCS)

(LCS) R4122277-2 09/16/24 18:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38600	96.5	80.0-120	
Fluoride	8000	7910	98.9	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4122277-2 09/16/24 18:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	38600	96.5	80.0-120	

L1777468-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777468-03 09/16/24 19:51 • (MS) R4122277-4 09/16/24 20:18 • (MSD) R4122277-5 09/16/24 20:32

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39500	71200	71700	79.3	80.4	1	80.0-120	J6		0.638	15
Fluoride	8000	383	8580	8300	103	98.9	1	80.0-120			3.41	15
Sulfate	40000	385000	355000	356000	0.000	0.000	1	80.0-120	E V	E V	0.268	15

Sample Narrative:

MS: Spike failure due to matrix.

MSD: Spike failure due to matrix.

L1777468-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1777468-04 09/16/24 21:12 • (MS) R4122277-8 09/16/24 21:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	37300	70000	81.8	1	80.0-120	
Fluoride	8000	107	7960	98.1	1	80.0-120	
Sulfate	40000	15600	52800	93.1	1	80.0-120	

L1777468-23,24

Method Blank (MB)

(MB) R4121875-1 09/14/24 13:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	U		547	1000
Fluoride	U		76.1	150
Sulfate	U		637	5000

L1777468-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-23 09/14/24 13:43 • (DUP) R4121875-3 09/14/24 13:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	44700	44800	1	0.147		15
Fluoride	189	213	1	12.3		15

L1777468-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-23 09/14/24 14:37 • (DUP) R4121875-6 09/14/24 14:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	254000	219000	10	15.1	J3	15

L1777468-24 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-24 09/14/24 15:04 • (DUP) R4121875-7 09/14/24 15:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	54900	55600	1	1.30		15
Fluoride	147	148	1	0.475	J	15
Sulfate	30400	31000	1	1.91		15

Laboratory Control Sample (LCS)

(LCS) R4121875-2 09/14/24 13:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	37700	94.2	80.0-120	
Fluoride	8000	8050	101	80.0-120	
Sulfate	40000	37400	93.5	80.0-120	

L1777468-23,24

L1777468-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777468-23 09/14/24 13:43 • (MS) R4121875-4 09/14/24 14:10 • (MSD) R4121875-5 09/14/24 14:24

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40000	44700	74400	76500	74.2	79.5	1	80.0-120	J6	J6	2.83	15
Fluoride	8000	189	8400	8690	103	106	1	80.0-120			3.32	15
Sulfate	40000	239000	231000	238000	0.000	0.000	1	80.0-120	E V	E V	3.00	15

L1777468-24 Original Sample (OS) • Matrix Spike (MS)

(OS) L1777468-24 09/14/24 15:04 • (MS) R4121875-8 09/14/24 15:31

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	54900	87200	80.6	1	80.0-120	
Fluoride	8000	147	8890	109	1	80.0-120	
Sulfate	40000	30400	68700	95.7	1	80.0-120	

L1777468-21,22

Method Blank (MB)

(MB) R4121851-1 09/18/24 00:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	U		76.1	150
Sulfate	U		637	5000

L1777468-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-21 09/18/24 00:46 • (DUP) R4121851-3 09/18/24 01:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	34600	34200	1	1.18		15
Fluoride	78.4	U	1	200	P1	15
Sulfate	43500	43000	1	1.12		15

L1777468-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-22 09/18/24 01:40 • (DUP) R4121851-6 09/18/24 01:54

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	150000	150000	1	0.283		15
Fluoride	795	806	1	1.40		15

L1777468-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1777468-22 09/18/24 02:21 • (DUP) R4121851-8 09/18/24 02:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	542000	541000	10	0.0359		15

Laboratory Control Sample (LCS)

(LCS) R4121851-2 09/18/24 00:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39000	97.6	80.0-120	
Fluoride	8000	8100	101	80.0-120	
Sulfate	40000	39500	98.6	80.0-120	

L1777468-21,22

L1777468-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777468-21 09/18/24 00:46 • (MS) R4121851-4 09/18/24 01:13 • (MSD) R4121851-5 09/18/24 01:27

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40000	34600	66400	67100	79.5	81.1	1	80.0-120	J6		0.956	15
Fluoride	8000	78.4	8010	8080	99.1	100	1	80.0-120			0.876	15
Sulfate	40000	43500	73700	74300	75.7	77.1	1	80.0-120	J6	J6	0.788	15

L1777468-22 Original Sample (OS) • Matrix Spike (MS)

(OS) L1777468-22 09/18/24 01:40 • (MS) R4121851-7 09/18/24 02:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	150000	159000	22.0	1	80.0-120	J6
Fluoride	8000	795	8210	92.7	1	80.0-120	

Method Blank (MB)

(MB) R4120972-1 09/17/24 18:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4120972-2 09/17/24 18:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.15	105	80.0-120	

L1777447-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777447-01 09/17/24 18:21 • (MS) R4120972-4 09/17/24 18:26 • (MSD) R4120972-5 09/17/24 18:28

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	U	3.24	3.24	108	108	1	75.0-125			0.0268	20

Method Blank (MB)

(MB) R4120971-1 09/17/24 18:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4120971-2 09/17/24 18:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.73	91.2	80.0-120	

L1777468-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777468-10 09/17/24 18:39 • (MS) R4120971-4 09/17/24 18:44 • (MSD) R4120971-5 09/17/24 18:47

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	3.00	U	2.95	2.53	98.4	84.2	1	75.0-125			15.6	20

Method Blank (MB)

(MB) R4120944-1 09/17/24 15:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4120944-2 09/17/24 15:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Mercury	3.00	3.21	107	80.0-120	

L1777501-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777501-04 09/17/24 15:46 • (MS) R4120944-4 09/17/24 15:55 • (MSD) R4120944-5 09/17/24 15:57

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	U	1.22	1.18	40.5	39.3	1	75.0-125	J6	J6	3.14	20

L1777578-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777578-07 09/17/24 16:00 • (MS) R4120944-6 09/17/24 16:02 • (MSD) R4120944-7 09/17/24 16:05

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	U	3.26	3.23	109	108	1	75.0-125			0.951	20

L1777468-01,02,03,04

Method Blank (MB)

(MB) R4125605-1 09/27/24 19:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Boron	11.5	J	9.63	30.0
Cadmium	U		0.150	1.00
Calcium	U		93.6	1000
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Magnesium	U		73.5	1000
Molybdenum	U		0.348	5.00
Potassium	U		108	2000
Selenium	U		0.300	2.00
Sodium	U		376	2000
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4125605-2 09/27/24 19:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	50.6	101	80.0-120	
Arsenic	50.0	50.6	101	80.0-120	
Barium	50.0	49.0	98.1	80.0-120	
Beryllium	50.0	42.5	85.0	80.0-120	
Boron	50.0	52.8	106	80.0-120	
Cadmium	50.0	50.3	101	80.0-120	
Calcium	5000	5170	103	80.0-120	
Chromium	50.0	53.0	106	80.0-120	
Cobalt	50.0	53.8	108	80.0-120	
Lead	50.0	49.2	98.5	80.0-120	
Magnesium	5000	5160	103	80.0-120	
Molybdenum	50.0	51.5	103	80.0-120	
Potassium	5000	4990	99.7	80.0-120	
Selenium	50.0	51.7	103	80.0-120	
Sodium	5000	5280	106	80.0-120	
Thallium	50.0	47.1	94.2	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4125605-2 09/27/24 19:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lithium	50.0	45.0	89.9	80.0-120	

L1777446-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777446-07 09/27/24 19:53 • (MS) R4125605-4 09/27/24 19:56 • (MSD) R4125605-5 09/27/24 20:00

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	U	53.3	50.1	107	100	1	75.0-125			6.22	20
Arsenic	50.0	1.12	51.6	51.8	101	101	1	75.0-125			0.341	20
Barium	50.0	56.9	110	108	106	103	1	75.0-125			1.58	20
Beryllium	50.0	U	45.1	45.0	90.3	90.1	1	75.0-125			0.239	20
Cadmium	50.0	U	50.2	49.3	100	98.6	1	75.0-125			1.80	20
Calcium	5000	123000	128000	128000	100	111	1	75.0-125			0.430	20
Chromium	50.0	U	52.1	51.4	104	103	1	75.0-125			1.37	20
Cobalt	50.0	0.135	51.6	51.3	103	102	1	75.0-125			0.538	20
Lead	50.0	U	52.3	51.5	105	103	1	75.0-125			1.71	20
Magnesium	5000	39500	44100	44400	93.4	98.5	1	75.0-125			0.585	20
Molybdenum	50.0	U	52.1	51.9	104	104	1	75.0-125			0.377	20
Potassium	5000	3480	8570	8450	102	99.4	1	75.0-125			1.32	20
Selenium	50.0	U	52.0	51.8	104	104	1	75.0-125			0.359	20
Sodium	5000	59600	63000	63000	68.0	68.3	1	75.0-125	V	V	0.0204	20
Thallium	50.0	U	50.4	49.8	101	99.6	1	75.0-125			1.16	20
Lithium	50.0	23.0	70.0	69.1	93.9	92.1	1	75.0-125			1.31	20

L1777446-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777446-07 09/28/24 13:39 • (MS) R4125750-4 09/28/24 13:45 • (MSD) R4125750-5 09/28/24 13:48

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	50.0	515	528	580	25.7	128	5	75.0-125	V	V	9.27	20

Method Blank (MB)

(MB) R4125945-1 09/29/24 14:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Calcium	U		93.6	1000
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Magnesium	U		73.5	1000
Molybdenum	U		0.348	5.00
Potassium	U		108	2000
Selenium	U		0.300	2.00
Sodium	U		376	2000
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Method Blank (MB)

(MB) R4126395-6 09/30/24 17:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		9.63	30.0

Laboratory Control Sample (LCS)

(LCS) R4125945-2 09/29/24 14:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	54.4	109	80.0-120	
Arsenic	50.0	50.0	100	80.0-120	
Barium	50.0	48.4	96.7	80.0-120	
Beryllium	50.0	49.8	99.5	80.0-120	
Cadmium	50.0	54.8	110	80.0-120	
Calcium	5000	5150	103	80.0-120	
Chromium	50.0	52.7	105	80.0-120	
Cobalt	50.0	53.5	107	80.0-120	
Lead	50.0	51.1	102	80.0-120	
Magnesium	5000	5100	102	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4125945-2 09/29/24 14:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Molybdenum	50.0	49.9	99.8	80.0-120	
Potassium	5000	4850	97.0	80.0-120	
Selenium	50.0	50.2	100	80.0-120	
Sodium	5000	5200	104	80.0-120	
Thallium	50.0	49.5	98.9	80.0-120	
Lithium	50.0	49.0	98.0	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4126395-2 09/30/24 17:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	50.0	49.4	98.9	80.0-120	

L1777468-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777468-10 09/29/24 14:40 • (MS) R4125945-4 09/29/24 14:46 • (MSD) R4125945-5 09/29/24 14:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	U	55.1	55.9	110	112	1	75.0-125			1.54	20
Arsenic	50.0	U	49.9	50.2	99.7	100	1	75.0-125			0.754	20
Barium	50.0	92.2	136	139	88.3	93.9	1	75.0-125			2.04	20
Beryllium	50.0	U	50.0	50.7	100	101	1	75.0-125			1.30	20
Cadmium	50.0	U	54.7	55.3	109	111	1	75.0-125			1.23	20
Calcium	5000	110000	115000	114000	102	77.7	1	75.0-125			1.06	20
Chromium	50.0	U	52.3	52.7	105	105	1	75.0-125			0.714	20
Cobalt	50.0	U	51.5	52.3	103	105	1	75.0-125			1.39	20
Lead	50.0	U	50.9	52.0	102	104	1	75.0-125			2.14	20
Magnesium	5000	34400	39200	38700	96.8	87.0	1	75.0-125			1.26	20
Molybdenum	50.0	0.844	50.8	52.0	100	102	1	75.0-125			2.27	20
Potassium	5000	1290	6090	6080	96.0	95.7	1	75.0-125			0.285	20
Selenium	50.0	U	50.2	52.0	100	104	1	75.0-125			3.48	20
Sodium	5000	4450	9570	9480	102	101	1	75.0-125			0.887	20
Thallium	50.0	U	49.6	50.5	99.2	101	1	75.0-125			1.77	20
Lithium	50.0	4.20	53.1	55.3	97.9	102	1	75.0-125			4.01	20

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MES-257115

L1777468-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777468-10 09/30/24 17:43 • (MS) R4126395-4 09/30/24 17:49 • (MSD) R4126395-5 09/30/24 17:52

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	50.0	77.0	127	133	100	112	1	75.0-125			4.65	20

Method Blank (MB)

(MB) R4123756-1 09/24/24 16:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Boron	U		9.63	30.0
Cadmium	U		0.150	1.00
Calcium	U		93.6	1000
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Magnesium	U		73.5	1000
Molybdenum	U		0.348	5.00
Potassium	U		108	2000
Selenium	U		0.300	2.00
Sodium	U		376	2000
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4123756-2 09/24/24 16:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	50.7	101	80.0-120	
Arsenic	50.0	49.0	98.0	80.0-120	
Barium	50.0	48.9	97.8	80.0-120	
Beryllium	50.0	51.1	102	80.0-120	
Boron	50.0	48.5	97.0	80.0-120	
Cadmium	50.0	49.1	98.3	80.0-120	
Calcium	5000	4790	95.8	80.0-120	
Chromium	50.0	48.8	97.5	80.0-120	
Cobalt	50.0	50.1	100	80.0-120	
Lead	50.0	47.5	95.0	80.0-120	
Magnesium	5000	4820	96.3	80.0-120	
Molybdenum	50.0	48.1	96.1	80.0-120	
Potassium	5000	4960	99.3	80.0-120	
Selenium	50.0	48.2	96.4	80.0-120	
Sodium	5000	4820	96.5	80.0-120	
Thallium	50.0	46.7	93.5	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4123756-2 09/24/24 16:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lithium	50.0	51.8	104	80.0-120	

L1778562-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1778562-13 09/24/24 17:06 • (MS) R4123756-4 09/24/24 16:52 • (MSD) R4123756-5 09/24/24 16:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	1.54	55.0	55.2	107	107	1	75.0-125			0.270	20
Arsenic	50.0	13.3	62.2	63.5	97.8	100	1	75.0-125			2.08	20
Barium	50.0	337	399	394	124	113	1	75.0-125			1.37	20
Beryllium	50.0	U	52.6	51.3	105	103	1	75.0-125			2.49	20
Boron	50.0	204	248	253	87.7	99.3	1	75.0-125			2.30	20
Cadmium	50.0	0.176	51.5	50.3	103	100	1	75.0-125			2.34	20
Calcium	5000	78000	82200	81800	84.2	76.2	1	75.0-125			0.492	20
Chromium	50.0	U	48.8	49.8	97.6	99.7	1	75.0-125			2.05	20
Cobalt	50.0	4.19	53.1	52.8	97.8	97.2	1	75.0-125			0.506	20
Lead	50.0	1.47	49.5	50.7	96.1	98.5	1	75.0-125			2.42	20
Magnesium	5000	15700	20400	20100	95.5	88.3	1	75.0-125			1.78	20
Molybdenum	50.0	14.9	64.9	64.7	99.9	99.6	1	75.0-125			0.283	20
Potassium	5000	11700	16500	16100	94.8	88.6	1	75.0-125			1.90	20
Selenium	50.0	0.797	49.3	46.9	97.0	92.3	1	75.0-125			4.93	20
Sodium	5000	112000	113000	113000	26.2	15.2	1	75.0-125	V	V	0.487	20
Thallium	50.0	U	48.5	48.0	97.0	96.1	1	75.0-125			0.935	20
Lithium	50.0	17.4	69.4	68.9	104	103	1	75.0-125			0.816	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MFS-257-115

Company Name/Address: S&ME - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com
Pres Chk

Report to: Vince Epps
Email To: vepps@smeinc.com

Project Description: Miami Fort Station
City/State Collected: North Bend, OH
Please Circle: PT MT CT ET

Phone: 513-771-8471
Client Project # 7217-17-003D
Lab Project # LITEGNTN-MIAMI

Collected by (print): Carter Harlan
Site/Facility ID # MFS Unit 115 (Plant)
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE
12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1774466
B020

Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-No	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
A-1 Pond	Grab	GW	NA	9/12/24	1240	3	X	X	X		X		-01
B-1 Pond	Grab	GW	NA	9/12/24	1300	3	X	X	X		X		-02
MW-01	Grab	GW	NA	9/10/24	1630	5	X	X	X	X	X		-03
MW-02	Grab	GW	NA	9/10/24	1500	5	X	X	X	X	X		-04
MW-03A	Grab	GW	NA	9/11/24	1100	5	X	X	X	X	X		-05
MW-04	Grab	GW	NA	9/11/24	1225	5	X	X	X	X	X		-06
MW-4A	Grab	GW	NA	9/10/24	1145	5	X	X	X	X	X		-07
MW-05	Grab	GW	NA	9/12/24	1035	5	X	X	X	X	X		-08
MW-06	Grab	GW	NA	9/12/24	1140	5	X	X	X	X	X		-09
MW-07	Grab	GW	NA	9/9/24	1525	5	X	X	X	X	X		-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na
5 Coolers

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Colin Prioux	09/12/24	1710	FedEx		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 113	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 09.13.24 Time: 0900	Hold: Condition: NCF / OK

Company / Name / Address: S&ME - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Email Address: Accounts Payable
smeinc_invoice@concursolutions.com

Pres Chk

Report to: Vince Epps

Email To: vepps@smeinc.com

Project Description: Miami Fort Station

City/State Collected: North Bend, OH

Please Circle: PT MT CT ET

Phone: 513-771-8471

Client Project # 7217-17-003D

Lab Project # LITEGNTN-MIAMI

Collected by (print):

Site/Facility ID # MFS Unit 115 (Plant)

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

Pace
PEOPLE ADVANCING SCIENCE

12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1774468

Table #

Acctnum: LITEGNTN

Template: T181344

Prelogin: P1063309

PM: 134

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-Nc	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-08	Grab	GW	NA	9/11/24	0905	5	X	X	X	X	X		-11
MW-09	Grab	GW	NA	9/11/24	1010	5	X	X	X	X	X		-12
MW-10	Grab	GW	NA	9/12/24	1455	5	X	X	X	X	X		-13
MW-11	Grab	GW	NA	9/11/24	1530	5	X	X	X	X	X		-14
MW-12	Grab	GW	NA	9/12/24	0925	5	X	X	X	X	X		-15
MW-13	Grab	GW	NA	9/11/24	1440	5	X	X	X	X	X		-16
MW-14	Grab	GW	NA	9/11/24	1340	5	X	X	X	X	X		-17
MW-15	Grab	GW	NA	9/10/24	0955	5	X	X	X	X	X		-18
MW-16	Grab	GW	NA	9/10/24	1024	5	X	X	X	X	X		-19
MW-17	Grab	GW	NA	9/10/24	1310	5	X	X	X	X	X		-20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

5 Coolers

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature) Colin Rioux	Date: 09/12/24	Time: 1710	Received by: (Signature) FedEx	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 113 — If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) CRobert	Date: 09.13.24 Time: 0900 — Hold: — Condition: NCF / OK

Company Name/Address: SAME - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com

Pres Chk

Report to: Vince Epps
Email To: vepps@smeinc.com

Project Description: Miami Fort Station
City/State Collected: North Bend, OH
Please Circle: PT MT CT ET

Phone: 513-771-8471
Client Project # 7217-17-003D
Lab Project # LITEGNTN-MIAMI

Collected by (print):
Site/Facility ID # MFS Unit 115 (Plant)
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-Nc	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-19	Grab	GW	NA	9/12/24	1625	5	X	X	X	X	X		-21
~~4A Production Well~~	Grab	GW	NA			~~3~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
XPW-01	Grab	GW	NA	9/12/24	1350	3	X	X	X		X		-22
DUP-1	Grab	GW	NA	9/11/24	—	3	X	X	X		X		-23
DUP-2	Grab	GW	NA	9/11/24	—	3	X	X	X		X		-24
MS/MSD	Grab	GW	NA	9/9/24	1525	3	X	X	X		X		-10

Chain of Custody Page 2 of 3

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12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # LITT4168
Table #
Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na
5 coolers

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Calvin Prioux	09/12/24	1710	FedEX	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 113
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 09-13-24 Time: 0900

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK

4777468

Fed Ex tracking #	Gun ID	Temperature
4041 0478 6591	TLA9	0.7 TO 0.3 = 1.0
4041 0478 6617		2.7 TO 0.3 = 3.0
4041 0478		0.9 TO 0.3 = 1.2
4041 0478 6606		2.1 TO 0.3 = 2.4
4041 0478 6639		3.5 TO 0.3 = 3.8

Name

Date

Pace Analytical®

ANALYTICAL REPORT

October 08, 2024

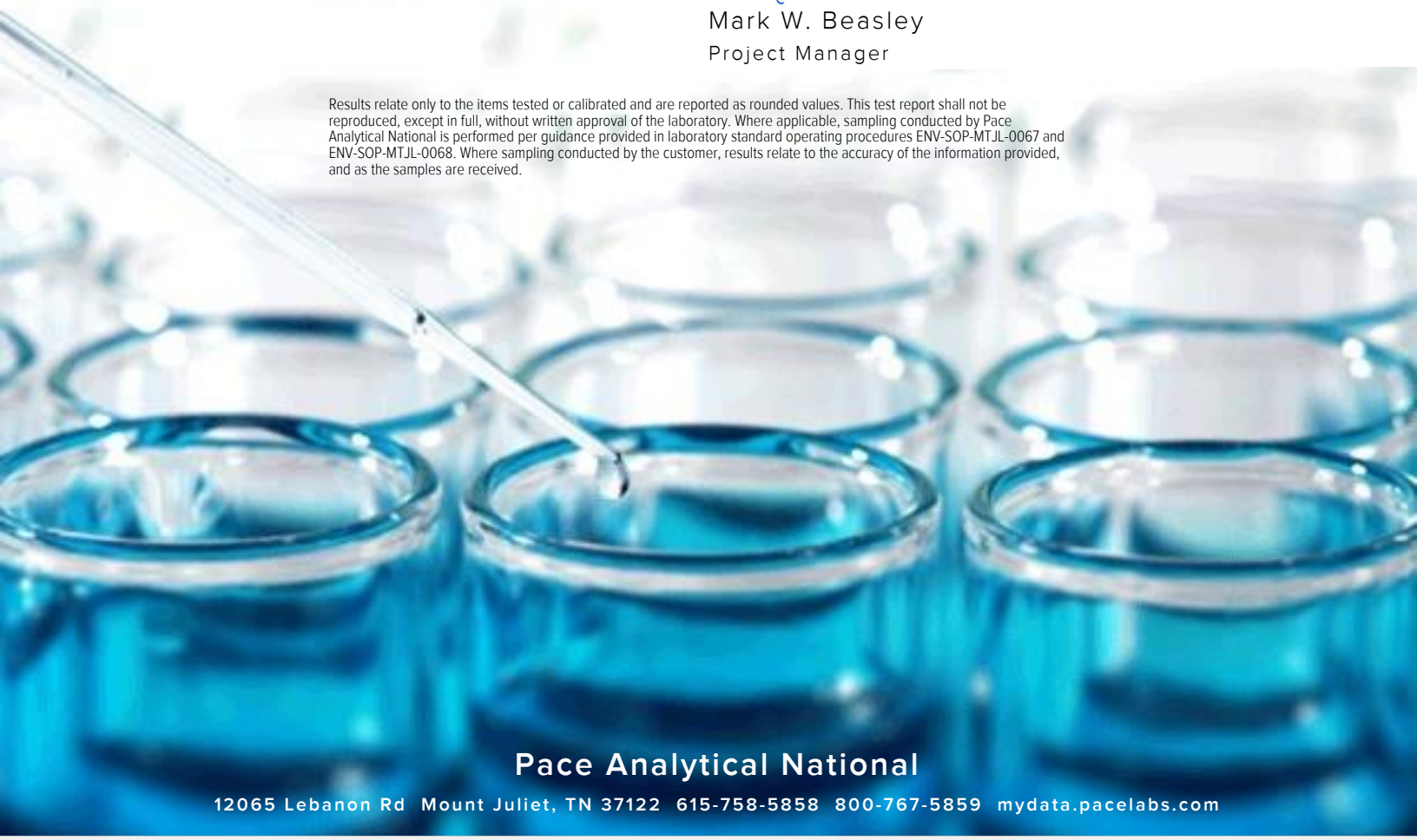
S&ME - Nashville, TN

Sample Delivery Group:	L1777470
Samples Received:	09/13/2024
Project Number:	7217-17-003D
Description:	Miami Fort Station - North Bend, OH
Site:	MFS UNIT 115 (PLANT)
Report To:	Vince Epps 862 East Crescentville Road Cincinnati, OH 45246

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

MW-01 L1777470-01 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/10/24 15:00 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363305	1	09/16/24 13:22	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363305	1	09/16/24 13:22	09/23/24 22:24	ZRG	Mt. Juliet, TN

MW-02 L1777470-02 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/10/24 16:30 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363305	1	09/16/24 13:22	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363305	1	09/16/24 13:22	09/23/24 22:24	ZRG	Mt. Juliet, TN

MW-03A L1777470-03 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/11/24 11:00 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363305	1	09/16/24 13:22	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363305	1	09/16/24 13:22	09/23/24 22:24	ZRG	Mt. Juliet, TN

MW-04 L1777470-04 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/11/24 12:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363305	1	09/16/24 13:22	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363305	1	09/16/24 13:22	09/23/24 22:24	ZRG	Mt. Juliet, TN

MW-4A L1777470-05 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/10/24 11:45 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363305	1	09/16/24 13:22	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363305	1	09/16/24 13:22	09/23/24 22:24	ZRG	Mt. Juliet, TN

MW-05 L1777470-06 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/12/24 10:35 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363305	1	09/16/24 13:22	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363305	1	09/16/24 13:22	09/23/24 22:24	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

MW-06 L1777470-07 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/12/24 11:40 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:48	ZRG	Mt. Juliet, TN

MW-07 L1777470-08 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/09/24 15:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-08 L1777470-09 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/11/24 09:05 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-09 L1777470-10 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/11/24 10:10 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-10 L1777470-11 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/12/24 14:55 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:48	ZRG	Mt. Juliet, TN

MW-11 L1777470-12 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/11/24 15:30 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

MW-12 L1777470-13 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/12/24 09:25 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-13 L1777470-14 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/11/24 14:40 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-14 L1777470-15 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/11/24 13:40 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362333	1	09/16/24 17:03	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	09/26/24 20:33	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-15 L1777470-16 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/10/24 09:15 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362264	1	09/17/24 16:32	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-16 L1777470-17 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/10/24 10:24 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362264	1	09/17/24 16:32	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

MW-17 L1777470-18 Non-Potable Water

Collected by: Carter Harlan | Collected date/time: 09/10/24 13:10 | Received date/time: 09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362264	1	09/17/24 16:32	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

MW-19 L1777470-19 Non-Potable Water

Collected by	Collected date/time	Received date/time
Carter Harlan	09/12/24 16:25	09/13/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2362264	1	09/17/24 16:32	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2363496	1	09/18/24 11:36	10/02/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2363496	1	09/18/24 11:36	09/26/24 19:42	ZRG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.352	J	0.271	0.469	0.494	0.258	09/26/2024 20:33	WG2362333
(T) Barium	*109*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*121*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.378	J	0.289	0.544	09/26/2024 20:33	WG2363305

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0259	U	0.100	0.156	0.228	0.179	09/23/2024 22:24	WG2363305
(T) Barium-133	*90.1*					*30.0-143*	*09/23/2024 22:24*	WG2363305

SAMPLE RESULTS - 02

MW-02
Sample Type: Water
Collected: 09/19/24 16:30
Lab ID: L1777470

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.363	U	0.407	0.705	0.769	0.401	09/26/2024 20:33	WG2362333
(T) Barium	*115*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*87.6*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.544	J	0.512	0.811	09/26/2024 20:33	WG2363305

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.544		0.311	0.591	0.257	0.190	09/23/2024 22:24	WG2363305
(T) Barium-133	*94.2*					*30.0-143*	*09/23/2024 22:24*	WG2363305

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.0308	U	0.244	0.442	0.457	0.238	09/26/2024 20:33	WG2362333
(T) Barium	*109*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*111*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.184	U	0.352	0.589	09/26/2024 20:33	WG2363305

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.184	J	0.254	0.396	0.371	0.255	09/23/2024 22:24	WG2363305
(T) Barium-133	*84.8*					*30.0-143*	*09/23/2024 22:24*	WG2363305

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.898		0.229	0.427	0.401	0.210	09/26/2024 20:33	WG2362333
(T) Barium	*113*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*110*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.997		0.307	0.518	09/26/2024 20:33	WG2363305

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0994	U	0.204	0.299	0.328	0.222	09/23/2024 22:24	WG2363305
(T) Barium-133	*98.4*					*30.0-143*	*09/23/2024 22:24*	WG2363305

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.394		0.199	0.397	0.360	0.190	09/26/2024 20:33	WG2362333
(T) Barium	*102*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*113*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.792		0.342	0.457	09/26/2024 20:33	WG2363305

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.398		0.278	0.492	0.282	0.202	09/23/2024 22:24	WG2363305
(T) Barium-133	*94.2*					*30.0-143*	*09/23/2024 22:24*	WG2363305

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.04		0.309	0.529	0.546	0.285	09/26/2024 20:33	WG2362333
(T) Barium	*105*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*82.8*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.07		0.322	0.583	09/26/2024 20:33	WG2363305

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0233	U	0.0901	0.143	0.205	0.161	09/23/2024 22:24	WG2363305
(T) Barium-133	*96.0*					*30.0-143*	*09/23/2024 22:24*	WG2363305

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.742		0.205	0.403	0.359	0.190	09/26/2024 20:33	WG2362333
(T) Barium	*133*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*103*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.12		0.381	0.497	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.381		0.321	0.597	0.344	0.262	09/26/2024 19:48	WG2363496
(T) Barium-133	*64.6*					*30.0-143*	*09/26/2024 19:48*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.527		0.285	0.501	0.514	0.270	09/26/2024 20:33	WG2362333
(T) Barium	*118*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*85.0*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.42		0.478	0.558	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.893		0.384	0.841	0.218	0.171	09/26/2024 19:42	WG2363496
(T) Barium-133	*93.9*					*30.0-143*	*09/26/2024 19:42*	WG2363496

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.376	J	0.243	0.441	0.440	0.230	09/26/2024 20:33	WG2362333
(T) Barium	*104*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*114*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.690		0.352	0.517	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.314		0.254	0.441	0.271	0.201	09/26/2024 19:42	WG2363496
(T) Barium-133	*89.0*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.219	U	0.267	0.484	0.506	0.265	09/26/2024 20:33	WG2362333
(T) Barium	*98.9*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*85.1*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.39		0.593	0.630	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.39		0.529	1.24	0.375	0.257	09/26/2024 19:42	WG2363496
(T) Barium-133	*84.0*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.654		0.205	0.403	0.360	0.190	09/26/2024 20:33	WG2362333
(T) Barium	*118*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*104*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.967		0.378	0.543	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.313	J	0.318	0.555	0.406	0.287	09/26/2024 19:48	WG2363496
(T) Barium-133	*60.9*					*30.0-143*	*09/26/2024 19:48*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.21		0.215	0.421	0.357	0.190	09/26/2024 20:33	WG2362333
(T) Barium	*111*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*92.9*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.73		0.396	0.433	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.521		0.333	0.744	0.245	0.202	09/26/2024 19:42	WG2363496
(T) Barium-133	*54.6*					*30.0-143*	*09/26/2024 19:42*	WG2363496

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

MW-12 SAMPLE RESULTS - 13

Sample Delivery Group: L1777470

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.202	J	0.209	0.416	0.387	0.205	09/26/2024 20:33	WG2362333
(T) Barium	*102*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*91.9*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.449	J	0.317	0.487	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.247	J	0.239	0.392	0.296	0.212	09/26/2024 19:42	WG2363496
(T) Barium-133	*90.0*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.311	U	0.342	0.581	0.646	0.337	09/26/2024 20:33	WG2362333
(T) Barium	*100*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*72.4*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.00		0.595	0.727	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.00		0.487	1.24	0.334	0.254	09/26/2024 19:42	WG2363496
(T) Barium-133	*55.2*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.954		0.292	0.569	0.512	0.270	09/26/2024 20:33	WG2362333
(T) Barium	*108*					*30.0-143*	*09/26/2024 20:33*	WG2362333
(T) Yttrium	*100*					*30.0-136*	*09/26/2024 20:33*	WG2362333

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.24		0.381	0.581	09/26/2024 20:33	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.291		0.244	0.433	0.274	0.200	09/26/2024 19:42	WG2363496
(T) Barium-133	*84.0*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.317	J	0.195	0.393	0.355	0.188	10/02/2024 21:56	WG2362264
(T) Barium	*117*					*30.0-143*	*10/02/2024 21:56*	WG2362264
(T) Yttrium	*99.5*					*30.0-136*	*10/02/2024 21:56*	WG2362264

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.678		0.407	0.578	10/02/2024 21:56	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.361	J	0.357	0.653	0.456	0.316	09/26/2024 19:42	WG2363496
(T) Barium-133	*56.5*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.758		0.191	0.389	0.329	0.175	10/02/2024 21:56	WG2362264
(T) Barium	*103*					*30.0-143*	*10/02/2024 21:56*	WG2362264
(T) Yttrium	*118*					*30.0-136*	*10/02/2024 21:56*	WG2362264

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.848		0.300	0.524	10/02/2024 21:56	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0899	U	0.231	0.353	0.408	0.289	09/26/2024 19:42	WG2363496
(T) Barium-133	*61.4*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.687		0.201	0.402	0.351	0.186	10/02/2024 21:56	WG2362264
(T) Barium	*119*					*30.0-143*	*10/02/2024 21:56*	WG2362264
(T) Yttrium	*97.2*					*30.0-136*	*10/02/2024 21:56*	WG2362264

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.716		0.327	0.584	10/02/2024 21:56	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0291	U	0.258	0.316	0.467	0.307	09/26/2024 19:42	WG2363496
(T) Barium-133	*78.8*					*30.0-143*	*09/26/2024 19:42*	WG2363496

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.626	J	0.348	0.625	0.630	0.330	10/02/2024 21:56	WG2362264
(T) Barium	*124*					*30.0-143*	*10/02/2024 21:56*	WG2362264
(T) Yttrium	*102*					*30.0-136*	*10/02/2024 21:56*	WG2362264

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.988		0.472	0.727	10/02/2024 21:56	WG2363496

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.362	J	0.319	0.600	0.363	0.269	09/26/2024 19:42	WG2363496
(T) Barium-133	*66.7*					*30.0-143*	*09/26/2024 19:42*	WG2363496

L1777470-16,17,18,19

Method Blank (MB)

(MB) R4129641-1 10/02/24 21:56

Analyte	MB Result	MB Qualifier	MB 2 sigma CE	MB MDA	MB Lc
	pCi/l		+ / -	pCi/l	pCi/l
Radium-228	-0.167	U	0.143	0.274	0.144
(T) Barium	*107*		*107*		
(T) Yttrium	*98.3*		*98.3*		

L1777470-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1777470-19 10/02/24 21:56 • (DUP) R4129641-5 10/02/24 21:56

Analyte	Original Result	Original 2 sigma CE	Original MDA	Original Lc	DUP Result	DUP 2 sigma CE	DUP MDA	DUP Lc	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	pCi/l	+ / -	pCi/l	pCi/l	%			%	
Radium-228	0.626	0.348	0.630	0.330	0.490	0.352	0.641	0.334	24.2	0.273	J	20	3
(T) Barium	*124*				*119*	*119*							
(T) Yttrium	*102*				*105*	*105*							

Laboratory Control Sample (LCS)

(LCS) R4129641-2 10/02/24 21:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	4.24	84.7	80.0-120	
(T) Barium			*123*		
(T) Yttrium			*106*		

L1775820-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775820-01 10/02/24 21:56 • (MS) R4129641-3 10/02/24 21:56 • (MSD) R4129641-4 10/02/24 21:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	16.7	361	375	374	82.6	78.4	1	70.0-130			0.187		20
(T) Barium		*589*			*598*	*566*			C1	C1			
(T) Yttrium		*93.7*			*94.8*	*98.2*							

Method Blank (MB)

(MB) R4127006-1 09/26/24 20:33

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.521	U	0.158	0.313	0.164
(T) Barium	*117*		*117*		
(T) Yttrium	*92.1*		*92.1*		

L1777470-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1777470-15 09/26/24 20:33 • (DUP) R4127006-5 09/26/24 20:33

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.954	0.292	0.512	0.270	0.258	0.357	0.657	0.343	115	1.51	U	20	3
(T) Barium	*108*				*116*	*116*							
(T) Yttrium	*100*				*97.5*	*97.5*							

Laboratory Control Sample (LCS)

(LCS) R4127006-2 09/26/24 20:33

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.53	90.6	80.0-120	
(T) Barium			*115*		
(T) Yttrium			*112*		

L1777448-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777448-11 09/26/24 20:33 • (MS) R4127006-3 09/26/24 20:33 • (MSD) R4127006-4 09/26/24 20:33

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.794	16.7	16.9	95.4	96.4	1	70.0-130			1.01		20
(T) Barium		*119*			*107*	*108*							
(T) Yttrium		*99.9*			*97.7*	*113*							

Method Blank (MB)

(MB) R4126111-1 09/23/24 22:24

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.00175	U	0.0145	0.0327	0.0216
(T) Barium-133	*105*		*105*		

L1777470-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1777470-05 09/23/24 22:24 • (DUP) R4126111-5 09/23/24 22:24

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.398	0.278	0.282	0.202	0.400	0.331	0.402	0.264	0.526	0.00486	J	20	3
(T) Barium-133	*94.2*				*91.4*	*91.4*							

Laboratory Control Sample (LCS)

(LCS) R4126111-2 09/23/24 22:24

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.17	103	75.0-125	
(T) Barium-133			*99.6*		

L1777448-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777448-03 09/23/24 22:24 • (MS) R4126111-3 09/23/24 22:24 • (MSD) R4126111-4 09/23/24 22:24

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.406	19.0	20.3	92.8	99.6	1	75.0-125			6.92		20
(T) Barium-133		*100*			*95.5*	*97.4*							

Method Blank (MB)

(MB) R4126085-5 09/26/24 19:48

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.000	U	0.0120	0.0305	0.0218
(T) Barium-133	*86.0*		*86.0*		

L1777488-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1777488-15 09/26/24 19:42 • (DUP) R4126085-4 09/26/24 19:42

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.0721	0.217	0.389	0.272	-0.0656	0.222	0.440	0.282	200	0.444	U	20	3
(T) Barium-133	*67.8*				*85.0*	*85.0*							

Laboratory Control Sample (LCS)

(LCS) R4126085-1 09/26/24 19:42

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	4.59	91.8	75.0-125	
(T) Barium-133			*86.1*		

L1777470-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1777470-15 09/26/24 19:42 • (MS) R4126085-2 09/26/24 19:42 • (MSD) R4126085-3 09/26/24 19:42

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.291	18.3	19.3	89.8	95.0	1	75.0-125			5.59		20
(T) Barium-133		*84.0*			*70.2*	*83.3*							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C1	Tracer recovery limits have been exceeded; values are outside upper control limits.
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
S&ME - Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information:
Accounts Payable
smeinc_invoice@concursolutions.com

Pres Chk

Report to: Vince Epps

Email To: vepps@smeinc.com

Project Description: Miami Fort Station

City/State Collected: North Bend, OH

Please Circle: PT MT CT ET

Phone: 513-771-8471

Client Project # 7217-17-003D

Lab Project # LITEGNTN-MIAMI

Collected by (print): Carter Harlan

Site/Facility ID # MFS Unit 115 (Plant)

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

Pace
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12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # B020177470

Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-No	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
A-1 Pond	Grab	GW	NA	9/12/24	1240	3	X	X	X		X		-
B-1 Pond	Grab	GW	NA	9/12/24	1300	3	X	X	X		X		-
MW-01	Grab	GW	NA	9/10/24	1630	5	X	X	X	X	X		-01
MW-02	Grab	GW	NA	9/10/24	1500	5	X	X	X	X	X		-02
MW-03A	Grab	GW	NA	9/11/24	1100	5	X	X	X	X	X		-03
MW-04	Grab	GW	NA	9/11/24	1225	5	X	X	X	X	X		-04
MW-4A	Grab	GW	NA	9/10/24	1145	5	X	X	X	X	X		-05
MW-05	Grab	GW	NA	9/12/24	1035	5	X	X	X	X	X		-06
MW-06	Grab	GW	NA	9/12/24	1190	5	X	X	X	X	X		-07
MW-07	Grab	GW	NA	9/9/24	1525	5	X	X	X	X	X		-08

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na
5 Coolers

pH ____ Temp ____
Flow ____ Other ____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Colin Prioux	09/12/24	1710	FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 113

Date: 09.13.24 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name: Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information: Accounts Payable
smeinc_invoice@concursolutions.com

Pres Chk

Report to: Vince Epps

Email To: vepps@smeinc.com

Project Description: Miami Fort Station

City/State Collected: North Bend, OH

Please Circle: PT MT CT ET

Phone: 513-771-8471

Client Project # 7217-17-003D

Lab Project # LITEGNTN-MIAMI

Collected by (print):

Site/Facility ID # MFS Unit 115 (Plant)

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

Pace
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12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859

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SDG # L1774700

Table #

Acctnum: LITEGNTN

Template: T181344

Prelogin: P1063309

PM: 134

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-N	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-08	Grab	GW	NA	9/11/24	0905	5	X	X	X	X	X		-09
MW-09	Grab	GW	NA	9/11/24	1010	5	X	X	X	X	X		-10
MW-10	Grab	GW	NA	9/12/24	1455	5	X	X	X	X	X		-11
MW-11	Grab	GW	NA	9/11/24	1530	5	X	X	X	X	X		-12
MW-12	Grab	GW	NA	9/12/24	0925	5	X	X	X	X	X		-13
MW-13	Grab	GW	NA	9/11/24	1440	5	X	X	X	X	X		-14
MW-14	Grab	GW	NA	9/11/24	1390	5	X	X	X	X	X		-15
MW-15	Grab	GW	NA	9/10/24	0915	5	X	X	X	X	X		-16
MW-16	Grab	GW	NA	9/10/24	1024	5	X	X	X	X	X		-17
MW-17	Grab	GW	NA	9/10/24	1310	5	X	X	X	X	X		-18

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na
5 Coolers

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Colin Prioux	09/12/24	1710	FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			CRobert

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 113

Date: 09.13.24 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address:
SS&ME Cincinnati
862 E. Crescentville Rd.
Cincinnati. OH 45246

Billing Information:
Accounts Payable
smeinc_invoice@concursolutions.com

Pres Chk

Report to: Vince Epps
Email To: vepps@smeinc.com

Project Description: Miami Fort Station
City/State Collected: North Bend, OH
Please Circle: PT MT CT ET

Phone: 513-771-8471
Client Project # 7217-17-003D
Lab Project # LITEGNTN-MIAMI

Collected by (print):
Site/Facility ID # MFS Unit 115 (Plant)
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

Pace
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SDG # L777470
Table #
Acctnum: LITEGNTN
Template: T181344
Prelogin: P1063309
PM: 134
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Carb/Bicarb Alk, Cl, F, SO4 125mlHDPE-Nc	CCR Metals 250mlHDPE HNO3	Other Metals 250mlHDPE HNO3	RA-226/228COMB 1L-HPE-HNO3	TDS 250 mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-19	Grab	GW	NA	9/12/24	1025	5	X	X	X	X	X		-19
~~4A Production Well~~	Grab	GW	NA			COA	X	X	X	X	X		
XPW-01	Grab	GW	NA	9/12/24	1350	3	X	X	X		X		
DUP-1	Grab	GW	NA	9/11/24	—	3	X	X	X		X		
DUP-2	Grab	GW	NA	9/11/24	—	3	X	X	X		X		
MS/MSD	Grab	GW	NA	9/9/24	1525	3	X	X	X		X		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
CCR Metals = Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
Other Metals = K, Mg, Na
5 coolers

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR
Colin Prioux	09/12/24	1710	FedEX	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 113
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 09.13.24 Time: 0900
			CRODER	Hold: Condition: NCF / (OK)

LTTR470

Fed Ex tracking #	Gun ID	Temperature
4041 0478 0591	TLA9	0.7 TO 0.3 = 1.0
4041 0478 0617		2.7 TO 0.3 = 3.0
4041 0478		0.9 TO 0.3 = 1.2
4041 0478 0606		2.1 TO 0.3 = 2.4
4041 0478 0639		3.5 TO 0.3 = 3.8

Name

Date

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	XPW-01	Purge Time:	20 Minutes
Locked?:	No	Sample Date:	September 12, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	13:50
Weather:	Sunny	Air Temp:	86F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				7.27	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	13:25	End Time:	13:45	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**			
Final Volume Purged:			1.6	Gallons				
Final Volume Purge Rate:			300	mL/min				
Well Purged Dry?:			No	(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	13:25	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:30	0.4	300	7.40	21.4	7.1	1.521	0.1	-98	20.3	Clear, no odor
	13:35	0.8	300	7.36	21.2	7.1	1.668	0.0	-94	9.11	Clear, no odor
	13:40	1.2	300	7.37	21.0	7.0	1.696	0.0	-89	7.71	Clear, no odor
	13:45	1.6	300	7.37	21.0	7.0	1.701	0.0	-88	5.64	Clear, no odor
Final:	13:45	1.6	300	7.37	21.0	7.0	1.701	0.0	-88	5.6	End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 13:50 Sample End Time: 14:00

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 10, 2024
Source Well:	MW-01	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	September 10, 2024
Sampled By:	Colin R., Carter H.	Sample Time:	15:00
Weather:	Sunny	Air Temp:	81F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				50.25	ft-TOC
Total Well Depth:				62.76	ft-TOC
Height of Water Column:				12.51	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.0	Gal
3 * Well Volume	6.12	Gal
5 * Well Volume	10.21	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	14:25	End Time:	14:55	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet		Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC		**Comments:**		
Final Volume Purged:		1.9		Gallons				
Final Volume Purge Rate:		250		mL/min				
Well Purged Dry?:		No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	14:25	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:30	0.3	200	50.27	25.4	7.1	1.010	4.7	97	0.20	Clear, no odor
	14:35	0.6	250	50.25	27.5	7.0	1.113	2.0	90	0.14	Clear, no odor
	14:40	0.9	250	50.25	27.9	7.0	1.138	1.0	84	0.20	Clear, no odor
	14:45	1.3	250	50.25	28.1	7.0	1.157	0.7	77	0.25	Clear, no odor
	14:50	1.6	250	50.25	28.4	7.0	1.164	0.7	70	0.19	Clear, no odor
	14:55	1.9	250	50.25	28.8	7.0	1.164	0.6	67	0.18	Clear, no odor
Final:	14:55	1.9	250	50.25	28.8	7.0	1.164	0.6	67	0.2	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:00 Sample End Time: 15:15

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 10, 2024
Source Well:	MW-02	Purge Time:	55 Minutes
Locked?:	Yes	Sample Date:	September 10, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	16:30
Weather:	Sunny	Air Temp:	88F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				19.30	ft-TOC
Total Well Depth:				39.96	ft-TOC
Height of Water Column:				20.66	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.4	Gal
3 * Well Volume	10.11	Gal
5 * Well Volume	16.86	Gal

Well Purging Information

Purge Method:	Bladder Pump	Start Time:	15:30	End Time:	16:25		
(If Used) Bladder Pump Control Settings:	On (sec): 3.5	Off (sec):	3.5	Pressure:	100	psi	
Pump Intake Depth from Top of Casing:		ft-TOC					
Water Column Above Pump Intake:		feet	Flow Through Cell Vol:		200	mL	
DTW-TOC at 25% Drawdown of WC Above Pump:		ft-TOC	**Comments:**				
Final Volume Purged:	2.9	Gallons					
Final Volume Purge Rate:	200	mL/min					
Well Purged Dry?:	No	(Yes/No)					

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	15:30	0.0	---	---	---	---	---	---	---	---	Start Purging
	15:35	0.3	200	21.70	15.1	6.6	1.277	0.3	-94	0.18	Clear, no odor
	15:40	0.5	200	23.35	15.1	6.6	1.280	0.8	-91	28.8	Clear, no odor
	15:45	0.8	200	23.16	15.2	6.7	1.277	1.6	-83	54.6	Cloudy, no odor
	15:50	1.1	200	23.40	15.2	6.7	1.268	2.0	-78	95.5	Black, no odor
	15:55	1.3	200	23.42	15.1	6.7	1.210	2.3	-77	124	Black, no odor
	16:00	1.6	200	23.42	15.0	6.8	1.180	2.3	-76	126	Black, no odor
	16:05	1.8	200	23.46	15.3	6.8	1.132	2.3	-77	108	Black, no odor
	16:10	2.1	200	23.39	15.2	6.8	1.111	2.3	-77	90.4	Black, no odor
	16:15	2.4	200	23.39	15.1	6.8	1.108	2.3	-77	76.7	Black, no odor
	16:20	2.6	200	23.40	15.1	6.8	1.100	2.3	-76	74.7	Black, no odor
	16:25	2.9	200	23.28	15.2	6.8	1.089	2.4	-76	70.0	Black, no odor
Final:	16:25	2.9	200	23.28	15.2	6.8	1.089	2.4	-76	70.0	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:30 Sample End Time: 16:45

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 11, 2024
Source Well:	MW-03A	Purge Time:	20 Minutes
Locked?:	Yes	Sample Date:	September 11, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	11:00
Weather:	Sunny	Air Temp:	73F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				19.30	ft-TOC
Total Well Depth:				52.04	ft-TOC
Height of Water Column:				32.74	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	5.3	Gal
3 * Well Volume	16.03	Gal
5 * Well Volume	26.71	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	10:35	End Time:	10:55	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet		Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC		**Comments:**		
Final Volume Purged:		1.3		Gallons				
Final Volume Purge Rate:		250		mL/min				
Well Purged Dry?:		No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	10:35	0.0	---	---	---	---	---	---	---	---	Start Purging
	10:40	0.3	250	19.30	15.7	7.0	0.447	0.1	-94	5.50	Clear, no odor
	10:45	0.7	250	19.32	15.5	7.0	0.454	0.0	-111	2.42	Clear, no odor
	10:50	1.0	250	19.32	15.5	7.0	0.447	0.0	-115	0.81	Clear, no odor
	10:55	1.3	250	19.31	15.5	7.1	0.444	0.0	-117	0.62	Clear, no odor
Final:	10:55	1.3	250	19.31	15.5	7.1	0.444	0.0	-117	0.6	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:00 Sample End Time: 11:15

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 11, 2024
Source Well:	MW-04	Purge Time:	50 Minutes
Locked?:	Yes	Sample Date:	September 11, 2024
Sampled By:	Colin R. & Carter H.	Sample Time:	12:25
Weather:	Sunny	Air Temp:	78F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				26.00	ft-TOC
Total Well Depth:				45.00	ft-TOC
Height of Water Column:				19.00	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.1	Gal
3 * Well Volume	9.30	Gal
5 * Well Volume	15.50	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	11:30	End Time:	12:20	
(If Used) Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:			ft-TOC				
Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
Final Volume Purged:	4.0		Gallons				
Final Volume Purge Rate:	300		mL/min				
Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	11:30	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:35	0.4	300	26.00	17.4	5.7	2.134	0.5	29	379	Orange, no odor
	11:40	0.8	300	26.06	17.1	5.6	2.215	0.5	50	945	Orange, no odor
	11:45	1.2	300	26.04	17.0	5.7	2.114	0.5	53	273	Orange, no odor
	11:50	1.6	300	26.02	16.9	5.7	1.975	0.1	52	111	Orange, no odor
	11:55	2.0	300	26.02	16.9	5.8	1.829	0.1	49	61.1	Cloudy, no odor
	12:00	2.4	300	26.03	16.9	5.8	1.703	0.1	44	48.5	Cloudy, no odor
	12:05	2.8	300	26.00	17.0	5.9	1.609	0.1	40	53.0	Cloudy, no odor
	12:10	3.2	300	26.03	17.3	5.9	1.520	0.1	36	48.8	Cloudy, no odor
	12:15	3.6	300	26.02	17.6	6.0	1.498	0.1	34	49.4	Cloudy, no odor
	12:20	4.0	300	26.00	17.8	6.0	1.467	0.1	32	46.8	Cloudy, no odor
Final:	12:20	4.0	300	26.00	17.8	6.0	1.467	0.1	32	46.8	End of Purging

Sample Method: Bladder Pump Sample Start Time: 12:25 Sample End Time: 12:40

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 10, 2024
Source Well:	MW-04A	Purge Time:	40 Minutes
Locked?:	No	Sample Date:	September 10, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	11:45
Weather:	Sunny	Air Temp:	76F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				38.98	ft-TOC
Total Well Depth:				45.00	ft-TOC
Height of Water Column:				6.02	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.0	Gal
3 * Well Volume	2.95	Gal
5 * Well Volume	4.91	Gal

Well Purging Information

Purge Method:			Start Time:	11:00	End Time:	11:40	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		2.8		Gallons	Flush mount well		
Final Volume Purge Rate:		250		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	11:00	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:05	0.4	300	38.98	17.6	6.9	1.975	0.3	86	2.30	Clear, no odor
	11:10	0.8	300	38.98	17.6	6.9	1.980	0.2	82	4.02	Clear, no odor
	11:15	1.1	250	38.98	17.6	6.9	1.984	0.1	78	6.23	Clear, no odor
	11:20	1.5	250	38.98	17.7	7.0	1.984	0.1	75	8.63	Clear, no odor
	11:25	1.8	250	38.98	17.7	6.9	1.984	0.2	73	10.3	Clear, no odor
	11:30	2.1	250	38.98	17.7	7.0	1.986	0.1	71	8.77	Clear, no odor
	11:35	2.4	250	38.98	17.7	6.9	1.983	0.1	69	7.93	Clear, no odor
	11:40	2.8	250	38.98	17.7	6.9	1.986	0.1	68	6.42	Clear, no odor
Final:	11:40	2.8	250	38.98	17.7	6.9	1.986	0.1	68	6.4	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:45 Sample End Time: 12:00

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	MW-05	Purge Time:	35 Minutes
Locked?:	No	Sample Date:	September 12, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	10:35
Weather:	Sunny	Air Temp:	78F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				56.10	ft-TOC
Total Well Depth:				75.41	ft-TOC
Height of Water Column:				19.31	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.2	Gal
3 * Well Volume	9.45	Gal
5 * Well Volume	15.76	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	9:55	End Time:	10:30	
(If Used) Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:			ft-TOC				
Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
Final Volume Purged:	1.9		Gallons	Flush mount well			
Final Volume Purge Rate:	200		mL/min				
Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	09:55	0.0	---	---	---	---	---	---	---	---	Start Purging
	10:00	0.3	200	56.08	19.6	7.1	2.957	8.2	115	2.07	Clear, no odor
	10:05	0.5	200	56.05	19.6	6.9	2.778	2.5	116	27.8	Clear, no odor
	10:10	0.8	200	56.01	19.7	6.9	2.617	0.9	112	19.8	Clear, no odor
	10:15	1.1	200	56.05	19.7	6.9	2.573	0.5	106	14.7	Clear, no odor
	10:20	1.3	200	56.11	19.8	6.8	2.565	0.4	104	7.89	Clear, no odor
	10:25	1.7	250	56.20	19.8	6.8	2.562	0.4	100	6.10	Clear, no odor
	10:30	1.9	200	56.29	19.9	6.8	2.557	0.3	96	3.56	Clear, no odor
Final:	10:30	1.9	200	56.29	19.9	6.8	2.557	0.3	96	3.6	End of Purging

Sample Method: Bladder Pump Sample Start Time: 10:35 Sample End Time: 10:50

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	MW-06	Purge Time:	30 Minutes
Locked?:	No	Sample Date:	September 12, 2024
Sampled By:	Carter H. & Colin R..	Sample Time:	11:40
Weather:	Sunny	Air Temp:	80F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				54.35	ft-TOC
Total Well Depth:				74.99	ft-TOC
Height of Water Column:				20.64	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.4	Gal
3 * Well Volume	10.10	Gal
5 * Well Volume	16.84	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	11:05	End Time:	11:35	
(If Used) Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:			ft-TOC				
Water Column Above Pump Intake:			feet		Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
Final Volume Purged:	1.6		Gallons	Flush mount well			
Final Volume Purge Rate:	200		mL/min				
Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	11:05	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:10	0.3	200	54.37	18.9	7.5	0.903	8.1	112	6.67	Clear, no odor
	11:15	0.5	200	54.40	17.9	7.2	0.936	1.3	7	1.87	Clear, no odor
	11:20	0.8	200	54.40	17.7	7.2	0.945	0.6	-57	1.00	Clear, no odor
	11:25	1.1	200	54.40	17.6	7.3	0.952	0.3	-80	0.64	Clear, no odor
	11:30	1.3	200	54.40	17.7	7.3	0.954	0.2	-89	0.72	Clear, no odor
	11:35	1.6	200	54.40	17.5	7.3	0.955	0.2	-92	0.53	Clear, no odor
Final:	11:35	1.6	200	54.40	17.5	7.3	0.955	0.2	-92	0.5	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:40 Sample End Time: 11:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 9, 2024
Source Well:	MW-07	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	September 9, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	15:25
Weather:	Sunny	Air Temp:	81F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				57.19	ft-TOC
Total Well Depth:				64.24	ft-TOC
Height of Water Column:				7.05	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.2	Gal
3 * Well Volume	3.45	Gal
5 * Well Volume	5.75	Gal

Well Purging Information

Purge Method:	Bladder Pump	Start Time:	14:50	End Time:	15:20		
(If Used) Bladder Pump Control Settings:	On (sec): 3.5	Off (sec):	3.5	Pressure:	100	psi	
Pump Intake Depth from Top of Casing:		ft-TOC					
Water Column Above Pump Intake:		feet	Flow Through Cell Vol:		200	mL	
DTW-TOC at 25% Drawdown of WC Above Pump:		ft-TOC	**Comments:**				
Final Volume Purged:	2.2	Gallons	MS/MSD				
Final Volume Purge Rate:	300	mL/min					
Well Purged Dry?:	No	(Yes/No)					

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	14:50	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:55	0.5	350	57.18	15.2	6.9	0.788	2.2	115	1.35	Clear, no odor
	15:00	0.8	250	57.18	16.5	6.9	0.787	3.1	117	1.06	Clear, no odor
	15:05	1.1	250	57.18	16.1	7.0	0.792	7.6	119	0.85	Clear, no odor
	15:10	1.5	250	57.18	15.5	7.0	0.792	1.5	121	0.61	Clear, no odor
	15:15	1.8	300	57.18	14.8	7.0	0.789	1.4	120	0.70	Clear, no odor
	15:20	2.2	300	57.18	14.8	7.0	0.789	1.5	122	0.71	Clear, no odor
Final:	15:20	2.2	300	57.18	14.8	7.0	0.789	1.5	122	0.7	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:25 Sample End Time: 15:50

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 11, 2024
Source Well:	MW-08	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	September 11, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	9:05
Weather:	Sunny	Air Temp:	64F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				40.39	ft-TOC
Total Well Depth:				47.16	ft-TOC
Height of Water Column:				6.77	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.1	Gal
3 * Well Volume	3.31	Gal
5 * Well Volume	5.52	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	8:35	End Time:	9:00	
(If Used) Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:			ft-TOC				
Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
Final Volume Purged:	1.3		Gallons	Duplicate sample collected (DUP-1). Pump cable needs to be fixed. No well cap.			
Final Volume Purge Rate:	200		mL/min				
Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	08:35	0.0	---	---	---	---	---	---	---	---	Start Purging
	08:40	0.3	200	40.39	26.0	6.9	1.009	2.8	208	69.9	Cloudy, no odor
	08:45	0.5	200	40.39	27.0	6.9	0.934	1.9	200	2.94	Clear, no odor
	08:50	0.8	200	40.39	27.1	6.9	0.924	1.7	189	1.23	Clear, no odor
	08:55	1.1	200	40.39	27.2	6.9	0.924	1.9	181	1.23	Clear, no odor
	09:00	1.3	200	40.39	27.0	7.0	0.924	2.0	177	1.29	Clear, no odor
Final:	09:00	1.3	200	40.39	27.0	7.0	0.924	2.0	177	1.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 09:05 Sample End Time: 09:30

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 11, 2024
Source Well:	MW-09	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	September 11, 2024
Sampled By:	Colin R. & Carter H.	Sample Time:	10:10
Weather:	Sunny	Air Temp:	72F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	20.88	ft-TOC
			Total Well Depth:	29.55	ft-TOC
			Height of Water Column:	8.67	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.4	Gal
3 * Well Volume	4.24	Gal
5 * Well Volume	7.07	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	9:40	End Time:	10:05	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
	Pump Intake Depth from Top of Casing:			ft-TOC				
	Water Column Above Pump Intake:			feet		Flow Through Cell Vol:	200	mL
	DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC		**Comments:**		
	Final Volume Purged:	2.0		Gallons				
	Final Volume Purge Rate:	300		mL/min				
	Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	09:40	0.0	---	---	---	---	---	---	---	---	Start Purging
	09:45	0.4	300	20.88	23.5	6.9	1.311	0.2	125	5.44	Clear, no odor
	09:50	0.8	300	20.88	23.6	6.9	1.312	0.1	122	3.20	Clear, no odor
	09:55	1.2	300	20.88	23.6	6.9	1.312	0.1	118	2.42	Clear, no odor
	10:00	1.6	300	20.88	23.7	6.9	1.313	0.1	113	1.85	Clear, no odor
	10:05	2.0	300	20.88	23.7	6.9	1.312	0.1	109	0.70	Clear, no odor
Final:	10:05	2.0	300	20.88	23.7	6.9	1.312	0.1	109	0.7	End of Purging

Sample Method: Bladder Pump Sample Start Time: 10:10 Sample End Time: 10:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	MW-10	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	September 12, 2024
Sampled By:	Colin R.	Sample Time:	14:55
Weather:	Sunny	Air Temp:	83F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				20.92	ft-TOC
Total Well Depth:				29.78	ft-TOC
Height of Water Column:				8.86	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.4	Gal
3 * Well Volume	4.34	Gal
5 * Well Volume	7.23	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	14:20	End Time:	14:50	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet		Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC		**Comments:**		
Final Volume Purged:		1.6		Gallons				
Final Volume Purge Rate:		200		mL/min				
Well Purged Dry?:		No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	14:20	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:25	0.3	200	21.00	16.7	7.6	0.491	0.1	-80	243	Orange, no odor
	14:30	0.5	200	21.04	16.6	7.6	0.481	0.1	-104	29.6	Orange, no odor
	14:35	0.8	200	21.06	16.6	7.6	0.478	0.1	-110	21.3	Clear, no odor
	14:40	1.1	200	21.09	16.8	7.6	0.479	0.1	-114	19.3	Clear, no odor
	14:45	1.3	200	21.09	16.7	7.6	0.478	0.1	-115	25.4	Clear, no odor
	14:50	1.6	200	21.09	16.8	7.6	0.478	0.4	-117	27.1	Clear, no odor
Final:	14:50	1.6	200	21.09	16.8	7.6	0.478	0.4	-117	27.1	End of Purging

Sample Method: Bladder Pump Sample Start Time: 14:55 Sample End Time: 15:10

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 11, 2024
Source Well:	MW-11	Purge Time:	20 Minutes
Locked?:	Yes	Sample Date:	September 11, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	15:30
Weather:	Sunny	Air Temp:	90F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	21.56	ft-TOC
			Total Well Depth:	29.78	ft-TOC
			Height of Water Column:	8.22	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.3	Gal
3 * Well Volume	4.02	Gal
5 * Well Volume	6.71	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	15:05	End Time:	15:25	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
	Pump Intake Depth from Top of Casing:			ft-TOC				
	Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200	mL
	DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
	Final Volume Purged:	1.3		Gallons	Duplicate sample collected (DUP-2).			
	Final Volume Purge Rate:	250		mL/min				
	Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	15:05	0.0	---	---	---	---	---	---	---	---	Start Purging
	15:10	0.3	250	21.59	15.7	7.4	0.596	0.7	-50	14.3	Clear, no odor
	15:15	0.7	250	21.59	15.7	7.4	0.610	0.4	-67	8.66	Clear, no odor
	15:20	1.0	250	21.59	15.6	7.5	0.615	0.3	-75	3.85	Clear, no odor
	15:25	1.3	250	21.59	15.6	7.5	0.616	0.3	-80	1.82	Clear, no odor
Final:	15:25	1.3	250	21.59	15.6	7.5	0.616	0.3	-80	1.8	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:30 Sample End Time: 15:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	MW-12	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	September 12, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	9:25
Weather:	Sunny	Air Temp:	65F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	54.94	ft-TOC
			Total Well Depth:	65.17	ft-TOC
			Height of Water Column:	10.23	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.7	Gal
3 * Well Volume	5.01	Gal
5 * Well Volume	8.35	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	8:50	End Time:	9:20	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
	Pump Intake Depth from Top of Casing:			ft-TOC				
	Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200	mL
	DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
	Final Volume Purged:	1.6		Gallons				
	Final Volume Purge Rate:	200		mL/min				
	Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	08:50	0.0	---	---	---	---	---	---	---	---	Start Purging
	08:55	0.3	200	54.95	16.8	5.7	1.261	0.5	126	0.95	Clear, no odor
	09:00	0.5	200	54.95	16.8	5.7	1.260	0.3	130	0.57	Clear, no odor
	09:05	0.8	200	54.95	16.7	5.7	1.260	0.4	133	0.52	Clear, no odor
	09:10	1.1	200	54.95	16.8	5.7	1.261	0.2	134	0.50	Clear, no odor
	09:15	1.3	200	54.95	16.8	5.7	1.264	0.1	134	1.01	Clear, no odor
	09:20	1.6	200	54.95	16.7	5.8	1.270	0.1	132	0.41	Clear, no odor
Final:	09:20	1.6	200	54.95	16.7	5.8	1.270	0.1	132	0.4	End of Purging

Sample Method: Bladder Pump Sample Start Time: 09:25 Sample End Time: 09:40

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 11, 2024
Source Well:	MW-13	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	September 11, 2034
Sampled By:	Carter H. & Colin R.	Sample Time:	14:40
Weather:	Sunny	Air Temp:	84F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	26.56	ft-TOC
			Total Well Depth:	34.26	ft-TOC
			Height of Water Column:	7.70	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.3	Gal
3 * Well Volume	3.77	Gal
5 * Well Volume	6.28	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	14:00	End Time:	14:35	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
	Pump Intake Depth from Top of Casing:			ft-TOC				
	Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200	mL
	DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
	Final Volume Purged:	2.2		Gallons				
	Final Volume Purge Rate:	200		mL/min				
	Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	14:00	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:05	0.3	250	26.54	16.5	7.3	0.394	1.7	-23	254	Orange, no odor
	14:10	0.7	250	26.54	16.2	7.4	0.395	1.2	-8	47.4	Cloudy, no odor
	14:15	1.0	250	26.54	16.0	7.4	0.398	1.0	-8	42.8	Cloudy, no odor
	14:20	1.3	250	26.54	16.0	7.4	0.398	0.8	-4	28.4	Cloudy, no odor
	14:25	1.7	250	26.54	16.0	7.5	0.398	0.6	-5	13.4	Clear, no odor
	14:30	1.9	200	26.54	16.2	7.5	0.399	0.6	-9	12.8	Clear, no odor
	14:35	2.2	200	26.54	16.0	7.5	0.398	0.5	-13	12.2	Clear, no odor
Final:	14:35	2.2	200	26.54	16.0	7.5	0.398	0.5	-13	12.2	End of Purging

Sample Method: Bladder Pump Sample Start Time: 14:40 Sample End Time: 14:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 11, 2024
Source Well:	MW-14	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	September 11, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	13:40
Weather:	Sunny	Air Temp:	85F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				25.76	ft-TOC
Total Well Depth:				34.26	ft-TOC
Height of Water Column:				8.50	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.4	Gal
3 * Well Volume	4.16	Gal
5 * Well Volume	6.94	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	13:10	End Time:	13:35	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet		Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC		**Comments:**		
Final Volume Purged:		1.8		Gallons				
Final Volume Purge Rate:		250		mL/min				
Well Purged Dry?:		No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	13:10	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:15	0.4	300	25.82	18.5	7.0	0.407	3.9	66	2.35	Clear, no odor
	13:20	0.8	300	25.77	17.3	7.5	0.416	0.4	49	1.22	Clear, no odor
	13:25	1.1	250	25.77	17.9	7.6	0.413	0.3	32	0.62	Clear, no odor
	13:30	1.5	250	25.77	18.3	7.6	0.408	0.2	15	0.53	Clear, no odor
	13:35	1.8	250	25.77	17.9	7.6	0.412	0.3	9	0.35	Clear, no odor
Final:	13:35	1.8	250	25.77	17.9	7.6	0.412	0.3	9	0.4	End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:40 Sample End Time: 13:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

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LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 10, 2024
Source Well:	MW-15	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	September 10, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	9:15
Weather:	Sunny	Air Temp:	60F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				43.56	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	8:35	End Time:	9:10	
(If Used) Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:			ft-TOC				
Water Column Above Pump Intake:			feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:			ft-TOC	**Comments:**			
Final Volume Purged:	1.8		Gallons	Pump not working at 0845.			
Final Volume Purge Rate:	200		mL/min				
Well Purged Dry?:	No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	08:35	0.0	---	---	---	---	---	---	---	---	Start Purging
	08:40	0.3	200	43.39	16.9	7.1	1.308	2.9	164	2.20	Clear, no odor
	08:50	0.8	200	43.37	17.1	7.0	1.360	1.4	124	7.67	Clear, no odor
	08:55	1.1	200	43.25	16.8	7.0	1.358	0.8	103	2.75	Clear, no odor
	09:00	1.3	200	43.23	16.8	7.0	1.359	0.5	82	2.04	Clear, no odor
	09:05	1.6	200	43.27	16.9	7.0	1.356	0.4	64	1.48	Clear, no odor
	09:10	1.8	200	43.24	16.8	7.0	1.355	0.4	52	1.38	Clear, no odor
Final:	09:10	1.8	200	43.24	16.8	7.0	1.355	0.4	52	1.4	End of Purging

Sample Method: Bladder Pump Sample Start Time: 09:15 Sample End Time: 09:30

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 10, 2024
Source Well:	MW-16	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	September 10, 2024
Sampled By:	Colin R. & Carter H.	Sample Time:	10:24
Weather:	Sunny	Air Temp:	65F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				43.35	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:			Bladder Pump	Start Time:	9:45	End Time:	10:20	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**			
Final Volume Purged:			2.0	Gallons				
Final Volume Purge Rate:			200	mL/min				
Well Purged Dry?:			No	(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	09:45	0.0	---	---	---	---	---	---	---	---	Start Purging
	09:50	0.3	200	43.35	19.5	7.2	1.239	2.4	-83	1.92	Clear, no odor
	09:55	0.6	250	43.35	17.5	6.8	1.444	0.5	-77	8.13	Clear, no odor
	10:00	0.9	250	43.35	17.2	6.8	1.454	0.2	-44	16.6	Clear, no odor
	10:05	1.2	200	43.35	17.3	6.7	1.450	0.1	-14	10.5	Clear, no odor
	10:10	1.5	200	43.35	17.4	6.7	1.450	0.1	2	6.65	Clear, no odor
	10:15	1.7	200	43.35	17.4	6.7	1.456	0.1	13	4.14	Clear, no odor
	10:20	2.0	200	43.35	17.5	6.7	1.457	0.1	21	2.95	Clear, no odor
Final:	10:20	2.0	200	43.35	17.5	6.7	1.457	0.1	21	3.0	End of Purging

Sample Method: Bladder Pump Sample Start Time: 10:24 Sample End Time: 10:40

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 10, 2024
Source Well:	MW-17	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	September 10, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	13:10
Weather:	Sunny	Air Temp:	80F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				57.55	ft-TOC
Total Well Depth:					ft-TOC
Height of Water Column:					feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:			Bladder Pump	Start Time:	12:40	End Time:	13:05	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	55	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**			
Final Volume Purged:			1.7	Gallons				
Final Volume Purge Rate:			250	mL/min				
Well Purged Dry?:			No	(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	12:40	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:45	0.3	250	57.55	16.3	7.0	1.030	2.2	-28	2.06	Clear, odor
	12:50	0.7	250	57.59	16.0	7.0	1.017	1.1	10	2.07	Clear, odor
	12:55	1.0	250	57.60	16.0	7.0	1.011	0.6	25	0.47	Clear, odor
	13:00	1.3	250	57.56	16.7	6.9	1.008	0.6	32	0.65	Clear, odor
	13:05	1.7	250	57.58	15.9	6.9	1.013	0.4	36	0.17	Clear, odor
Final:	13:05	1.7	250	57.58	15.9	6.9	1.013	0.4	36	0.2	End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:10 Sample End Time: 13:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	MW-19	Purge Time:	40 Minutes
Locked?:	Yes	Sample Date:	September 12, 2024
Sampled By:	Colin R. & Carter H.	Sample Time:	16:30
Weather:	Sunny	Air Temp:	83F

Water Level & Well Data

Measuring Point:			Top of Casing		
Depth to Water:			46.60	ft-TOC	
Total Well Depth:				ft-TOC	
Height of Water Column:				feet	
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	15:45	End Time:	16:25	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet		Flow Through Cell Vol:	200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**			
Final Volume Purged:			2.6	Gallons				
Final Volume Purge Rate:			250	mL/min				
Well Purged Dry?:			No	(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	15:45	0.0	---	---	---	---	---	---	---	---	Start Purging
	15:50	0.3	250	46.60	18.5	6.8	0.906	4.1	22	7.15	Clear, no odor
	15:55	0.7	250	46.60	18.3	6.8	0.903	1.5	18	5.74	Clear, no odor
	16:00	1.0	250	46.60	18.1	0.9	0.905	1.2	19	1.39	Clear, no odor
	16:05	1.3	250	46.60	19.6	6.8	0.909	0.8	15	0.86	Clear, no odor
	16:10	1.7	250	46.60	18.3	6.7	0.904	0.5	20	0.53	Clear, no odor
	16:15	2.0	250	46.60	18.6	6.7	0.904	0.4	21	0.65	Clear, no odor
	16:20	2.3	250	46.60	18.1	6.7	0.904	0.3	22	0.86	Clear, no odor
	16:25	2.6	250	46.60	18.2	6.7	0.903	0.3	23	0.59	Clear, no odor
Final:	16:25	2.6	250	46.60	18.2	6.7	0.903	0.3	23	0.6	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:30 Sample End Time: 16:45

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	Basin A Source	Purge Time:	2 Minutes
Locked?:	No	Sample Date:	September 12, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	12:40
Weather:	Sunny	Air Temp:	86F

Water Level & Well Data

Measuring Point:			Top of Casing		
Depth to Water:			N/A	ft-TOC	
Total Well Depth:				ft-TOC	
Height of Water Column:				feet	
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Peristaltic Pump		Start Time:	12:33	End Time:	12:35	
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100	psi
Pump Intake Depth from Top of Casing:				ft-TOC				
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200	mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**			
Final Volume Purged:		#VALUE!		Gallons	Pond A			
Final Volume Purge Rate:		#N/A		mL/min				
Well Purged Dry?:		No		(Yes/No)				

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	12:33	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:35	#VALUE!	N/A	N/A	32.9	8.3	1.520	9.7	61		
Final:	12:35	#VALUE!	#N/A	#N/A	32.9	8.3	1.520	9.7	61		End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 12:40 Sample End Time: 12:50

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 12, 2024
Source Well:	Basin B Source	Purge Time:	2 Minutes
Locked?:	No	Sample Date:	September 12, 2024
Sampled By:	Carter H. & Colin R.	Sample Time:	13:00
Weather:	Sunny	Air Temp:	86F

Water Level & Well Data

Measuring Point:			Top of Casing		
Depth to Water:			N/A	ft-TOC	
Total Well Depth:				ft-TOC	
Height of Water Column:				feet	
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume		Gal
3 * Well Volume		Gal
5 * Well Volume		Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	12:53	End Time:	12:55
(If Used)	Bladder Pump Control Settings:	On (sec):	3.5	Off (sec):	3.5	Pressure:	100 psi
Pump Intake Depth from Top of Casing:				ft-TOC			
Water Column Above Pump Intake:				feet	Flow Through Cell Vol:		200 mL
DTW-TOC at 25% Drawdown of WC Above Pump:				ft-TOC	**Comments:**		
Final Volume Purged:		#VALUE!		Gallons	Pond B		
Final Volume Purge Rate:		#N/A		mL/min			
Well Purged Dry?:		No		(Yes/No)			

Field Parameters (Taken at time intervals ≥ 5 minutes and purge volumes ≥ 1 flow-through cell volume)

	Time	Volume Purged (gal)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (s.u.)	Spec. Cond. (mS/cm)	Dissolved Oxygen (mg/L)	ORP* (mV)	Turbidity (NTU)	Comment
	12:53	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:55	#VALUE!	N/A	N/A	28.9	8.6	1.486	12.6	62		
Final:	12:55	#VALUE!	#N/A	#N/A	28.9	8.6	1.486	12.6	62		End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:00 Sample End Time: 13:10

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes:

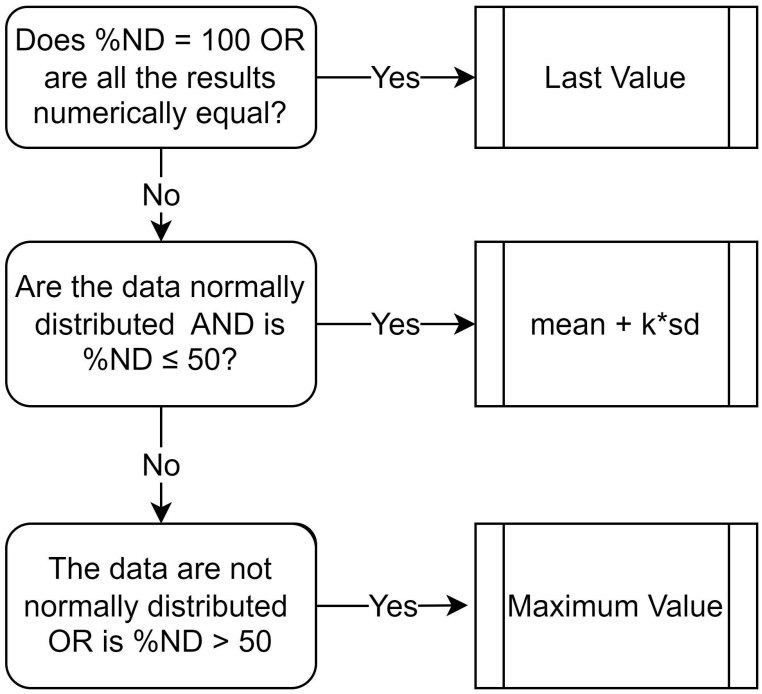
Form Revision Date: 2/12/18 16:00

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3, 2024
MIAMI FORT POWER PLANT, POND SYSTEM
MFS-257-115

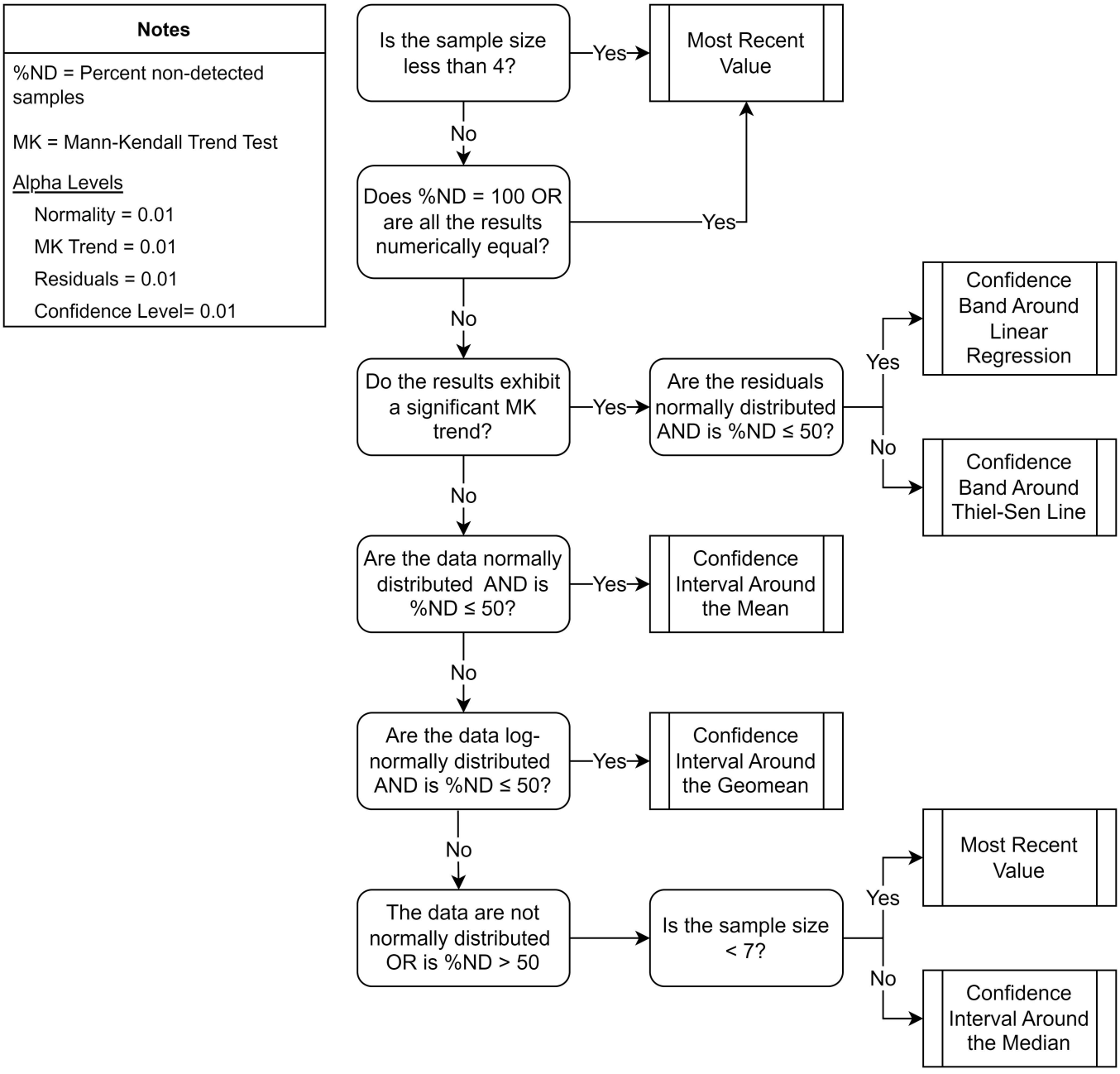
Miami Fort Station			
Well ID	**Date**	**Time**	**Depth to Water**
Basin A and B Combined - Unit 115			
MW-01	9/9/2024	11:57	50.44
MW-02	9/9/2024	12:31	19.59
MW-03A	9/9/2024	12:53	19.00
MW-04	9/9/2024	13:02	24.00
MW-04A	9/9/2024	13:15	38.96
MW-05	9/9/2024	13:29	56.45
MW-06	9/9/2024	13:37	54.35
MW-07	9/9/2024	11:37	57.19
MW-08	9/9/2024	12:02	40.39
MW-09	9/9/2024	12:09	20.79
MW-10S	9/9/2024	12:39	13.82
MW-10	9/9/2024	12:37	19.96
MW-11S	9/9/2024	12:47	15.00
MW-11	9/9/2024	12:44	21.08
MW-12	9/9/2024	13:20	54.78
MW-13	9/9/2024	13:10	27.08
MW-13S	9/9/2024	13:13	23.76
MW-14	9/9/2024	13:04	25.85
MW-15	9/9/2024	10:58	43.60
MW-16	9/9/2024	11:01	43.37
MW-17	9/9/2024	11:40	57.62
MW-18	9/9/2024	11:27	55.43
MW-19	9/9/2024	11:21	46.75
XPW-01	9/9/2024	13:45	7.31
Gypsum Recycle Pond - Former Unit 114			
MW-GP1	9/9/2024	10:38	23.66
MW-GP2	9/9/2024	10:34	20.41
MW-GP3	9/9/2024	10:30	33.89
MW-GP4	9/9/2024		Does not open
MW-GP5	9/9/2024	10:26	27.92

APPENDIX B
STATISTICAL METHODOLOGY FOR DETERMINATION OF BACKGROUND VALUES

Notes
%ND = Percent non-detected samples sd = standard deviation k = kappa for tolerance limit (95% confidence/95% coverage)



APPENDIX C
STATISTICAL METHODOLGY FOR DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS


Notes
%ND = Percent non-detected samples
MK = Mann-Kendall Trend Test
Alpha Levels
Normality = 0.01
MK Trend = 0.01
Residuals = 0.01
Confidence Level= 0.01
Is the sample size less than 4?
Yes
Most Recent Value
No
Does %ND = 100 OR are all the results numerically equal?
Yes
No
Do the results exhibit a significant MK trend?
Yes
Are the residuals normally distributed AND is %ND ≤ 50?
Yes
Confidence Band Around Linear Regression
No
Confidence Band Around Thiel-Sen Line
No
Are the data normally distributed AND is %ND ≤ 50?
Yes
Confidence Interval Around the Mean
No
Are the data log-normally distributed AND is %ND ≤ 50?
Yes
Confidence Interval Around the Geomean
No
The data are not normally distributed OR is %ND > 50
Is the sample size < 7?
Yes
Most Recent Value
No
Confidence Interval Around the Median

APPENDIX D
ALTERNATIVE SOURCE DEMONSTRATIONS

Geosyntec consultants

engineers | scientists | innovators

ALTERNATIVE SOURCE DEMONSTRATION

Miami Fort Power Plant, Pond System (Unit ID #115) 40 C.F.R. § 257.95 (g)(3)(ii)

Prepared for

Miami Fort Power Company LLC
11021 Brower Road
North Bend, Ohio 45052

Prepared by

Geosyntec Consultants, Inc.
500 W Wilson Bridge Road. Suite 250
Worthington, Ohio 43085

Project Number: GLP8066

Geosyntec consultants

Alternative Source Demonstration

Pond System, Miami Fort Power Plant
(Unit ID #115)
40 C.F.R. § 257.95 (g)(3)(ii)

Prepared for

Miami Fort Power Company LLC
11021 Brower Road
North Bend, Ohio 45052

Prepared by

Geosyntec Consultants, Inc.
500 W Wilson Bridge Road. Suite 250
Worthington, Ohio 43085

License No.: PE.85326
Expires: 12/31/2025

John Seymour, P.E.
Senior Principal



Project Number: GLP8066

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ACRONYMS AND ABBREVIATIONS

%	percent
ASD	alternative source demonstration
CCR	coal combustion residuals
CMA	corrective measures assessment
ft	feet
ft bgs	feet below ground surface
GWB	Geochemist's Workbench
GWPS	groundwater protection standard
LOE	line of evidence
MFPC	Miami Fort Power Company LLC
MFPP	Miami Fort Power Plant
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mV	millivolts
MCD	Miami Conservancy District
MNA	monitored natural attenuation
NAVD88	North American vertical datum 1988
ORP	oxidation reduction potential
SEP	sequential extraction procedure
SSL	statistically significant level
XRD	X-ray diffraction

Geosyntec consultants

1. INTRODUCTION

Geosyntec Consultants, Inc. (Geosyntec) has prepared this alternative source demonstration (ASD) on behalf of Miami Fort Power Company LLC (MFPC), regarding the Miami Fort Power Plant's (MFPP) Pond System coal combustion residuals (CCR) unit at 11021 Brower Rd, North Bend, OH (Site). The Pond System has an existing groundwater monitoring network which consists of 16 downgradient wells and one background well. The Site location is depicted in **Figure 1**.

Groundwater monitoring has been completed at the MFPP Pond System since 2015. The most recent assessment monitoring sampling event (A6D) was completed on September 21 through September 25, 2023. Analytical data from all sampling events completed from December 2015 through A6D were evaluated in accordance with the Statistical Analysis Plan for the Site (Ramboll 2022). Exceedances of arsenic were identified above the site-specific groundwater protection standard (GWPS) of 0.010 milligrams per liter (mg/L) at downgradient monitoring wells MW-2, MW-6, MW-10, and MW-13 on January 15, 2024.

Under Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.95(g)(3)(ii), the owner or operator of a CCR surface impoundment may submit a demonstration that a source other than the CCR unit caused the contamination, or that the exceedance of the GWPS resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. An ASD was previously prepared to address arsenic concentrations above the GWPS at MW-2, MW-10, and MW-13 (Ramboll 2020).

Geosyntec has completed a review of geochemical conditions at the Site to evaluate the influence of the uppermost aquifer solid-phase mineralogy and geochemistry on groundwater composition. Pursuant to 40 C.F.R. § 257.95(g)(3)(ii), the lines of evidence (LOEs) documented in this ASD demonstrate that a source other than the MFPP Pond System CCR unit was the cause of the GWPS exceedances for arsenic at downgradient monitoring wells MW-2, MW-6, MW-10, and MW-13. Using evidence from laboratory analyses of aquifer solids and groundwater and geochemical modeling, this assessment demonstrates that geogenic arsenic associated with aquifer solids (natural variability) was identified as the alternative source of elevated arsenic in Site groundwater.

2. BACKGROUND

2.1 Site Location and Description

The MFPP is in the southwest corner of Ohio adjacent to the state boundaries of Indiana and Kentucky. The MFPP is bounded by the Ohio River at the confluence of the Great Miami River (**Figure 1**). MFPP's Pond System is an unlined surface impoundment located in the southwest corner of the property. It is bounded by the Veolia North America property and Brower Road to the north, the Great Miami River to the west, the Ohio River to the south, Veolia's production wells to the northwest, and MFPP's electric switch yard and production wells to the east.

2.2 Description of the CCR Multi-Unit

The Pond System is a CCR Multi-Unit consisting of Basins A and B (CCR Multi-Unit ID 115). The Multi-Unit covers a total area of approximately 50 acres and is located in the southwest corner of the Site property as shown in **Figure 1**.

2.2.1 Basin A

Basin A (formerly Unit 111) is an unlined surface impoundment approximately 1,000 by 1,400 feet (ft), or about 30 acres, in size. It was initially constructed prior to 1959 and a vertical expansion was added in approximately 1976 (AECOM, 2017). Basin A receives effluent from the sluice lines, which primarily transport bottom ash products as well as flue gas desulfurization effluent and some fly ash. Basin A also receives directly discharged miscellaneous yard drainage. The material is discharged into the northern portion of the basin and through a constructed internal ditch line, allowing the solids to settle and the water to decant into Basin B. Solid materials collected in Basin A are generally reclaimed for beneficial reuse or landfill placement.

The Basin A normal pool level is typically between elevations of 495 and 498 ft (referenced to North American Vertical Datum of 1988 [NAVD88]). The Basin A outfall is currently not in use and flow-through is controlled by the gate structure (AECOM 2017).

2.2.2 Basin B

Basin B is an unlined surface impoundment approximately 750 by 1,150 ft, or about 20 acres, in size. It is located immediately west and hydraulically downgradient of Basin A. Basin B (formerly Unit 112) was constructed between 1979 and 1981 (AECOM 2017). The Basin B normal pool level is typically below the Basin A normal pool and between elevations of 495 and 498 ft NAVD88. Basin A discharges into Basin B, which is used as a polishing pond prior to discharge to the Ohio River through the outfall structure in Basin B. Miscellaneous yard drainage is also currently discharged directly to Basin B (AECOM 2017).

2.3 Geology and Hydrogeology

This section provides a summary of the Site geology and hydrogeology; additional detail is provided in the *Alternative Source Demonstration Miami Fort Pond System Report* (Ramboll 2020; **Attachment 1**) and the *Hydrogeological Characterization Report* (AECOM 2017).

The Site contains four geologic units consisting of CCR fill, recent alluvial deposits, glacial outwash, and bedrock. Below is a brief description of each geologic unit:

- The fill consists of CCR bottom ash and fly ash along with non-CCR solids. The fill unit also includes man-made berms constructed of various materials. The thickness of the fill ranges from 10 to 15 ft.
- The recent alluvial deposits consist of clay, silt, and fine sand deposited by Ohio River flood waters. The top of these deposits range from approximately 20 to 60 feet below ground surface (ft bgs). The alluvial material primarily consists of a silty, sandy clay adjacent to the site.
- The glacial outwash consists of sands and gravels. It is the uppermost aquifer at the Site and ranges from approximately 20 to 110 ft bgs, depending on the depth of the silt deposits and bedrock elevation. The bedrock consists of interbedded shales and limestones which lie approximately 110 to 120 ft bgs. The bedrock serves as a lower confining unit at the Site.

The groundwater potentiometric surface on Site is typically at approximately 455 to 460 ft NAVD88, which is coincident with the approximate pool elevation of the Ohio River. Depending on ground surface elevation, this correlates to an approximate depth to groundwater between 25-55 ft bgs in the vicinity of the Site. Groundwater flow is generally to the west/northwest towards the Great Miami River and Veolia production wells at Basin B, and east/southeast towards the Ohio River and MFPP production wells at Basin A. A potentiometric surface map generated using groundwater elevations recorded during the September 2023 sampling event is provided in **Figure 2** (originally provided in Ramboll 2024). The hydraulic gradient across the site is very low (flat) and prone to minor changes due to changes in river stage and/or nearby production well usage.

3. ALTERNATIVE SOURCE DEMONSTRATION LINES OF EVIDENCE

3.1 LOE #1: Geochemical Data Suggests Arsenic is Associated with Aquifer Solids and Mobilized to Groundwater as a Result of Oxidation-Reduction Conditions

The prior ASD report prepared by Ramboll for arsenic at the Pond System (Ramboll 2020) included discussion of prior studies by the Ohio Environmental Protection Agency (2015) and the United States Geological Survey (Thomas et al., 2005) which demonstrated that naturally occurring concentrations of arsenic are known to exist in both soils and groundwater in the same region (southwestern Ohio) and aquifer type (glacial buried-valley deposit aquifer).

Arsenic is known to become incorporated into the mineral structure of the soils through co-precipitation with iron-bearing minerals and is commonly sorbed to organic matter, clay minerals, and iron oxyhydroxides in the aquifer (Thomas et al., 2005). The previous MFPP Pond System arsenic ASD report noted that MW-2, MW-10, and MW-13 are located along the banks of the Great Miami River and Ohio River, and are susceptible to shifting geochemical conditions due to the presence of naturally occurring organic matter (a source of organic carbon and a potential reducing agent) that can drive geochemical conditions which mobilize naturally occurring arsenic from the soils to groundwater (Ramboll, 2020) (**Attachment 1**).

This ASD report expands upon the prior MFPP Pond System ASD (Ramboll, 2020) by presenting additional geochemical data and solid-phase mineralogy of aquifer solids collected at screened intervals adjacent to exceedance wells to further understand geochemical conditions in Site groundwater.

Aquifer solids were analyzed to evaluate whether subsurface material in the vicinity of the Pond System may account for reported arsenic concentrations in groundwater. Samples were submitted for analysis of total arsenic, arsenic distribution within the aquifer solids using sequential extraction procedure (SEP), and mineralogy via X-ray diffraction (XRD).

Geosyntec collected aquifer solids samples near monitoring wells MW-2, MW-4, pumping well 4A, MW-10, MW-13, and MW-19 during field events completed in February 2021 and July 2023. Samples were obtained from depths reflective of the screened interval of the nearby well at each boring location (**Figure 1**).[1] Geosyntec was unable to collect aquifer solids near MW-6 due to the proximity of overhead power lines; however, samples from soil boring B23-2 were collected near pumping well 4A to serve as an aquifer solid sample located further from the river (i.e., more representative of conditions near MW-6).

[1]Aquifer solid samples were collected at SB-2 near monitoring well MW-4 (36-37 ft below ground surface (bgs), 42-43 ft bgs, and 43-44 ft bgs) during the February 2021 field effort (**Figure 1**). Results of these samples are excluded from subsequent results tables and discussion to emphasize relevant findings; however, SEP and XRD results for SB-2 locations are included in the **Attachments 4** and **5**, respectively.

Boring logs and monitoring well construction information for the adjacent wells are provided in **Attachment 2.** Field observations of the sample lithologies (provided in **Table 1** and **Table 2**) are also provided in the 2021 and 2023 boring logs (**Attachment 3**).

SEP is an analytical technique used to infer associations between constituents and different classes of solids (Tessier et al., 1979). SEP uses progressively stronger reagents to solubilize metals from specific phases within the solid matrix. These classes of solids are identified based on their solubility under different reagents and include the exchangeable fraction (the most labile), the carbonate-bound fraction, the fraction associated with amorphous metal oxides such as iron oxides, the iron/manganese oxide-bound fraction, the organic matter-bound fraction, the fraction assumed to be associated with sulfides, and the residual fraction (the most recalcitrant).

To evaluate data quality in an SEP analysis, first the sum of individual extraction steps from the SEP was compared to the total arsenic concentration to verify that total arsenic recovery from SEP methods is similar to total arsenic analytical results. The sum of the SEP is not expected to be exactly equal to the total metals analysis but should be generally consistent with the total metals result.

Results for total and SEP analyses of arsenic in these samples are presented in **Table 1**, and the analytical laboratory reports are provided as **Attachment 4**. The total arsenic concentrations ranged from 5.7 to 7.1 milligrams per kilograms of soil (mg/kg). The summed concentrations of arsenic from the SEP analyses ranged from 5.6 to 7.9 mg/kg. The results were generally consistent between the total metals analyses and the summed SEP steps, indicating good metals recovery and data quality. These results indicate that arsenic is naturally present in both background and downgradient (compliance well) solid-phase samples at the Site. The highest total arsenic concentrations were observed in the aquifer solids sample from upgradient well MW-19 (7.1 mg/kg).

The largest fractions of arsenic in all five samples analyzed via SEP were associated with the fraction assumed to be sulfides (30-57%), which is more recalcitrant than the other reactive fractions (**Table 1**). Additional arsenic fractions are associated with:

- the residual metals fraction (13-34%),
- the oxyhydroxide fraction (6-25%), and
- the non-crystalline metals fraction (5-23%).

The non-crystalline material and oxyhydroxide fractions represent the arsenic fraction that is leachable by organic chelating agents such as naturally occurring organic matter or reducing conditions that would be expected under depositional riverbank environments with naturally occurring organic matter. These conditions were also noted in the previous ASD in the downgradient wells along the riverbank (Ramboll, 2020). These conditions are applicable at many Pond System monitoring wells of concern; therefore, the SEP analyses indicate that arsenic

associated with iron oxides and non-crystalline materials is available to be mobilized under conditions observed at the Site.

Mineralogical analyses were completed using XRD to characterize the mineralogy of the aquifer solids to evaluate specific mineral-water interactions which may affect arsenic concentrations in groundwater. Mineralogy of the samples analyzed consists primarily of quartz, various carbonate minerals (dolomite, calcite, and ankerite), various feldspar minerals (albite and microcline), clay minerals (kaolinite and chlorite) and oxide minerals (magnetite) (**Table 2**). Sulfide-bearing minerals were not identified via XRD, which suggests that the fraction assumed to be sulfide is not primarily governing arsenic mobility at the Site.

XRD results confirm the presence of mineral phases which were found to be associated with arsenic (i.e., magnetite and chlorite) based on SEP findings. Within depositional environments formed along riverbanks such as those at the Site, mixed valence Fe(II)-Fe(III) minerals tend to be more abundant than ferric (Fe(III)) iron minerals. Magnetite (Fe_3O_4), which was detected in every sample analyzed from aquifer solids near downgradient wells, is a mixed valence iron mineral. Additionally, chlorite ($Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$), which is a 2:1:1 layer ferrous (Fe(II)) iron-bearing clay mineral, was detected in aquifer solids from both background and downgradient wells. Mineralogy results are provided in **Table 2** and the laboratory analytical reports are included in **Attachment 5**.

In soils and sediments, arsenic redox chemistry (and as a result, arsenic mobilization to groundwater) is well-studied and linked to iron cycling (Gubler and ThomasArrigo, 2021; Gimenez et al., 2007). Generally, arsenic and iron are both redox sensitive elements that tend to be mobilized under more reducing groundwater conditions. Iron is mainly present in groundwater in two forms, reduced Fe(II) and oxidized Fe(III). In natural aqueous environments at pH 3-9, arsenic is primarily found as either the more oxidized species arsenate (As(V)) or the more reduced species arsenite (As(III)) (Smedley and Kinniburgh, 2002). Under more oxidizing conditions, arsenic is typically present as As(V), which shows a high sorption affinity to mixed valence and/or Fe(III)-oxyhyroxides such as magnetite or ferrihydrite (Dixit and Hering, 2003; Sun et al., 2018).

Arsenic is also often associated with clay minerals such as chlorite through the adsorption and oxidation/reduction of arsenic at the clay mineral surface (Lin and Puls, 2000). However, under reducing conditions, arsenic associated with iron mineral solid-phases is commonly soluble as As(III) due to the lack of electrical charge and associated decrease in interaction with aquifer mineralogy under circumneutral pH values (Jiang et al., 2013).

The differences in redox conditions between background and downgradient wells result in iron and arsenic speciation changes which increase arsenic mobility in downgradient wells. Monitoring wells with arsenic exceedances (MW-2, MW-6, MW-10, and MW-13) historically tend to have lower oxidation-reduction potential (ORP) values (i.e., more reducing geochemical conditions) than upgradient monitoring wells (MW-7 and MW-19) which have higher ORP values (i.e., more oxidizing geochemical conditions) as shown in **Figure 3**. The previous ASD report also described

reducing geochemical conditions in downgradient Site groundwater which were expected to mobilize naturally occurring arsenic given the relationship between aqueous arsenic and iron mineralization (oxides and clays) and the sensitivity of both arsenic and iron to redox conditions (Ramboll, 2020).

If reducing conditions drive mobilization of arsenic and iron, concentrations of arsenic and iron would be inversely related to ORP. To evaluate the relationship between arsenic and iron and the observed redox conditions at the wells of concern, ORP measurements were plotted versus arsenic (**Figure 4**) and iron concentrations (**Figure 5**). Aqueous arsenic concentrations are observed to be greater in groundwater with lower ORP values, as indicated by **Figure 4**. This relationship is also true for iron (**Figure 5**), suggesting that reducing geochemical conditions increase iron and arsenic solubility in Site groundwater. Additionally, the relationship of iron with ORP (**Figure 5**) suggests iron speciation is dynamic (i.e., susceptible to reversible dissolution or precipitation reactions) in Site groundwater. Arsenic which may be associated with iron would therefore also be susceptible to mobilization along with iron under more reducing conditions.

The relationship between aqueous arsenic and iron in groundwater at the wells of concern (*i.e.,* MW-2, MW-6, MW-10, and MW-13) and background well MW-7 is illustrated on **Figure 6**. Linear trendlines were fitted to the downgradient groundwater data which shows a strong correlation (R^2 values ranging from 0.833 to 0.998) between arsenic and iron groundwater concentrations in Site groundwater (**Figure 6**). The strong correlation between aqueous arsenic and iron in groundwater and the higher concentrations of arsenic and iron with reducing conditions in Site groundwater indicates that aqueous arsenic concentrations observed at the wells of concern are strongly linked to reducing conditions driving iron and arsenic mobilization.

3.2 LOE #2: Geochemical Modeling Supports the Mobilization Mechanism.

As discussed in LOE #1, the presence of reducing geochemical conditions indicates the potential for naturally occurring arsenic to become mobilized through reductive dissolution or desorption processes. Arsenic can be present as both arsenate and arsenite and the adsorption behavior of arsenic changes with its redox speciation (Dixit and Hering, 2003).

Pourbaix diagrams were prepared for iron (**Figures 7 and 8**) and arsenic (**Figure 9)** at representative downgradient and background wells to illustrate the thermodynamic stability (range of conditions in which a species is stable) of different minerals or chemical species in an aqueous solution as a function of both pH and redox conditions.[2] **Figures 7, 8,** and **9** display Pourbaix diagrams for the representative downgradient monitoring well MW-10 and the background well MW-7.

[2] Redox conditions are expressed in Pourbaix diagrams as redox potential (Eh) in units of volts. Eh values for groundwater samples are calculated from ORP measures collected in the field. Field ORP measurements were converted to Eh by adding +200 millivolts to correct for the Ag/AgCl electrode.

Figure 7 indicates the predicted stability of iron oxide mineral magnetite, which is supported by XRD results (**Table 2**). In addition to magnetite, amorphous iron oxyhydroxides are likely to be present in aquifer solids based on the prominent association of arsenic with amorphous metal oxides indicated by SEP results (**Table 1**). These amorphous iron oxyhydroxides constitute a significant arsenic-associated solid phase which are expected to influence arsenic mobility; however, amorphous materials are not detectable in XRD analyses and are therefore unable to be directly quantified. Iron Pourbaix diagrams were prepared for MW-10 and MW-7 with magnetite suppressed (i.e., excluded from the model; **Figure 8**) to evaluate the thermodynamic stability of the amorphous iron oxide ferrihydrite ($Fe(OH)_3$(ppd)). **Figure 8** demonstrates that a component of iron within the system exists in a state of dynamic equilibrium with respect to multiple solid or aqueous phases. This iron is susceptible to dissolution/precipitation reactions depending on groundwater redox conditions. These reactions would directly influence iron and arsenic concentrations in groundwater.

As discussed in Section 3.1, aqueous arsenic speciation influences arsenic sorption capability and therefore arsenic mobility. Differences in the arsenic speciation between MW-7 and MW-10 were observed from the arsenic Pourbaix diagrams (**Figure 9**). The Pourbaix diagram for background well MW-7, which has more oxidizing geochemical conditions than the downgradient wells, indicates As(V) (as $H_2AsO_4^-$ and $HAsO_4^{--}$) as the predominant species under these conditions. In contrast, the more mobile As(III) (as $As(OH)_3$) is predicted to be intermittently favorable at MW-10 (**Figure 9**) where the oxidation-reduction conditions are more reducing. This would suggest that conditions at MW-10 are more favorable for increased aqueous arsenic concentrations due to the greater abundance of the mobile $As(OH)_3$ species relative to background.

Additional Pourbaix diagrams are provided in **Attachments 6** and **7** for the other monitoring wells with reported arsenic exceedances. The iron (**Attachment 6**) and arsenic (**Attachment 7**) Pourbaix diagrams for the wells of concern demonstrate that much of the Site groundwater is in a dynamic state between oxidized and reduced forms of arsenic and iron, with the downgradient locations generally showing a higher predominance of the more mobile As(III) species compared to background location MW-7. More reducing conditions at downgradient wells compared to background can result in relatively greater desorption of arsenic from iron oxides and iron-bearing clays and potential dissolution of iron oxide minerals and iron-bearing clays which may contain adsorbed or co-precipitated arsenic due to changes in arsenic or iron speciation at the downgradient locations of concern.

A geochemical reaction pathway model was generated using Geochemist's Workbench (GWB) React module software package (version 17.0.1) to qualitatively assess the impact of variable Eh conditions on arsenic mobilization due to speciation changes and subsequent desorption from crystalline iron oxides (magnetite). Modeling of arsenic desorption from magnetite was completed to assess the predicted impact of this mechanism on total aqueous arsenic at representative downgradient conditions. Magnetite was observed in XRD results and predicted to be stable in downgradient and background geochemical conditions. While dissolution of additional iron phases such as amorphous iron oxyhydroxides also provide mechanisms for increasing arsenic

concentrations in groundwater, amorphous phases are unable to be directly quantified as model inputs.

Groundwater composition data from monitoring well MW-10 (average of groundwater samples which contain analytical results for all major ions) was used to populate the aqueous component of the model. The magnetite component identified in XRD analysis of the aquifer solid sample associated with the screened interval of MW-10 (0.1 weight %; sample B23-12 51.5-53.5 ft bgs; **Table 2**) was included in the model as the solid-phase reactive component to assess arsenic mobility. Sorption to magnetite was incorporated into model calculations using the Dzombak and Morel (1990) two-layer surface complexation model. Crystalline iron minerals ferrite, hematite, and goethite were not detected in the XRD so they were suppressed during model simulations. While desorption from chlorite may provide an additional source of arsenic to groundwater under reducing conditions (Lins and Puls, 2000), the model does not include arsenic adsorption/desorption from chlorite as thermodynamic data representative of chlorite surface interactions with arsenic are not as well established as arsenic-oxide interactions.

Modeling results provide a qualitative conceptual demonstration of redox-change impacts to aqueous arsenic concentrations at MW-10 (average pH of 7.30) in the presence of crystalline iron oxides (i.e., magnetite), which are known to function as arsenic sorption surfaces with an effect on arsenic aqueous concentrations. **Figure 9** shows the predicted total concentration of all aqueous arsenic species over the range of Eh conditions observed in MW-10 groundwater since monitoring began. As illustrated on **Figure 9**, arsenic concentrations in the aqueous phase (independent of speciation calculations) are predicted to increase with decreasing Eh values, consistent with the higher groundwater arsenic concentrations observed at MW-10 compared to background well MW-7. The predicted concentrations of aqueous arsenic species representing the predominant arsenite ($As(OH)_3$) and arsenate ($HAsO_4^{2-}$) phases over a range of Eh conditions are illustrated in **Figure 10**, which shows that arsenite is dominant in groundwater with decreasing Eh values (i.e., higher concentrations in compliance well MW-10 compared to upgradient well MW-7). Lower Eh conditions are associated with the aqueous arsenic speciation changes and desorption of arsenic from iron oxides, as demonstrated in **Figure 11**.

These results provide further support that arsenic is more mobile at the downgradient locations (represented by MW-10 in the model) due to their historically lower ORP values than the upgradient wells (**Figure 3**). This conceptual demonstration of site-specific geochemical mechanisms reinforces the assertion that arsenic speciation influences aqueous arsenic concentrations due to its effect on the sorption and/or desorption of arsenic species to iron oxides, and iron-bearing clays, in aquifer solid material in the vicinity of the Pond System. These processes are naturally occurring and are not associated with a release from the Pond System.

3.3 LOE #3: Pond System Porewater Geochemical Signature is Distinct from the Wells of Concern and Can't be a Source.

A CCR unit release would be expected to impact the major ion chemical signature of downgradient groundwater. A Piper diagram, which represents the relative proportions of major cations and anions in water samples, was created to visualize major ion chemistry of a porewater (i.e., water within the CCR) sample, the background well (MW-7), and the exceedance wells (i.e., MW-2, MW-6, MW-10, and MW-13) (**Figure 13)**.

Geosyntec collected a porewater sample from the leachate well XPW-01 on February 25, 2021 (**Figure 1**). No changes to material handling or plant operations have occurred that would change the anticipated arsenic concentrations in the Pond System since this sample was collected.

The Piper diagram indicates that the wells of concern have a relatively similar geochemical signature to the background well MW-7. This is illustrated by the clustering of the most recent sampling results on the Piper diagram. In contrast, groundwater composition at the wells of interest is distinct from the composition of the Pond System porewater in **Figure 13**. This difference is driven by the anion composition of the samples, with the porewater containing a greater proportion of sulfate whereas both the background and downgradient groundwater have much lower sulfate and higher contributions of alkalinity. The higher alkalinity contributions are anticipated due to the relatively high abundance of carbonate minerals (i.e., calcite, dolomite, and ankerite) identified in solid-phase samples by the XRD analysis (**Table 2**). Further, the porewater sample is sulfate-dominant at 1,100 mg/L in comparison to calcium and magnesium which are present in lower concentrations at 261 mg/L and 208 mg/L, respectively (**Table 3**).

In the event of a Pond System release, groundwater from wells of interest would be expected to have similar ionic composition to Pond System porewater. The distinct geochemical signature relative to Pond System porewater and relative geochemical composition between the wells of interest and the background location suggests that arsenic exceedances of the GWPS are not attributable to impacts from the Pond System unit.

4. CONCLUSIONS

This analysis demonstrates the arsenic GWPS exceedances at MW-2, MW-6, MW-10, and MW-13 are not caused by a release from the Pond System CCR unit, but instead are attributed to a source other than the Pond System. The following summarizes the three LOEs used to support this demonstration:

1. While solid phase analyses identified total arsenic associated with both background and compliance well aquifer solids at comparable concentrations, reducing groundwater conditions at downgradient locations mobilize greater concentrations of arsenic to groundwater. Arsenic speciation in groundwater and the association of arsenic with iron-bearing minerals are both redox-dependent. Aqueous geochemical data indicate strong correlations between aqueous arsenic, iron, and redox conditions, supporting the association of arsenic and iron in aquifer solids. SEP results indicate that arsenic is associated with iron-bearing minerals such as oxides, sulfides, amorphous iron oxyhydroxides, and recalcitrant materials at both background and compliance locations. XRD identified the presence of iron-bearing minerals magnetite and chlorite at the downgradient compliance well locations which could serve as a source of arsenic and iron to groundwater.

2. A geochemical reaction pathway model was generated using GWB to qualitatively assess the impact of variable redox conditions on arsenic mobilization with regards to arsenic speciation and sorption of arsenic to magnetite. The model predicts that under reducing geochemical conditions (as expected in the wells of concern), arsenic will be desorbed from magnetite and mobilized into solution to a greater degree than would be predicted under more oxidizing background redox conditions.

3. The Pond System porewater geochemical signature is distinct from the exceedance wells groundwater quality, which suggests that these arsenic exceedances of the GWPS are not attributable to impacts from the Pond System unit.

The three LOEs demonstrates:

- Arsenic naturally exists in the aquifer solids in the vicinity of the Pond System.
- More reducing conditions downgradient of the Pond System compared to background locations appears to have resulted in changes to the speciation of arsenic and the stability of iron minerals, increasing the potential for desorption from iron minerals and dissolution of iron minerals with sorbed or coprecipitated arsenic.

These processes are natural and are unrelated to the Pond System. This demonstration meets the expectations in 40 C.F.R. § 257.95 (g)(3)(ii) that a statistically significant increase may result from natural variation in groundwater quality.

The information serves as the written ASD prepared in accordance with 40 C.F.R. § 257.95 (g)(3)(ii) demonstrating that the GWPS exceedances for arsenic at MW-2, MW-6, MW-10, and MW-13 are not attributable to the Pond System CCR unit. Therefore, implementation of corrective measures is not required for arsenic at the Pond System CCR unit.

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Geosyntec consultants

TABLES

Table 1 - Arsenic SEP Results Summary
Miami Fort Power Plant

Geosyntec Consultants, Inc.

Soil Boring Location		B23-1		B23-12		B23-12		B23-12		SB-1	
Sample Depth (ft bgs)		(43.5-45)		(31.5-33.5)		(38.5-39.8)		(51.5-53.5)		(64-65)	
Location		Downgradient		Downgradient		Downgradient		Downgradient		Upgradient	
Adjacent Well		MW-13/S		MW-10/S & MW-2		MW-10/S & MW-2		MW-10/S & MW-2		MW-19	
Field Boring Log Description		Fine/Med Coarse Sand		Dark Gray Clay, Staining		Brown/Gray Coarse Sand		Brown Well Graded Sand		Brown Well Graded Sand	
Total Arsenic		6.9		5.7		6.0		6.8		7.1	
SEP Fraction	**SEP Reagent**	**Concentration**	**% of Total**	**Concentration**	**% of Total**	**Concentration**	**% of Total**	**Concentration**	**% of Total**	**Concentration**	**% of Total**
Exchangeable Metals Fraction	$MgSO_4$	<2.4	--	<2.6	--	<2.2	--	<2.4	--	<2.3	--
Metals Bound to Carbonates Fraction	Sodium acetate, acetic acid	<1.8	--	<1.9	--	<1.7	--	<1.8	--	<1.7	--
Non-crystalline Materials Fraction	Ammonium oxalate (pH 3)	0.35 J	6%	1.8	23%	0.77	11%	0.49 J	6%	0.34 J	5%
Metals Bound to Metal Hydroxide Fraction	Hydroxylamine HCl and acetic acid	0.62	11%	0.99	13%	0.43 J	6%	0.53 J	7%	1.7	25%
Bound to Organic Material Fraction	5% sodium hypochlorite (pH 9.5)	<9.0	--	<9.7	--	<8.4	--	2.4 J	30%	<8.6	--
Metals Bound to Acid/Sulfide Fraction	HNO_3, HCl, and H_2O	3.2	57%	2.4	30%	3.5	50%	2.7	34%	3.9	57%
Residual Metals Fraction	HF, HNO_3, HCL, and H_3BO_3	1.4	25%	2.7	34%	2.3	33%	1.8	23%	0.93	13%
SEP Total		5.6	100%	7.9	100%	7.0	100%	7.9	100%	6.9	100%

Notes:
SEP: sequential extraction procedure
ft bgs: feet below ground surface
All results shown in miligram of arsenic per kilogram of soil (mg/kg).
Total arsenic was analyzed using aqua regia digest, ICP-MS
Non-detect values are shown as less than the reporting limit.
The arsenic fraction associated with each SEP phase is shown.
% of total arsenic is calculated from the sum of the SEP fractions.

Table 2 - Summary of X-Ray Diffraction Analysis
Miami Fort Power Plant

Geosyntec Consultants, Inc.

Field Boring Location			B23-1	B23-12	B23-12	B23-12	B23-2	B23-2	SB-1
Sample Depth (ft bgs)			(43.5-45)	(31.5-33.5)	(38.5-39.8)	(51.5-53.5)	(42-43.6)	(59-60.5)	(64-65)
Location			Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Upgradient
Adjacent Well			MW-13/S	MW-10/S & MW-2	MW-10/S & MW-2	MW-10/S & MW-2	MW-4A	MW-4A	MW-19
Field Boring Log Description			Fine/Med Coarse Sand	Dark Gray Clay, Staining	Brown/Gray Coarse Sand	Brown Well Graded Sand	Silty Sandy Clay, Orange Mottling	Med Dense/Fine Sandy Clay	Dark Brown Well Graded Gravely Sand
Mineral/Compound	**Formula**	**Mineral Type**	**(wt %)**	**(wt %)**	**(wt %)**	**(wt %)**	**(wt %)**	**(wt %)**	**(wt %)**
Quartz	SiO_2	Silicate	55.4	61.0	44.9	59.2	61.0	47.5	69.0
Albite	$NaAlSi_3O_8$	Feldspar	7.7	7.5	8.4	9.5	7.8	8.4	9.9
Microcline	$KAlSi_3O_8$	Feldspar	4.0	0.4	4.6	4.2	0.4	3.7	5.5
Calcite	$CaCO_3$	Carbonate	16.4	0.5	17.4	7.8	0.4	15.0	7.0
Dolomite	$CaMg(CO_3)_2$	Carbonate	7.1	--	15.0	9.2	--	10.8	1.9
Ankerite	$CaFe(CO_3)_2$	Carbonate	2.5	--	1.2	1.1	--	5.3	0.3
Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$	Amphibole	0.9	0.8	0.9	1.6	0.4	1.2	--
Diopside	$CaMgSi_2O_6$	Pyroxene	0.8	2.1	0.6	1.3	1.6	2.4	--
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$	Mica	3.5	14.8	4.0	3.8	15.0	4.0	3.0
Kaolinite	$Al_2Si_2O_5(OH)_4$	Clay	0.4	8.3	0.9	0.6	8.0	0.4	1.5
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$	Clay	1.2	2.7	2.0	1.7	2.2	0.5	1.5
Magnetite	Fe_3O_4	Oxide	0.2	0.2	0.2	0.1	0.4	0.4	--
Montmorillonite	$(Na,Ca)_{0.3}(Al,Mg)_2Si_4O_{10}(OH)_2 \cdot 10H_2O$	Clay	--	0.8	--	--	1.0	--	--
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$	Mica	--	1.0	--	--	1.7	--	--
Rhodochrosite	$MnCO_3$	Carbonate	--	--	--	--	--	0.3	0.4

Clay Minerals Total		1.6	11.7	2.8	2.3	11.2	0.9	3.0

Notes:
Sample depth is shown in feet below ground surface (ft bgs).
wt %: percentage by weight

Table 3 - Major Ion Compositions
Miami Fort Power Station

Geosyntec Consultants, Inc.

Parameter	Calcium		Magnesium		Sodium		Potassium		Bicarbonate Alkalinity		Sulfate		Chloride	
Unit / Sample ID	mg/L	meq/kg	mg/L	meq/kg	mg/L	meq/kg	mg/L	meq/kg	mg/L	meq/kg	mg/L	meq/kg	mg/L	meq/kg
MW-2_9/25/2023	131	6.452	55.2	4.542	18.3	0.796	0.846	0.02164	584	9.571	10.9	0.2269	33.2	0.9243
MW-6_9/21/2023	51.7	2.546	86.0	7.077	48.1	2.092	3.81	0.09745	499	8.178	6.61	0.1376	76.9	2.141
MW-7_9/22/2023	109	5.369	33.8	2.781	4.48	0.1949	1.33	0.03402	363	5.949	41.5	0.8641	3.08	0.08576
MW-10_9/22/2023	49.1	2.419	17.6	1.448	26.1	1.135	3.19	0.08159	203	3.327	22.0	0.4581	31.1	0.866
MW-13_9/22/2023	42.1	2.074	11.7	0.9628	21.0	0.9134	2.32	0.05934	123	2.016	46.7	0.9723	28.1	0.7825
XPW-01_2/25/2021	261	12.85	208	17.12	56.7	2.466	15.5	0.3964	197	3.229	1,100	22.9	324	9.015

Notes:
mg/L: milligram per liter
meq/kg: milliequivalent per kilogram

Geosyntec consultants

FIGURES



Legend

- Monitoring Well
- Pumping Well
- Soil Borings
- Leachate Well

Notes

-Surface water and soil boring locations are limited to Geosyntec's February 2021 and July 2023 field efforts.
- Monitoring well GPS locations were provided by Ramboll.
- Aerial imagery accessed from ArcGIS Online. Imagery taken 9/24/2013, provided courtesy of NAIP.

200 100 0 200 Feet

Site and Well Location Map

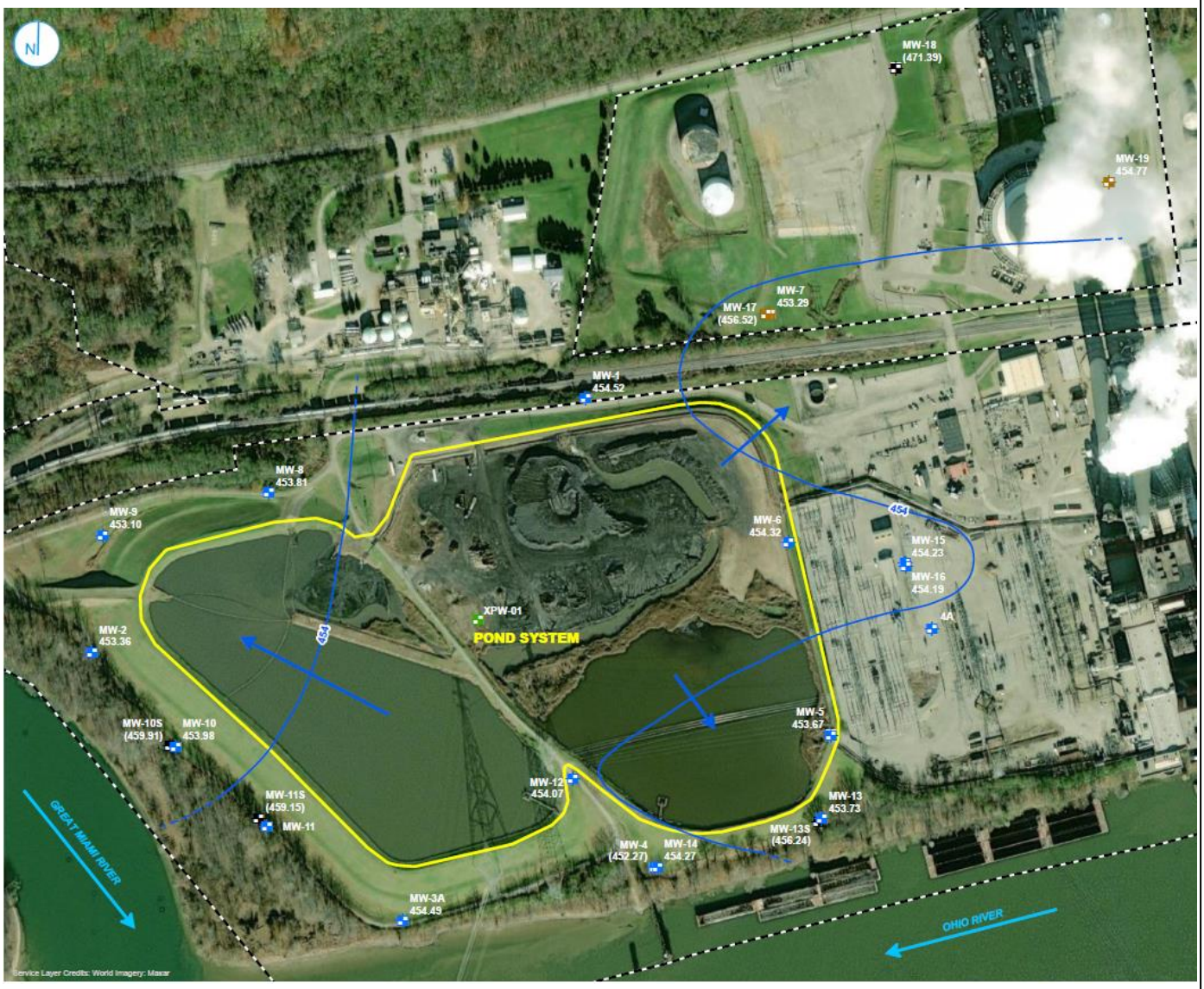
Miami Fort Power Station
North Bend, Ohio

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Figure **1**

C:\Users\mimmon\Documents\ArcGIS\Packages\Soil Boring Map_D4E6F7C1-56F1-4A3E-9FC1-15C1AC127883E\v106\Soil Boring_MW.mxd: Mimmon; 03-Apr-2024; CHA8300-08-03



COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
PORE WATER WELL
GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
PROPERTY BOUNDARY

0 150 300 Feet

Notes

-Figure originally from “Annual Groundwater Monitoring and Corrective Action Report" (Ramboll, 2024).
-Elevations in parentheses were not used for contouring.
-Elevation contours shown in feet. North American Vertical Datum of 1988 (NAVD88).

Potentiometric Surface Map - September 2023

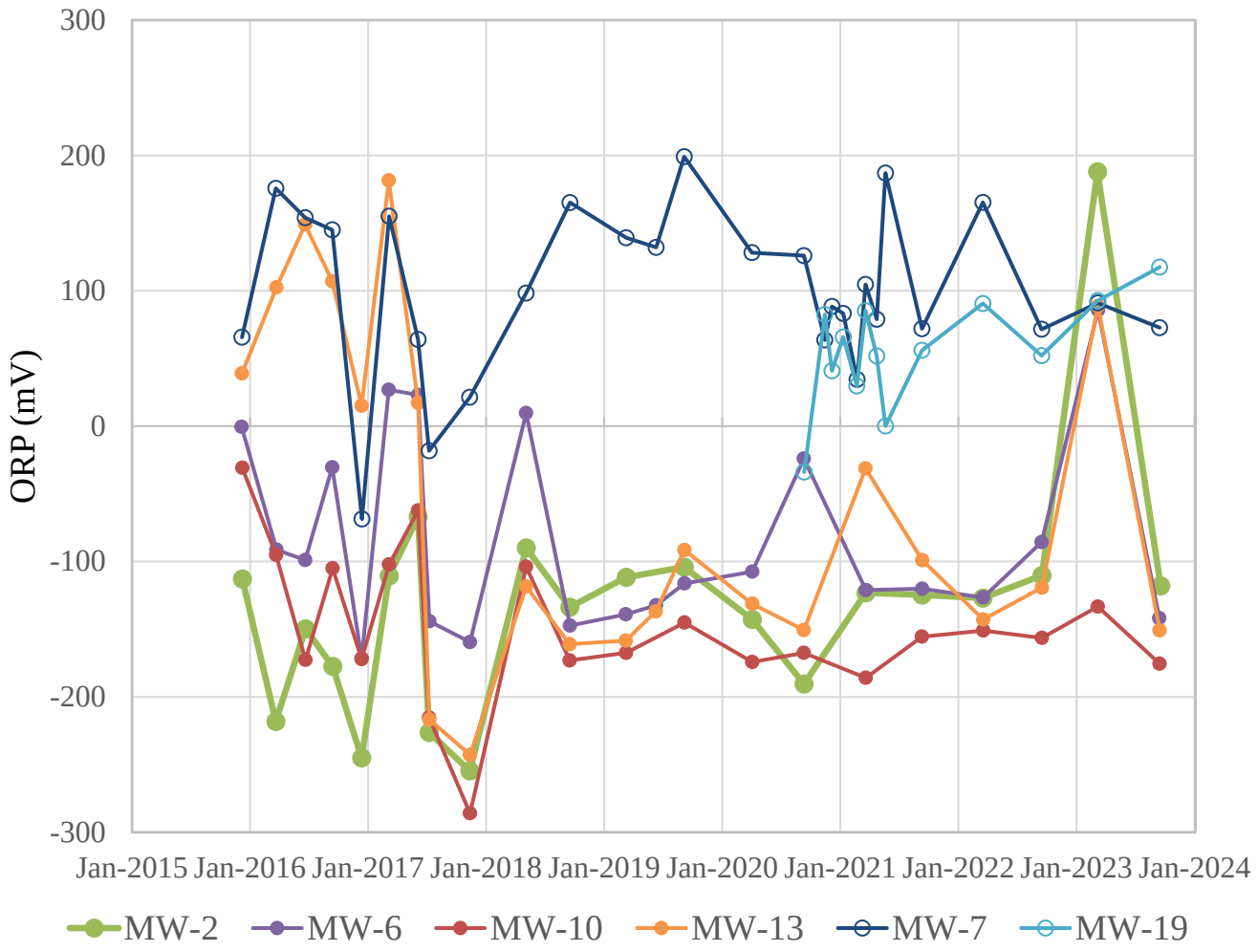
Miami Fort Pond System
North Bend, Ohio

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Figure **2**

\\stlouismo-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 **ASD Update\Report\Figures**



Notes: Data were collected under the federal coal combustion residual (CCR) rule requirements and represents oxidation reduction potential (ORP) in groundwater.

mV: millivolts

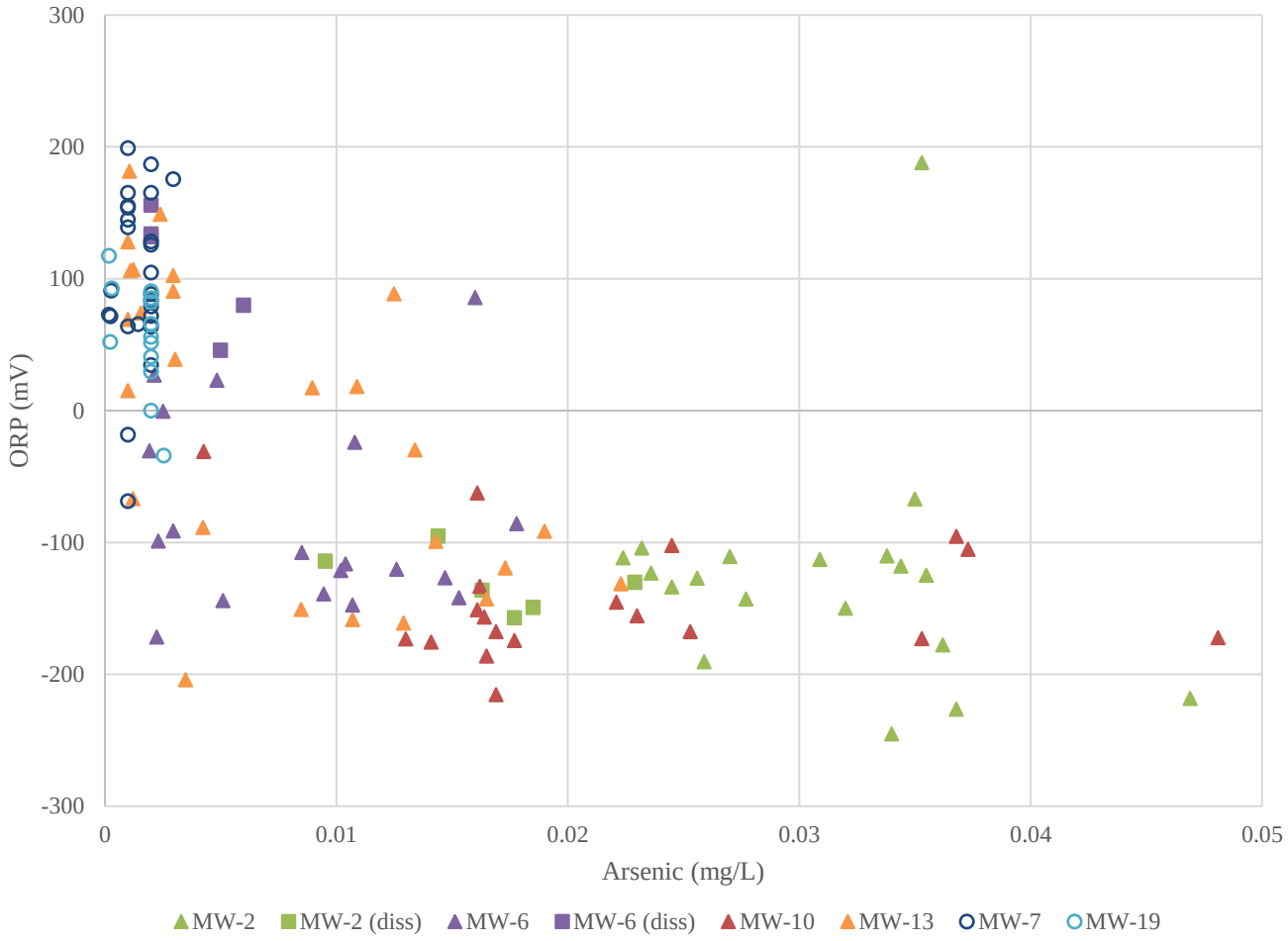
ORP Time Series Graph
Miami Fort Pond System
North Bend, Ohio

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Columbus, Ohio | April 2024

Figure **3**

\\stlouismo-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures



Notes: Data were collected under the federal coal combustion residual (CCR) rule requirements and represents oxidation reduction potential and arsenic in groundwater. Dissolved arsenic is shown by square symbols for occasions where only dissolved arsenic data was collected at the site rather than total arsenic data.
mg/L: milligrams per liter, mV: millivolts

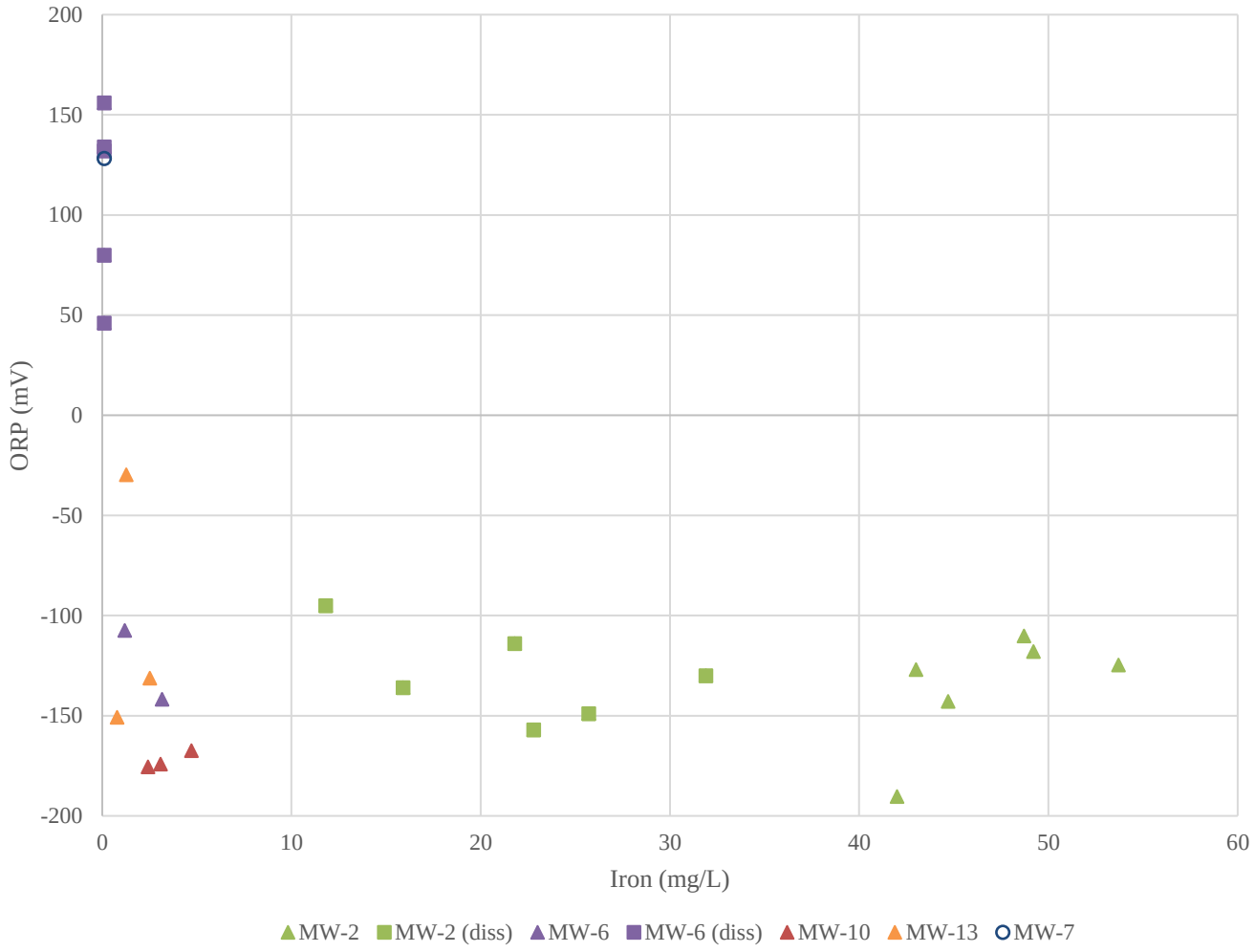
Oxidation Reduction Potential Versus Arsenic Scatterplot
Miami Fort Pond System
North Bend, Ohio

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Figure **4**

\\stlouismo-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures



Notes: Data were collected under the federal coal combustion residual (CCR) rule requirements and represents oxidation reduction potential and iron in groundwater. Dissolved iron is shown by square symbols for occasions where only dissolved iron data was collected at the site rather than total iron data. Dissolved and total iron data was not available for upgradient well MW-19.

mg/L: milligrams per liter, mV: millivolts

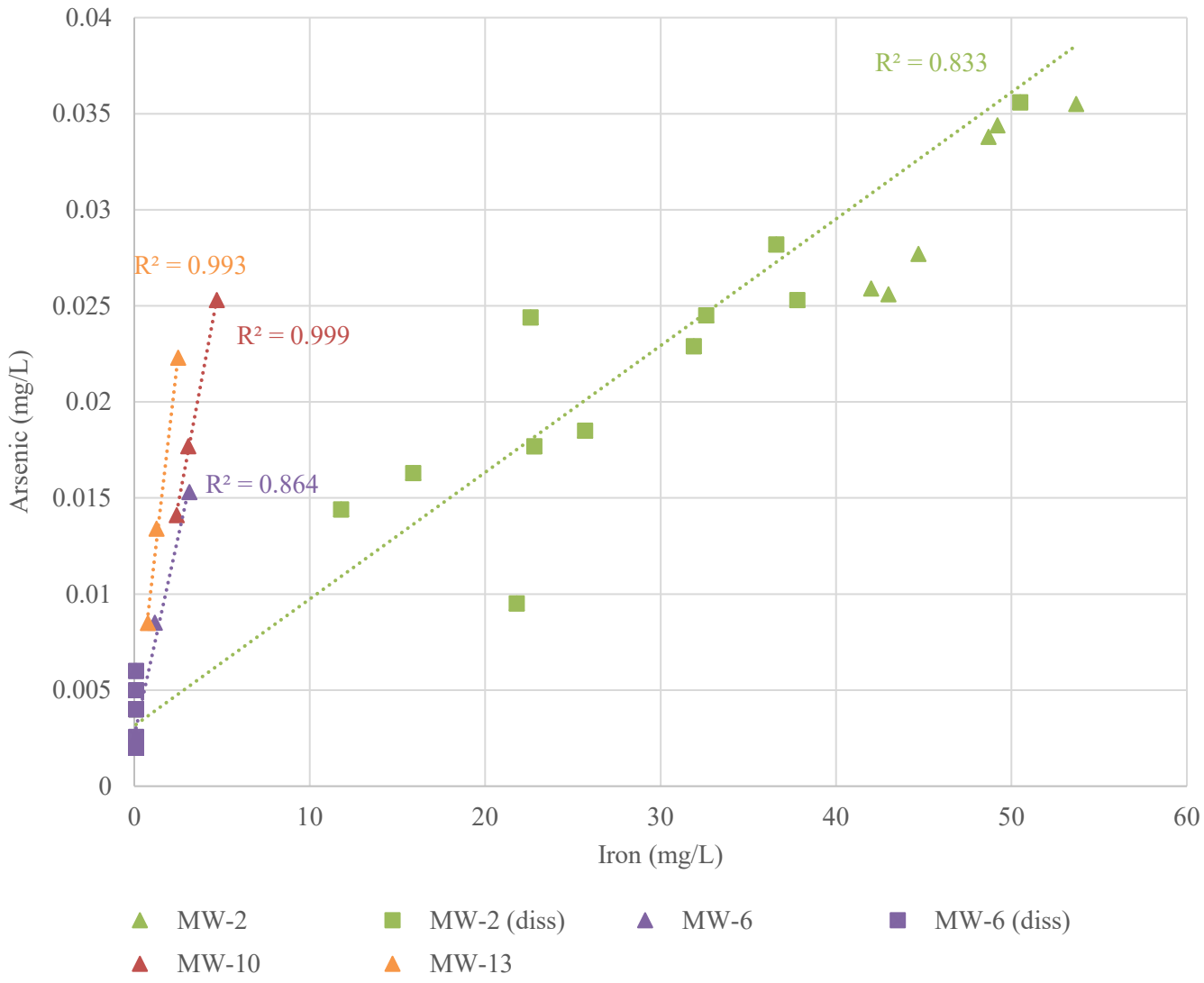
Oxidation Reduction Potential Versus Iron Scatterplot
Miami Fort Pond System
North Bend, Ohio

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Figure **5**

\\stlouismo-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures



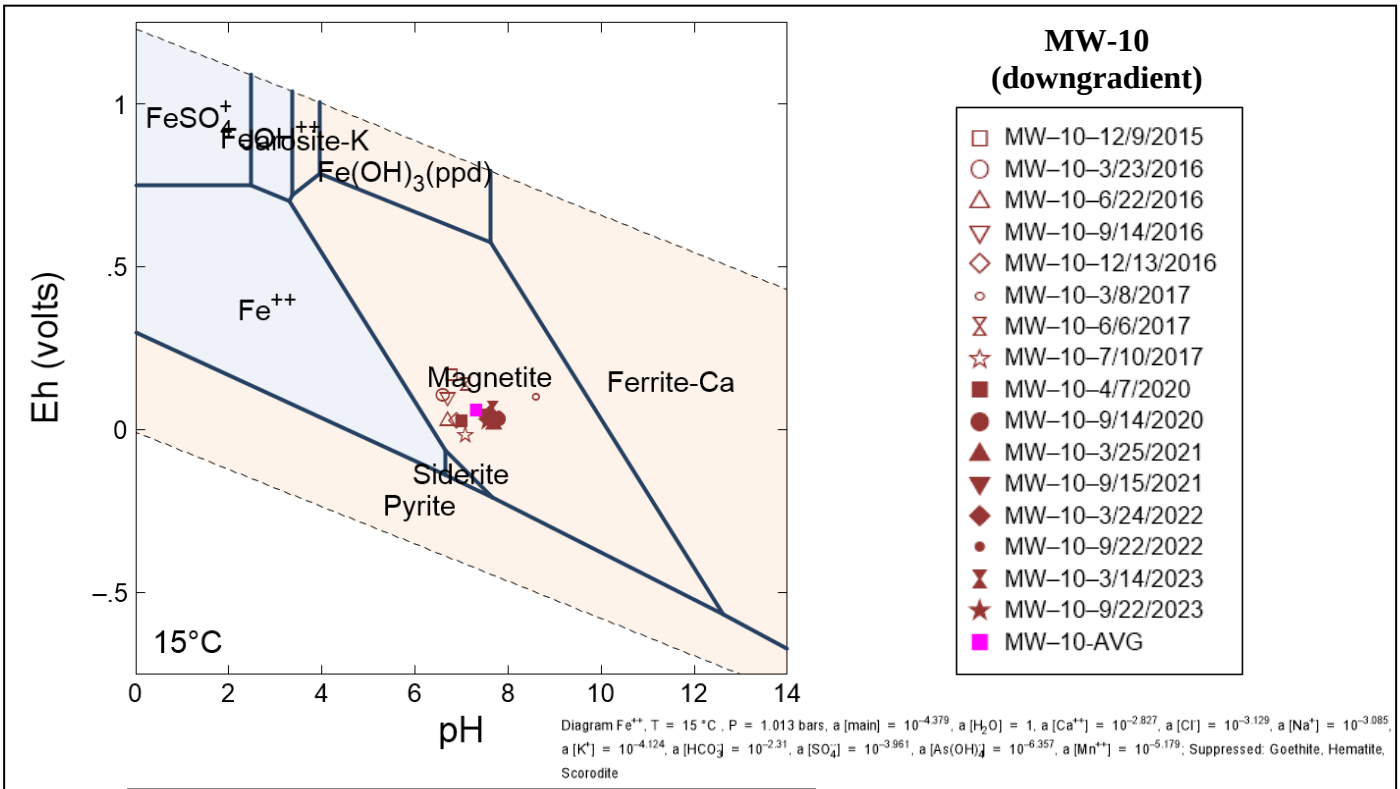
Notes: Data were collected under the federal coal combustion residual (CCR) rule requirements and represents aqueous arsenic and iron in groundwater. Dissolved arsenic and iron are shown by square symbols for occasions where only dissolved iron and arsenic data was collected at the site rather than total iron and arsenic data. Dissolved and total iron data was not available for upgradient well MW-19.
mg/L: milligrams per liter

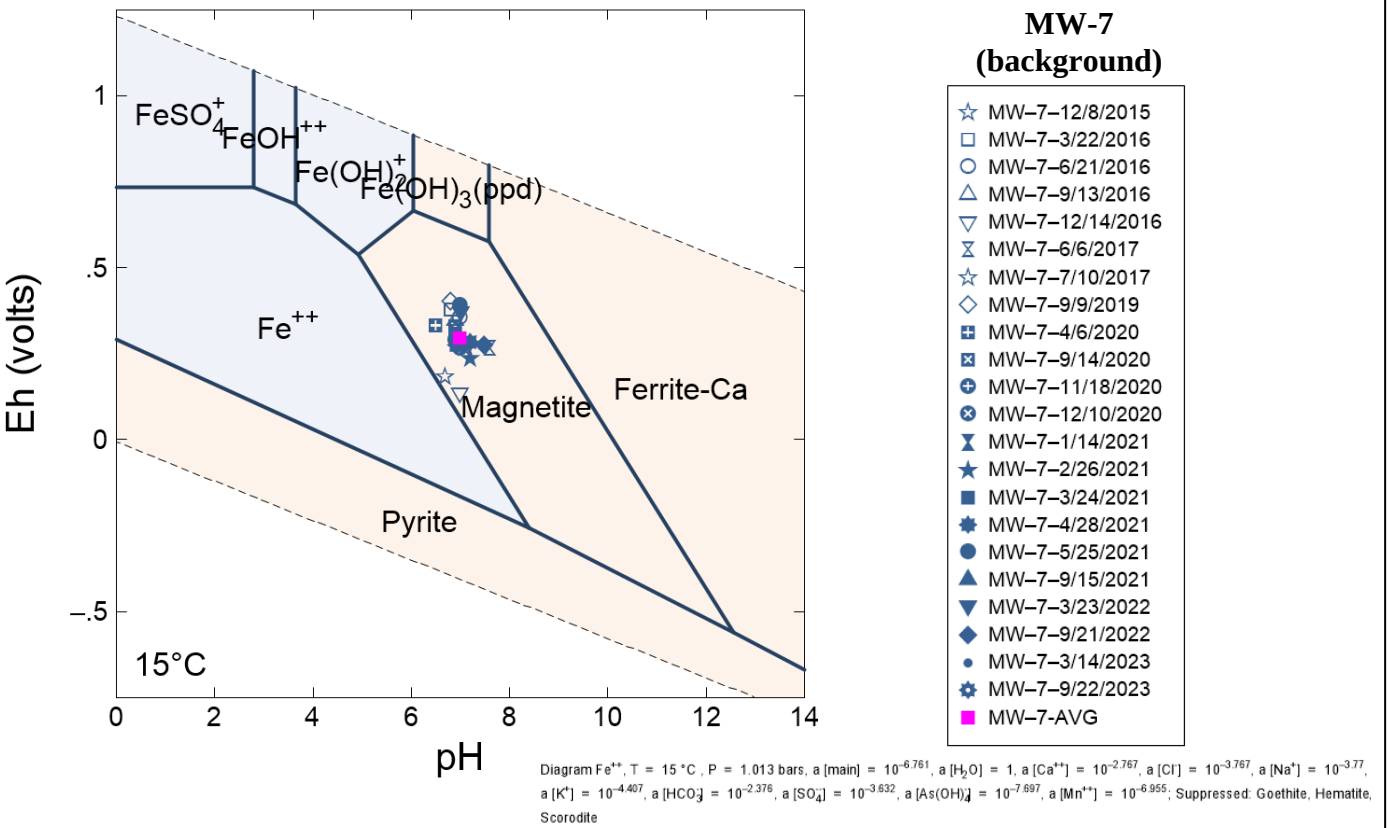
Arsenic Versus Iron Scatterplot
Miami Fort Pond System
North Bend, Ohio

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Figure 6





Notes: Groundwater samples from monitoring wells MW-10 and MW-7 which contains analytical results from all major ions are plotted in the Pourbaix diagram with the average result. Pourbaix diagrams for the remaining wells of concern can be found in **Attachment 6**.

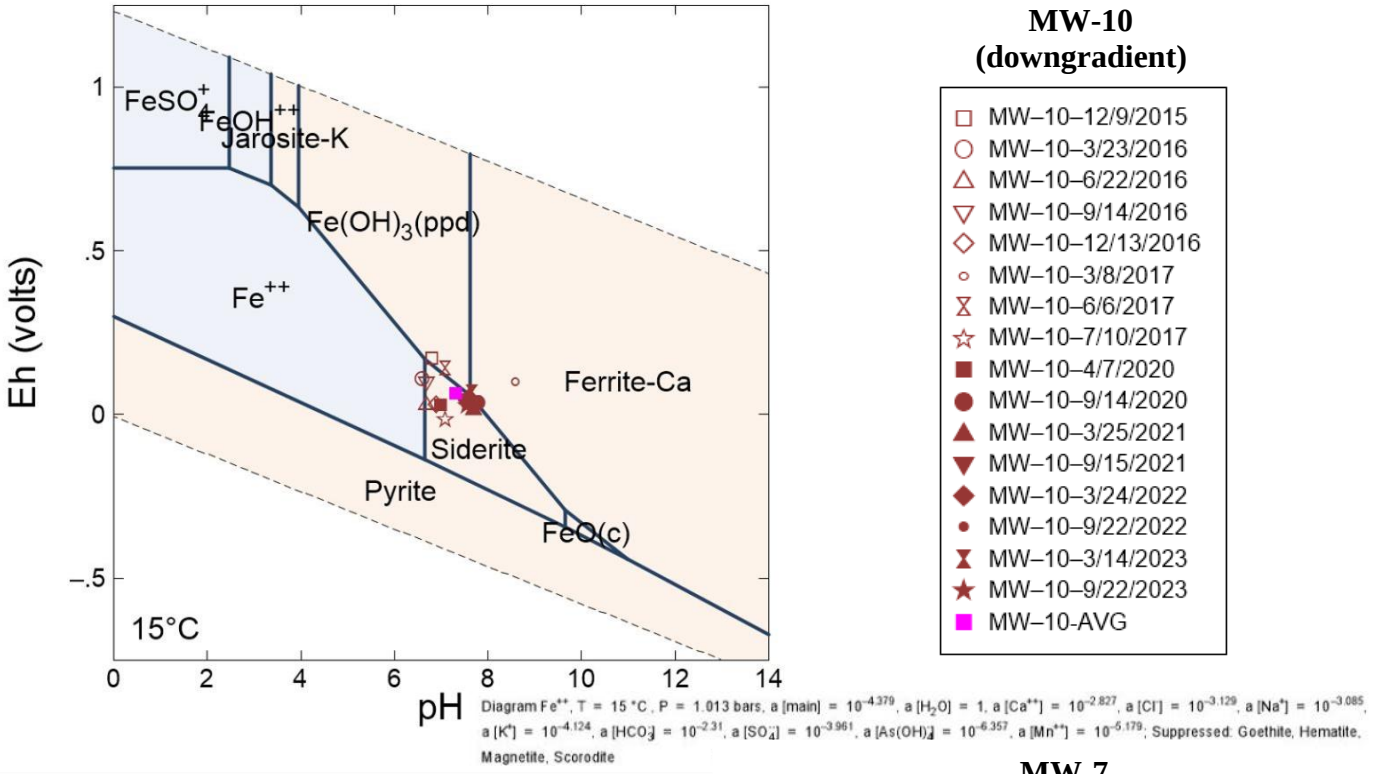
MW-10 and MW-7: Iron Pourbaix Diagram
Miami Fort Pond System
North Bend, Ohio

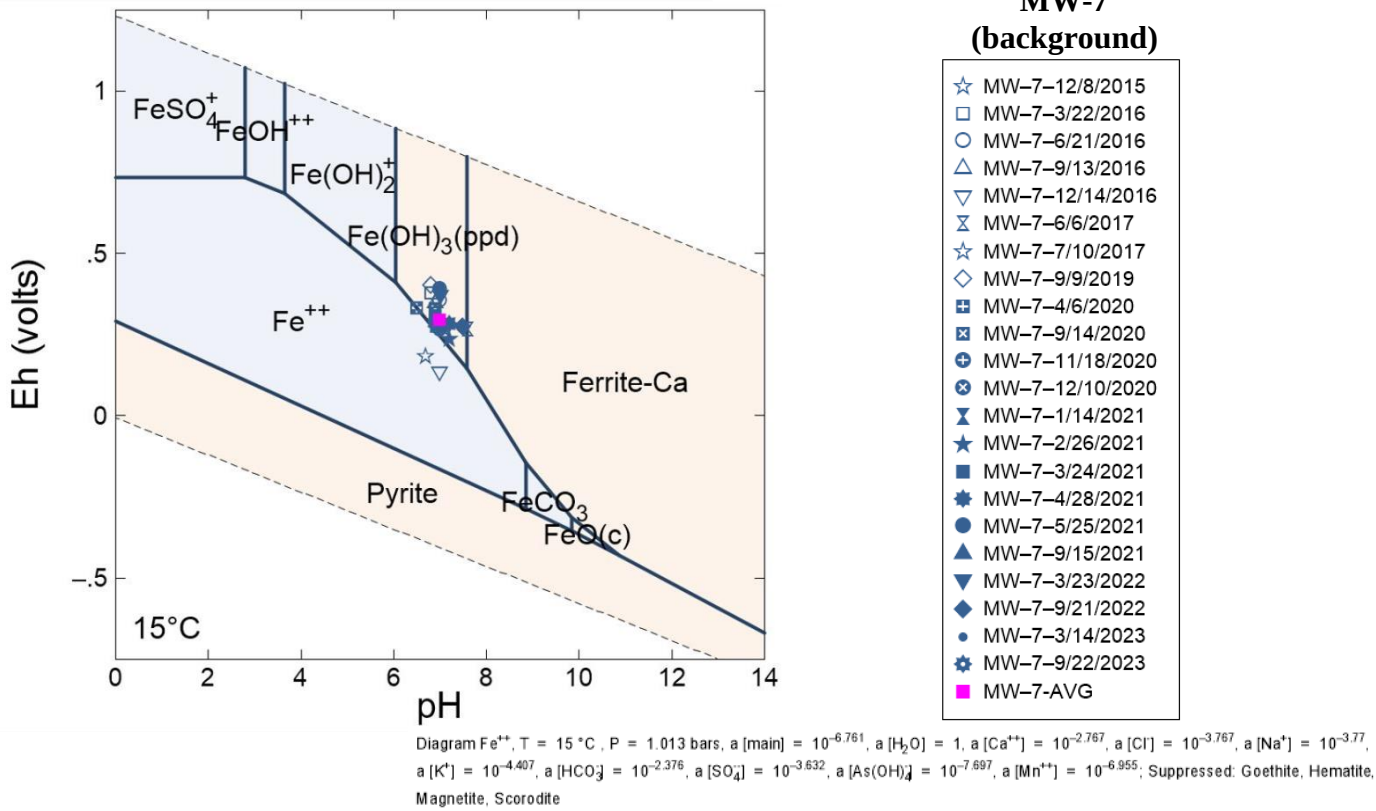
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Figure **7**

\\stfoulsmc-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures





Notes: Groundwater samples from monitoring wells MW-10 and MW-7 which contains analytical results from all major ions are plotted in the Pourbaix diagram with the average result. Pourbaix diagrams for the remaining wells of concern can be found in **Attachment 6**.

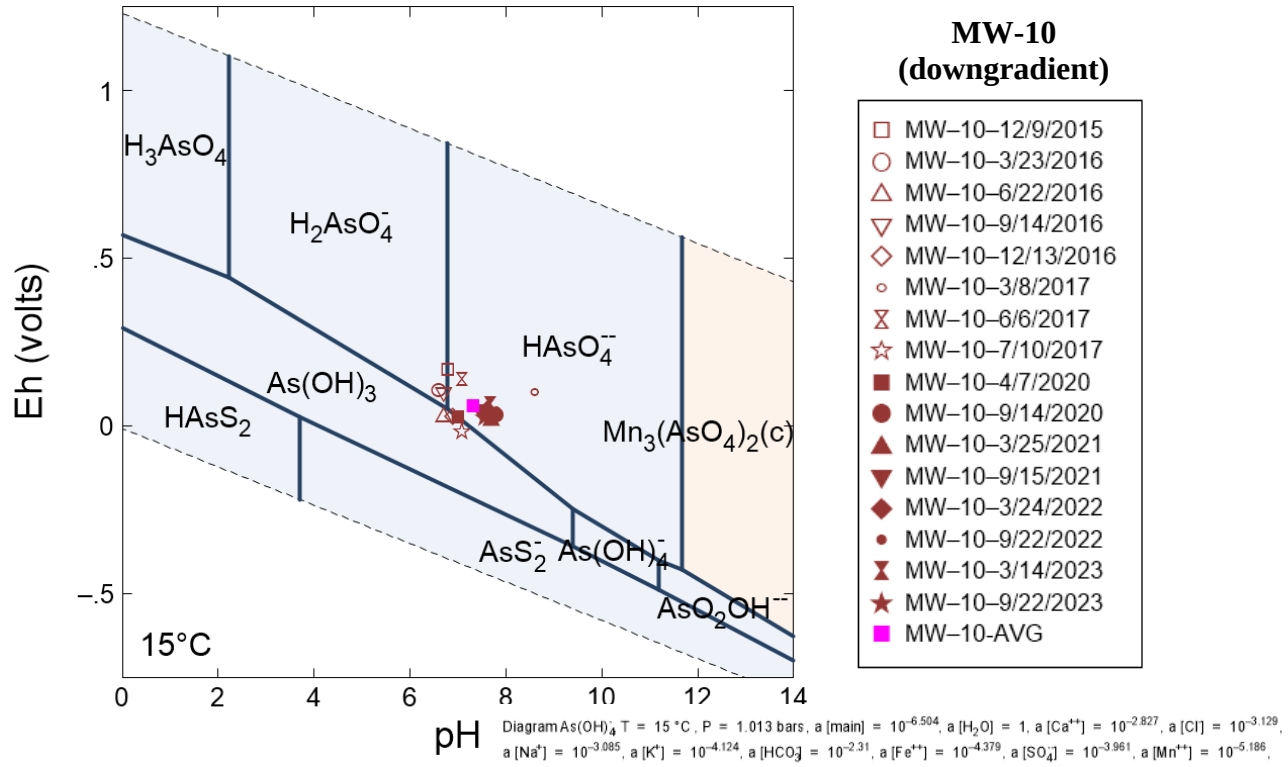
MW-10 and MW-7: Iron Pourbaix Diagram (Magnetite Suppressed)
Miami Fort Pond System
North Bend, Ohio

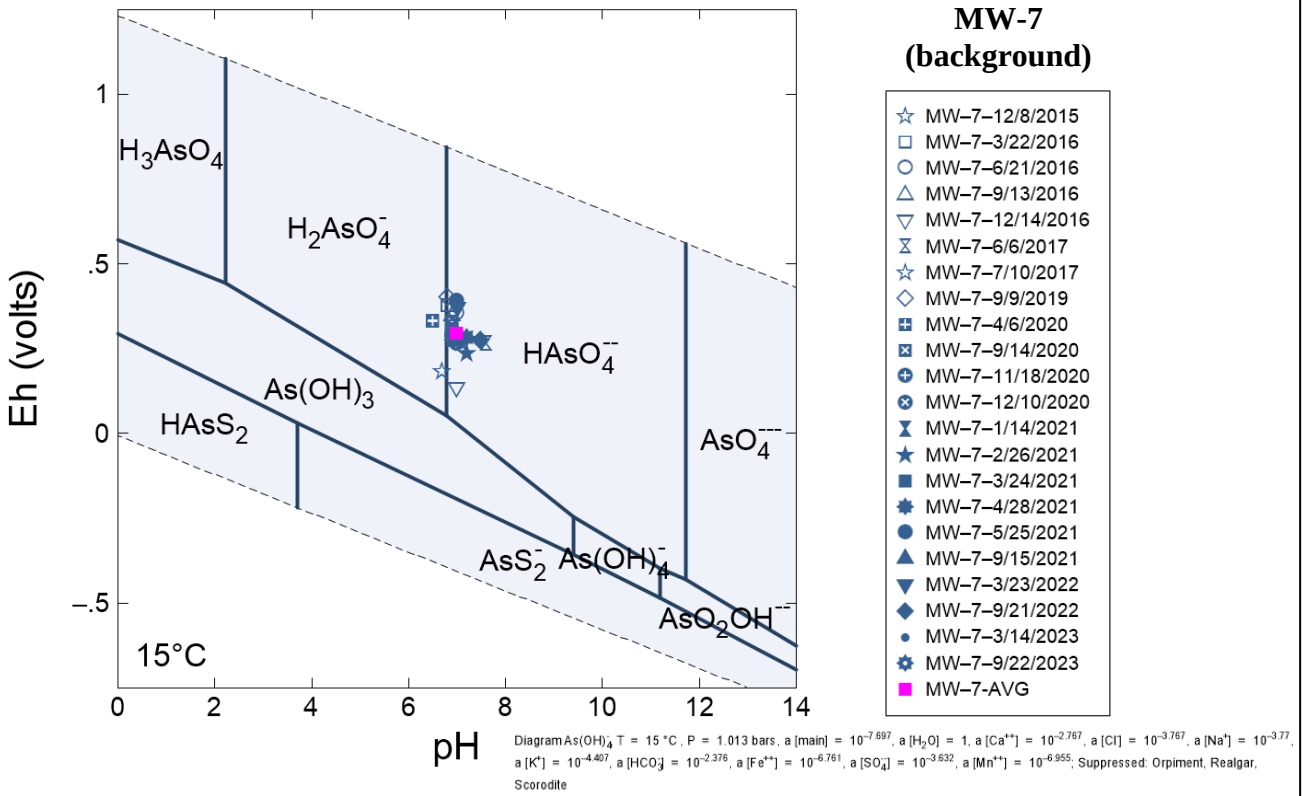
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Figure **8**

\\stlouismo-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 **ASD Update\Report\Figures**





Notes: Groundwater samples from monitoring wells MW-10 and MW-7 which contains analytical results from all major ions are plotted in the Pourbaix diagram with the average result. Pourbaix diagrams for the remaining wells of concern can be found in **Attachment 7**.

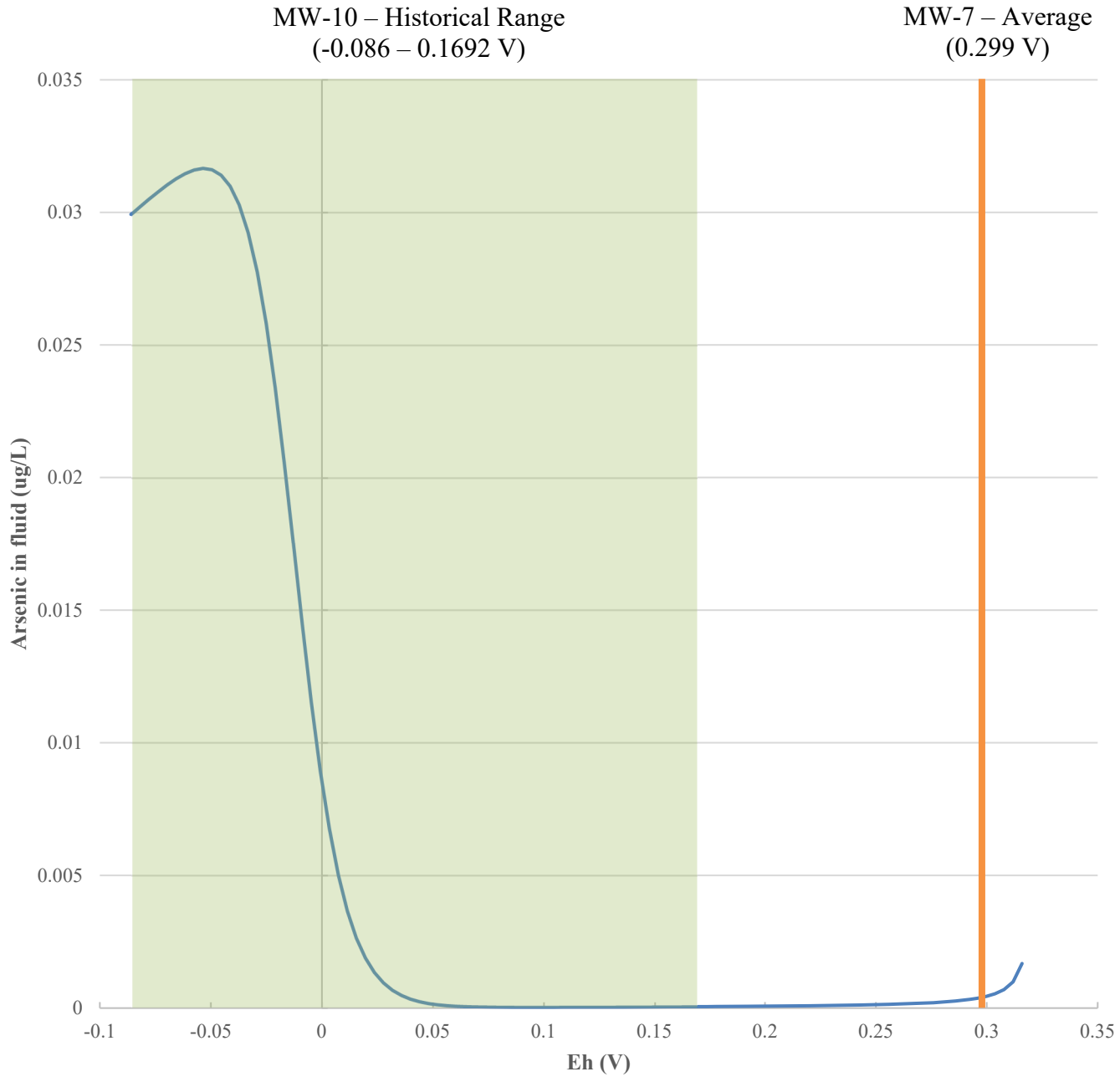
MW-10 and MW-7: Arsenic Pourbaix Diagram
Miami Fort Pond System
North Bend, Ohio

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Figure **9**

\\stfoulsmc-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures



Notes: Eh values are shown in volts (V). Predicted concentrations of aqueous arsenic in units of micrograms per liter (µg/L) as a function of Eh are shown. The historical range of measured Eh values at MW-10 is indicated by the green shading. The average Eh value of all sampling events from MW-7 is indicated by the orange line.

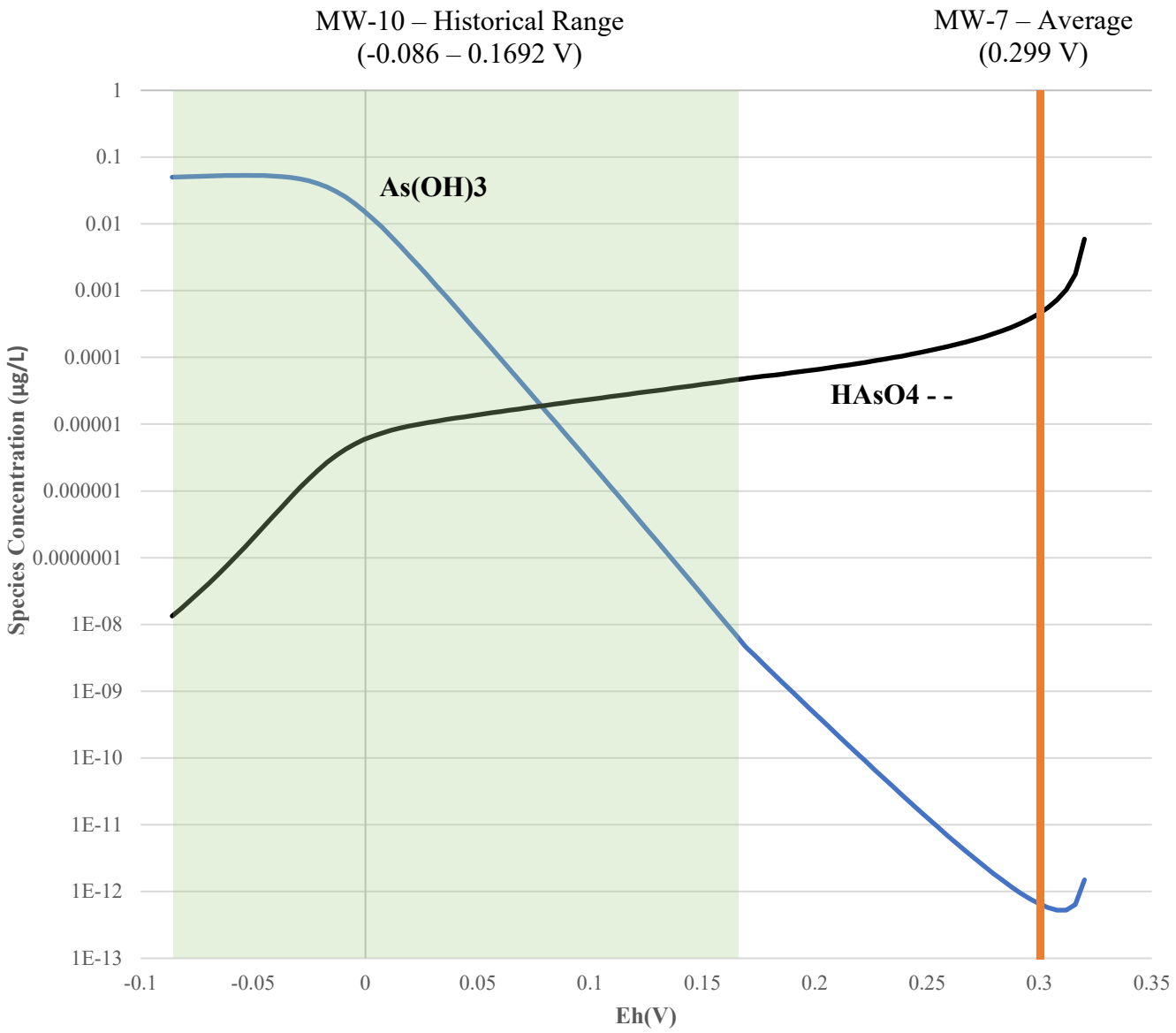
MW-10 Geochemical Model: Total Aqueous Arsenic
Miami Fort Pond System
North Bend, Ohio

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Figure **10**

\\stfoulsmc-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures



Notes: The concentrations of aqueous arsenic species (µg/L) are plotted against Eh (V).

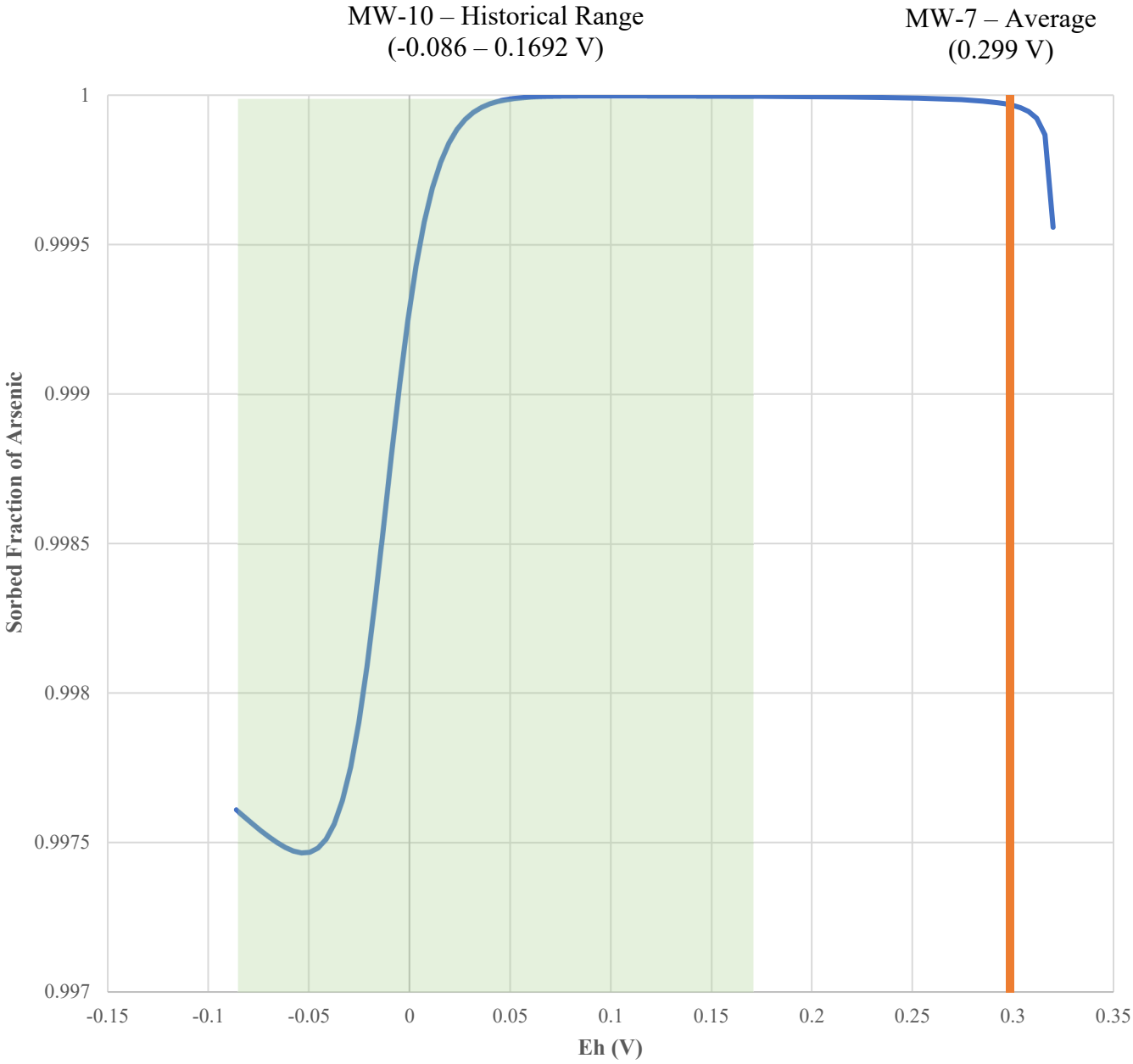
µg/L: micrograms per liter
V: volts

MW-10 Geochemical Model: Aqueous Arsenic Speciation
Miami Fort Pond System
North Bend, Ohio

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Figure **11**



Notes: The fraction of sorbed arsenic is plotted against Eh (V).

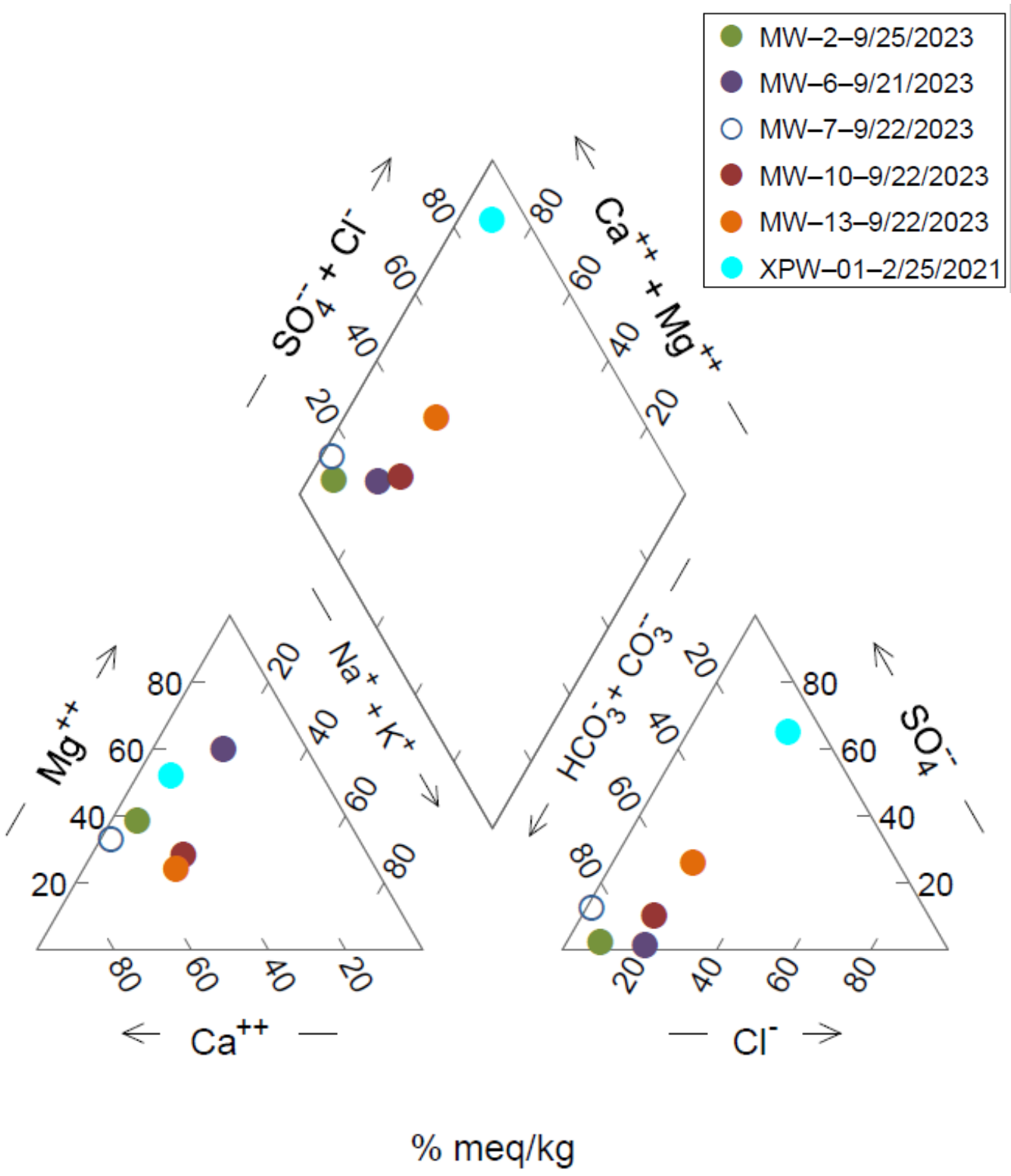
V: volts

MW-10 Geochemical Model: Sorbed Arsenic
Miami Fort Pond System
North Bend, Ohio

Geosyntec consultants

Columbus, Ohio | April 2024

Figure **12**



Notes: September 2023 groundwater samples from monitoring wells MW-2, MW-6, MW-7, MW-10, and MW-13 which contain analytical results for all major ions are plotted on the Piper diagram with the most recent porewater (XPW-01) sample.

% meq/kg: percent milliequivalents per kilogram

Piper Diagram: Porewater Comparison
Miami Fort Pond System
North Bend, Ohio

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Columbus, Ohio | April 2024

Figure **13**

\\dfsoulsmo-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures

Geosyntec consultants

ATTACHMENT 1

Ramboll's 2020 Alternative Source Demonstration

Intended for
Dynegy Miami Fort, LLC

Date
November 12, 2020

Project No.
1940074922

40 C.F.R. § 257.95(g)(3)(ii): ALTERNATE SOURCE DEMONSTRATION

MIAMI FORT POND SYSTEM

RAMBOLL Bright ideas. Sustainable change.

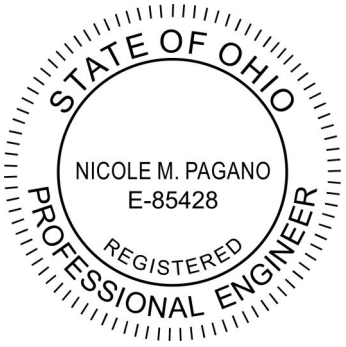
CERTIFICATIONS

I, Jacob J. Walczak, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used for other than its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Jacob J. Walczak
Senior Hydrogeologist
Ramboll Americas Engineering Solutions, Inc.,
f/k/a O'Brien & Gere Engineers, Inc.
Date: November 12, 2020

I, Nicole M. Pagano, a qualified professional engineer in good standing in the State of Ohio, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used for other than its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Nicole M. Pagano
Qualified Professional Engineer
85428
Ohio
Ramboll Americas Engineering Solutions, Inc.,
f/k/a O'Brien & Gere Engineers, Inc.
Date: November 12, 2020



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https://ramboll.com

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2.2	Description of the CCR Multi-Unit	4
2.3	Geology and Hydrogeology	4
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3.2	LOE #2: Arsenic and Molybdenum Concentrations Associated with Monitoring Wells MW-2, MW-10 and MW-13, and MW-6, respectively, are Not Correlated with Boron Concentrations, a Common Indicator for CCR Impacts to Groundwater.	8
3.3	LOE #3: Naturally-Occurring Concentrations of Arsenic are Commonly Found in Soils and Groundwater in Southwestern Ohio. MW-2, MW-10, and MW-13 are Located in Southwestern Ohio, Along the Banks of the Great Miami River and Ohio River, Where They are Susceptible to Geochemical Conditions that can Mobilize Naturally-Occurring Arsenic from the Soils into Groundwater.	10
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Figure E	Oxidation Reduction Potential Time-Series for Groundwater Samples
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FIGURES

Figure 1	Monitoring Well and Sampling Location Map
Figure 2	Groundwater Elevation Contour Map – April 6, 2020

APPENDICES

Appendix A	Boring Logs for Monitoring Wells MW-2, MW-3A, MW-4, MW-10, and MW-11

ACRONYMS AND ABBREVIATIONS

40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternate Source Demonstration
bgs	below ground surface
CCR	Coal Combustion Residuals
CMP	corrugated metal pipe
FGD	Flue Gas Desulfurization
f/k/a	formerly known as
ft	feet
GWPS	Groundwater Protection Standards
HDPE	high density polyethylene
LOEs	lines of evidence
MCD	Miami Conservancy District
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NAVD88	North American Vertical Datum of 1988
NRT/OBG	Natural Resource Technology, an OBG Company
OEPA	Ohio Environmental Protection Agency
ORP	oxidation-reduction potential
Ramboll	Ramboll Americas Engineering Solutions, Inc., f/k/a O'Brien & Gere Engineers, Inc.
RCRA	Resource Conservation and Recovery Act
Site	Miami Fort Power Station
SSIs	Statistically Significant Increases
SSLs	Statistically Significant Levels
USGS	United States Geological Survey

1. INTRODUCTION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.95(g)(3)(ii) allows the owner or operator of a Coal Combustion Residuals (CCR) unit 90 days from the date of determination of Statistically Significant Levels (SSLs) over Groundwater Protection Standards (GWPS) of groundwater constituents listed in Appendix IV of 40 C.F.R. Part 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSL(s), or that the SSL(s) resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (Alternate Source Demonstration [ASD]).

This ASD has been prepared on behalf of Dynegy Miami Fort, LLC, by Ramboll Americas Engineering Solutions, Inc., formerly known as (f/k/a) O'Brien & Gere Engineers, Inc.(Ramboll), to provide pertinent information pursuant to 40 C.F.R. § 257.95(g)(3)(ii) for the Miami Fort Pond System located near North Bend, Ohio.

The most recent Assessment Monitoring sampling event (A3) was completed on April 6 through April 7, 2020 and analytical data were received on May 4, 2020. Analytical data from all sampling events, from December 2015 through A3, were evaluated in accordance with the Statistical Analysis Plan (Natural Resource Technology, an OBG Company [NRT/OBG], 2017) to determine any Statistically Significant Increases (SSIs) of Appendix III parameters over background concentrations or SSLs of Appendix IV parameters over GWPS. That evaluation identified the following SSLs at downgradient monitoring wells:

- Arsenic at wells MW-2, MW-10 and MW-13
- Cobalt at wells MW-4 and 4A
- Molybdenum at well MW-6

In accordance with the Statistical Analysis Plan, wells MW-13 and 4A were resampled on June 12, 2020 and analyzed only for arsenic and cobalt, respectively, to confirm the SSLs. Following evaluation of analytical data from the resample event, the SSLs listed above for MW-13 and 4A were confirmed.

Pursuant to 40 C.F.R. § 257.95(g)(3)(ii), the following lines of evidence (LOEs) demonstrate that sources other than the Miami Fort Pond System were the cause of the arsenic and molybdenum SSLs listed above. This ASD was completed by November 2, 2020, within 90 days of determination of the SSLs (August 3, 2020), as required by 40 C.F.R. § 257.95(g)(3)(ii). This ASD does not address cobalt SSLs at downgradient monitoring wells MW-4 and 4A which is addressed by the Corrective Measures Assessment for the Pond System.

2. BACKGROUND

2.1 Site Location and Description

Miami Fort Power Station (Site) is located in the southwest corner of Ohio (Hamilton County) adjacent to the state boundaries of Indiana (west) and Kentucky (south), and approximately 5 miles southwest of North Bend, Ohio on the north shore of the Ohio River at the confluence with the Great Miami River (Figure 1). The Miami Fort Pond System (Pond System) is bounded by the Veolia North America property and Brower Road to the north, the Great Miami River to west, the Ohio River to the south, and the Miami Fort electric switch yard to the east. The Miami Fort production wells are located east of Basin A and Veolia's production wells are located northwest of Basin B. Pond System CCR monitoring well locations, production well locations, and source water sampling locations are shown in Figure 1.

2.2 Description of the CCR Multi-Unit

The Pond System is a CCR Multi-Unit consisting of Basins A and B (CCR Multi-Unit ID 115). The Multi-Unit covers a total area of approximately 51 acres and is located in the southwest corner of the Site property as shown in Figure 1.

Basin A (formerly Unit 111) receives effluent from the sluice lines, which primarily transport bottom ash products as well as flue gas desulfurization (FGD) effluent and some fly ash. Basin A also receives directly discharged miscellaneous yard drainage. The material is discharged into the northern portion of the basin and through a constructed internal ditch line allowing the solids to settle and the water to decant into Basin B. Solid materials collected in Basin A are generally reclaimed for beneficial reuse or landfill placement. The Basin A normal pool level is typically between elevations of 495 and 498 ft. Basin A and Basin B are hydraulically connected with a 48-inch corrugated metal pipe (CMP) culvert sliplined with a 40-inch high density polyethylene (HDPE) pipe that runs through the shared dike, allowing the basins to operate in series. The Basin A outfall is currently not in use and flow-through is controlled by the gate structure (AECOM, 2017).

Basin B (formerly Unit 112) was constructed between 1979 and 1981 (AECOM, 2017). The Basin B normal pool level is typically below the Basin A normal pool and between elevations of 495 and 498 ft. Basin A discharges into Basin B, which is used as a polishing pond prior to discharge to the Ohio River through the permitted outfall structure in Basin B. Miscellaneous yard drainage is also currently discharged directly to Basin B (AECOM, 2017).

2.3 Geology and Hydrogeology

The native geologic materials present beneath the Pond System at the Site include alluvial deposits, glacial outwash (Uppermost Aquifer), and bedrock, as described below:

- Alluvial Deposits - The alluvial deposits consist of clay, silt and fine sand deposited by the Ohio River floodwaters. These alluvial deposits are present at a depth ranging from approximately 20 to 60 ft below ground surface (bgs). A silty, sandy clay layer is the primary component of the alluvial deposits. The top of clay elevation ranges from 428 ft referenced to the North American Vertical Datum of 1988 (NAVD88) in the southwest corner of Basin B near the confluence of the Ohio River and the Great Miami River to 495 ft beneath the northeast corner of Basin A. The clay is thin, or absent, near the valley wall north of the Pond System and thickens towards the Ohio River. The clay is thickest beneath the southern half of the

Pond System, ranging in thickness from 15 ft to 48 ft. A silt layer, averaging approximately 7 ft thick, overlies the clay in several areas.

- Glacial Outwash (Uppermost Aquifer) - The Uppermost Aquifer consists of glacial outwash sands and gravels deposited during the Illinoian and Wisconsin stages of the Pleistocene. The thickness of the outwash deposits beneath the Site is approximately 100 ft; the outwash deposits directly overlie bedrock. A silt and fine sand layer is present locally overlying the outwash deposits and ranges in thickness from 4 to 30 ft; however, it is not present below the entirety of the Pond System.
- Bedrock - The bedrock consists of interbedded shales and limestones belonging to the Ordovician-aged Fairview and Kope formations (AECOM, 2017). Depth to bedrock beneath the Site varies between approximately 110 to 120 ft bgs. Due to the relatively impermeable nature of the shales and limestones underlying this region, water yields in the bedrock are generally insufficient for domestic use (AECOM, 2017).

The glacial outwash deposits (Uppermost Aquifer) underlying the Pond System are part of the Ohio River Valley Fill Aquifer; a glacial buried-valley deposit aquifer. The valley was cut into the bedrock by pre-glacial and glacial streams and subsequently backfilled with deposits of sand, gravel, and other glacial drift by glacial and alluvial processes as the glaciers advanced and receded. The thickness of the deposits ranges from approximately 60 to 100 ft and covers much of the width of the terrace between the valley wall to the Great Miami River and Ohio River confluence.

Groundwater elevations across the Site ranged from approximately 456 to 460 ft during A3, coincident with an approximate Ohio River pool elevation of 461 ft. The groundwater elevation contours shown on Figure 2 are based on groundwater measurements collected on April 6, 2020, the day prior to A3 analytical sampling. Groundwater flow in the Uppermost Aquifer is generally to the west/northwest towards the Great Miami River and Veolia's production wells, and south towards the Ohio River.

3. ALTERNATE SOURCE DEMONSTRATION: LINES OF EVIDENCE

This ASD is based on the following LOEs:

1. Median arsenic and molybdenum concentrations in the Pond System source water are lower than the median arsenic and molybdenum concentrations observed in downgradient wells with arsenic and molybdenum SSLs.
2. Arsenic and molybdenum concentrations associated with monitoring wells MW-2, MW-10 and MW-13, and MW-6, respectively, are not correlated with boron concentrations, a common indicator for CCR impacts to groundwater.
3. Naturally-occurring concentrations of arsenic are commonly found in soils and groundwater in southwestern Ohio. MW-2, MW-10 and MW-13 are located in southwestern Ohio, along the banks of the Great Miami River and Ohio River, where they are susceptible to geochemical conditions that can mobilize naturally-occurring arsenic from the soils into groundwater.

These LOEs are described and supported in greater detail below. Monitoring wells and Pond System source water sample locations are shown on Figure 1.

3.1 LOE #1: Median Arsenic and Molybdenum Concentrations in the Pond System Source Water Are Lower Than the Median Arsenic and Molybdenum Concentrations Observed in Downgradient Wells with Arsenic and Molybdenum SSLs.

Box-and-whisker plots graphically represent the range of values of a given dataset using lines to construct a box where the lower line, midline, and upper line of the box represent the values of the first quartile, median, and third quartile values, respectively. The minimum and maximum values of the dataset (excluding outliers) are illustrated by whisker lines extending beyond the first and third quartiles of (*i.e.*, below and above the box). The interquartile range (IQR) is the distance between the first and third quartiles. Outliers (values that are at least 1.5 times the IQR away from the edges of the box) are represented by single points plotted outside of the range of the whiskers. The number in parentheses below each plot is the number of observations (i.e. samples) represented in that dataset.

Figure A below provides a box-and-whisker plot of the total arsenic concentrations collected between 2015 and 2020 at Pond System monitoring wells and source water locations A-1, B-1, B-2, and B-3 (monitoring well and source water [pond] sampling locations are shown on Figure 1). Total arsenic concentrations obtained in source water samples and presented in Figure A were pooled to provide a median concentration for comparison to arsenic concentrations in monitoring wells.

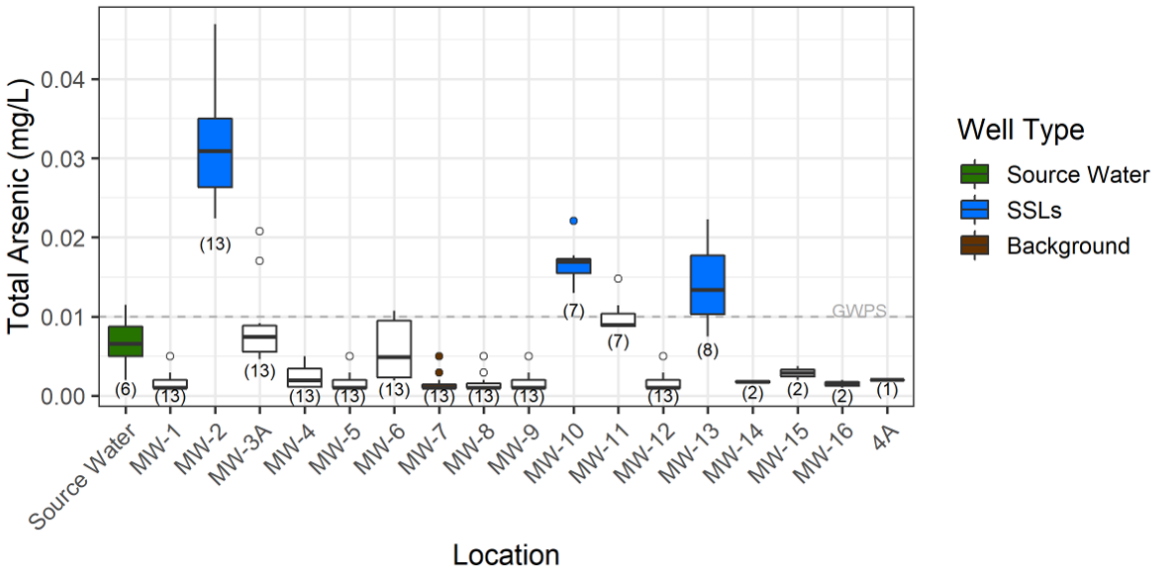


Figure A. Distribution of Arsenic Concentrations at Pond System Monitoring Wells and Source Water Locations (note: source water locations are pooled).

The box-and-whisker plot (Figure A) shows the arsenic concentrations in wells with arsenic SSLs (*i.e.*, MW-2, MW-10, and MW-13) have median arsenic concentrations greater than the median arsenic concentration observed in the source water (A-1, B-1, B-2, and B-3). If the Pond System was the source of arsenic in downgradient groundwater at wells with arsenic SSLs (*i.e.*, MW-2, MW-10, and MW-13), Pond System source water concentrations would be higher than the groundwater concentrations at those wells. Therefore, the Pond System is not the source of the arsenic in the downgradient groundwater.

Figure B below provides a box-and-whisker plot of the molybdenum concentrations collected between 2015 and 2020 at Pond System monitoring wells and source water locations A-1, B-1, B-2 and B-3 (monitoring well and source water sampling locations are shown on Figure 1).

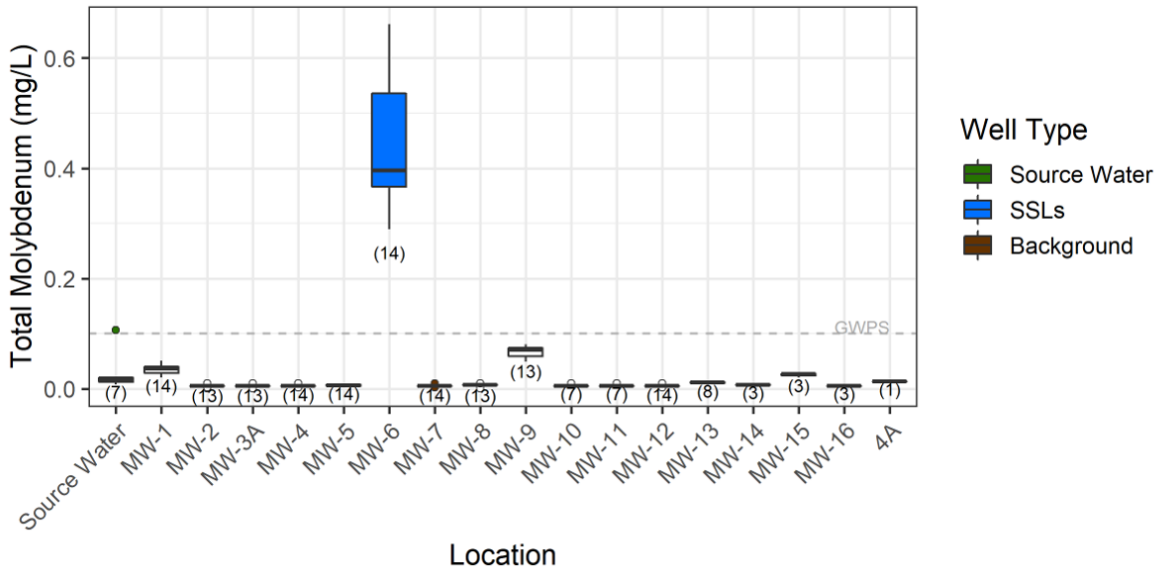


Figure B. Distribution of Molybdenum Concentrations at Pond System Monitoring Wells and Source Water Locations (note: source water locations are pooled).

The box-and-whisker plot (Figure B) shows the median molybdenum concentration in the well with a molybdenum SSL (*i.e.*, MW-6) is greater than the median molybdenum concentration observed in the source water (A-1, B-1, B-2, and B-3). If the Pond System was the source of molybdenum in downgradient groundwater at the well with a molybdenum SSL (*i.e.*, MW-6), Pond System source water concentrations would be higher than the groundwater concentrations at that well. Therefore, the Pond System is not the source of the molybdenum in the downgradient groundwater.

3.2 LOE #2: Arsenic and Molybdenum Concentrations Associated with Monitoring Wells MW-2, MW-10 and MW-13, and MW-6, respectively, are Not Correlated with Boron Concentrations, a Common Indicator for CCR Impacts to Groundwater.

Boron is a common indicator of CCR impacts to groundwater due to its leachability from CCR and mobility in groundwater. If a CCR constituent is identified as an SSL but boron is not correlated with that constituent, it is unlikely that the CCR unit is the source of the SSL.

Figure C below provides a scatter plot of arsenic versus boron concentrations (collected between 2015 and 2020) in downgradient groundwater at wells with arsenic SSLs, along with the results of a Kendall correlation test for non-parametric data. The results of the test at each well are described by the p-value and tau (Kendall's correlation coefficient) included in each plot. Typically, a p-value greater than 0.05 is considered to be a statistically insignificant relationship. The range of tau falls between -1 and 1, with a perfect correlation equal to -1 or 1. The closer tau is to 0, the less of a correlation exists in the data.

The results of the correlation analyses indicated that groundwater concentrations of arsenic observed at monitoring wells MW 2, MW-10, and MW-13 do not correlate with concentrations of boron, a common indicator of CCR impacts to groundwater. Figure C below illustrates the lack of

a relationship between arsenic concentrations and boron concentrations in groundwater at MW-2, MW-10, and MW-13, where the p-values are greater than 0.05 and tau is close to 0.

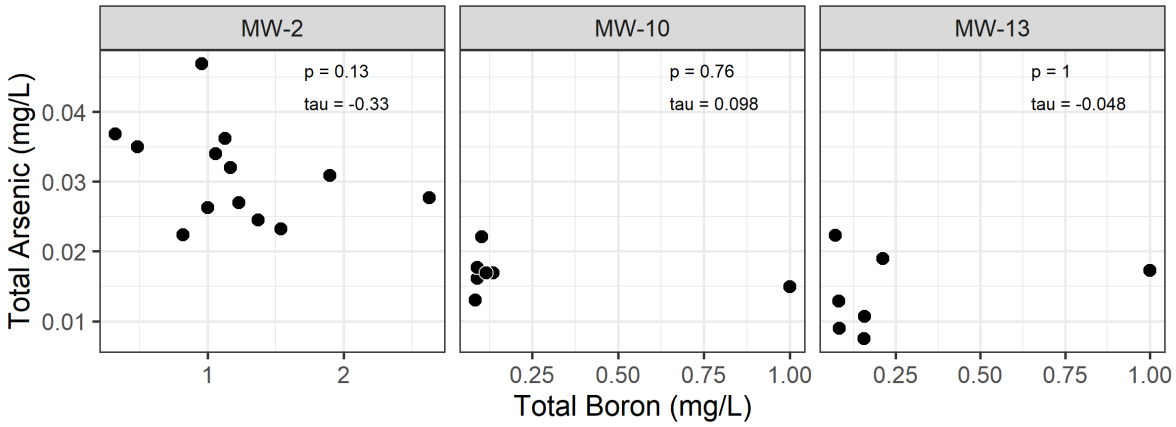


Figure C. Arsenic Concentrations Versus Boron Concentrations at Wells MW-2, MW-10, and MW-13 (2015-2020).

Figure D below provides a scatter plot of molybdenum versus boron concentrations (collected between 2015-2020) in downgradient groundwater at the only well with a molybdenum SSL, MW-6, along with the results of Kendall correlation analysis at MW-6 as described by the p-values and tau correlation coefficients included in the plot. The results of the Kendall correlation analysis indicated that groundwater molybdenum concentrations observed at monitoring well MW-6 do not correlate with concentrations of boron, a common indicator of CCR impacts to groundwater. Figure D below illustrates the lack of a relationship between molybdenum concentrations and boron concentrations in groundwater at MW-6, where the p-value is greater than 0.05 and tau is close to 0.

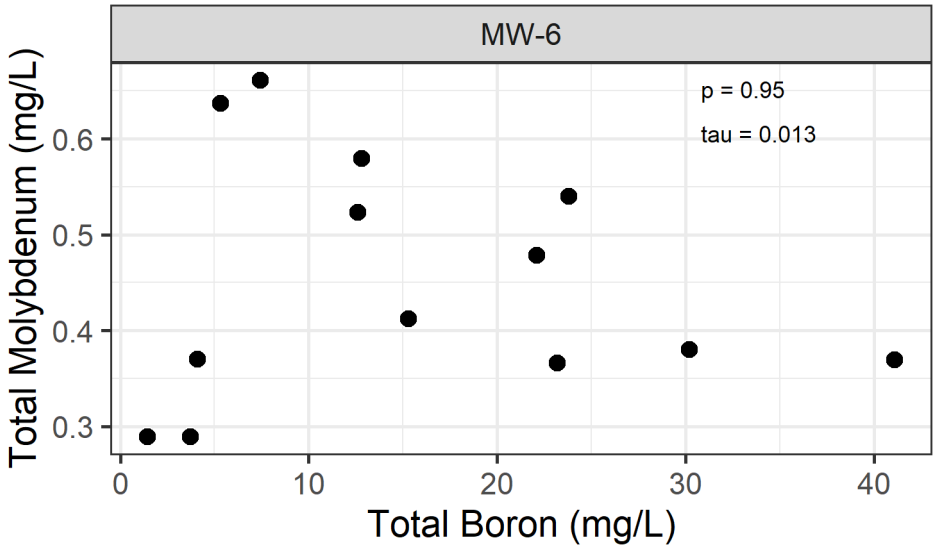


Figure D. Molybdenum Concentrations Versus Boron Concentrations at Well MW-6 (2015-2020).

Arsenic and molybdenum concentrations do not correlate with boron concentrations in downgradient monitoring wells with arsenic and molybdenum SSLs, indicating the Pond System is not the source of CCR constituents detected in the downgradient monitoring wells.

3.3 LOE #3: Naturally-Occurring Concentrations of Arsenic are Commonly Found in Soils and Groundwater in Southwestern Ohio. MW-2, MW-10, and MW-13 are Located in Southwestern Ohio, Along the Banks of the Great Miami River and Ohio River, Where They are Susceptible to Geochemical Conditions that can Mobilize Naturally-Occurring Arsenic from the Soils into Groundwater.

Naturally-occurring concentrations of arsenic are commonly found in nearby soils. Ten surficial soil samples (0 to 2 ft bgs) were collected by Ohio Environmental Protection Agency (OEPA), approximately 3,000 ft northeast of the Pond System (Figure 1), near Shawnee Lookout in Hamilton County Park, and analyzed for arsenic as part of a study to evaluate background soil concentrations of Resource Conservation and Recovery Act (RCRA) metals in the Cincinnati area (OEPA, 2015). Results of the analysis indicated surficial terrace soils (clay) adjacent to the Pond System have background arsenic concentrations ranging from 5.61 to 8.20 milligrams per kilogram (mg/kg).

Arsenic occurs naturally in southwestern Ohio glacial buried-valley deposit aquifers like the Uppermost Aquifer. Fifty-seven (57) groundwater samples were collected by the United States Geological Survey (USGS) in cooperation with the Miami Conservancy District (MCD) to increase understanding of arsenic occurrence in southwest Ohio (Thomas et al., 2005). The study included samples collected from carbonate bedrock, glacial buried-valley deposits and glacial till with interbedded sand and gravel aquifers within the Great Miami River drainage basin, and included samples from domestic wells in Preble, Miami, and Shelby counties. The USGS reported that 37 percent of the samples analyzed had elevated concentrations of arsenic (greater than or equal to 10 micrograms per liter [μg/L]) and elevated arsenic concentrations were found in all three aquifer types studied. Geochemical conditions were also evaluated and the USGS determined that elevated arsenic concentrations in the study area were associated with iron-reducing, sulfate-reducing, or methanic conditions, and all samples with elevated arsenic concentrations had iron concentrations that exceeded 1 milligrams per liter (mg/L), indicating the potential for the reduction of arsenic-bearing iron oxides present in soil.

Based on previous studies discussed above, naturally-occurring concentrations of arsenic are known to exist in both soils and groundwater in the same region (southwestern Ohio) and aquifer type (glacial buried-valley deposit aquifer) as the Pond System. The OEPA study showed arsenic-bearing soils were found in close proximity (approximately 3,000 ft northeast) to the Pond System. The USGS study showed that iron-reducing, sulfate-reducing, or methanic geochemical conditions needed to mobilize arsenic were common in southwestern Ohio aquifers. Reducing conditions indicating the potential for arsenic mobilization are likely to occur at the Pond System monitoring wells MW-2, MW-10, and MW-13, where arsenic SSLs were determined, as indicated by the following factors discussed below:

- Most riverbank boring logs indicate organic materials are present in the soils.
- MW-2, MW-10, and MW-13 are among the monitoring wells adjacent to the riverbank, where the lowest oxidation-reduction potential (ORP) at the Site were observed.

- Dissolved iron concentrations present in groundwater at monitoring well MW-2 correlate with dissolved arsenic concentrations.

Arsenic is naturally present in groundwater and soils at variable concentrations. The arsenic is co-precipitated with iron oxyhydroxides and incorporated into the mineral structure of the soils, and can also be adsorbed to organic matter or the iron oxyhydroxides in the aquifer. Both of these sources of arsenic can be mobilized in groundwater by dissolution or desorption under reducing geochemical conditions, where organic carbon commonly acts as the reducing agent (Thomas et al., 2005; McArthur et al., 2001). Arsenic-bearing soils are known to be present in the areas near the Pond System (OEPA, 2015); and, organic matter, a source of organic carbon and potential reducing agent, was observed in the most riverbank boring logs for monitoring wells located along the banks of the Great Miami River and Ohio River (see boring logs for wells MW-2, MW-3A, MW-4, MW-10, and MW-11 in Appendix A). The presence of organic material and arsenic-bearing soils indicates there is potential for naturally-occurring arsenic to become mobilized through reductive dissolution or desorption.

Reducing conditions sufficient to mobilize naturally-occurring arsenic have also been observed along the riverbanks of the Great Miami River and Ohio River as evidenced by the low ORP measurements observed in the groundwater at monitoring wells MW-2, MW-3A, MW-10, MW-11, MW-13 and MW-14 (presented in Figure E below; monitoring wells adjacent to the riverbank are illustrated with solid lines, upland wells are illustrated with dashed lines).

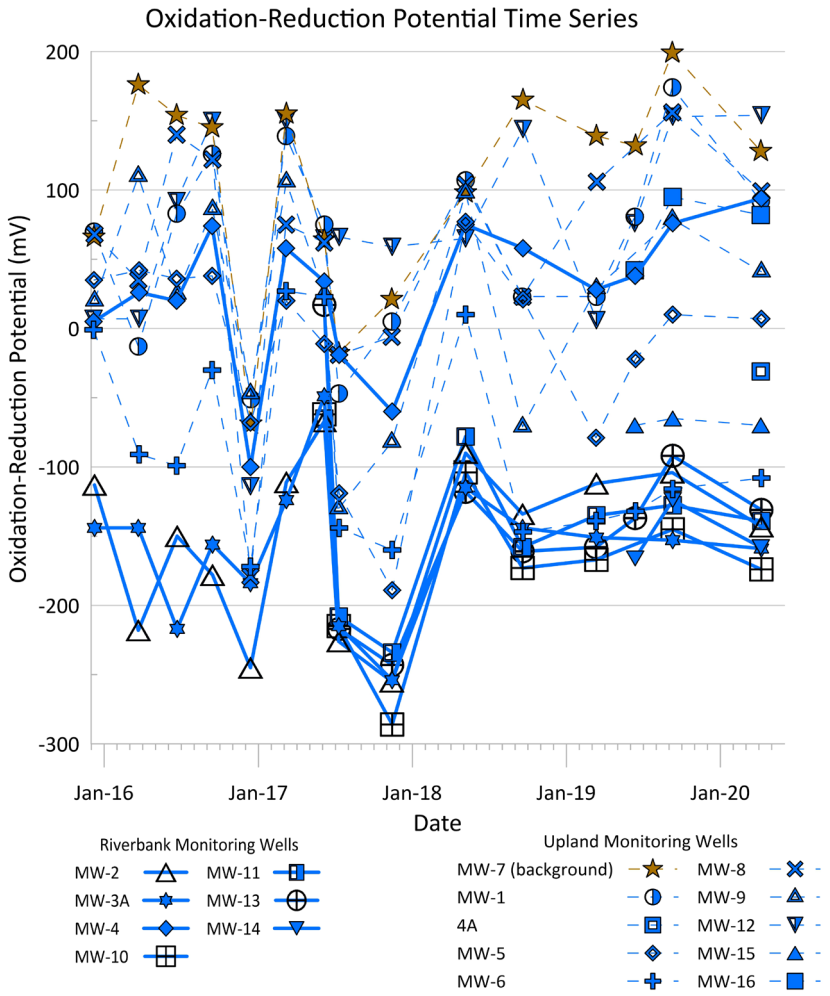


Figure E. Oxidation Reduction Potential Time-Series for Groundwater Samples (Monitoring Wells Adjacent to the Riverbank are Illustrated with Solid Lines, Upland Wells are Illustrated with Dashed Lines).

Available data indicated that concentrations of dissolved iron observed in groundwater at monitoring well MW-2 from 2008 to 2014 correlate with dissolved arsenic concentrations. Dissolved iron concentrations ranged from 11.8 to 52.1 mg/L at monitoring well MW-2 from 2008 to 2014, at least an order of magnitude greater than the 1 mg/L reported by the USGS as being indicative of iron-reducing geochemical conditions. Dissolved iron concentrations were also near or greater than 1 mg/L in A3 for MW-2, MW-10, and MW-13 at 45, 2.5 and 0.91 mg/L, respectively. Figure F below illustrates the relationship between dissolved iron concentrations and dissolved arsenic concentrations in groundwater at MW-2, where the R-squared value is 0.87, indicating a good correlation between dissolved iron and dissolved arsenic.

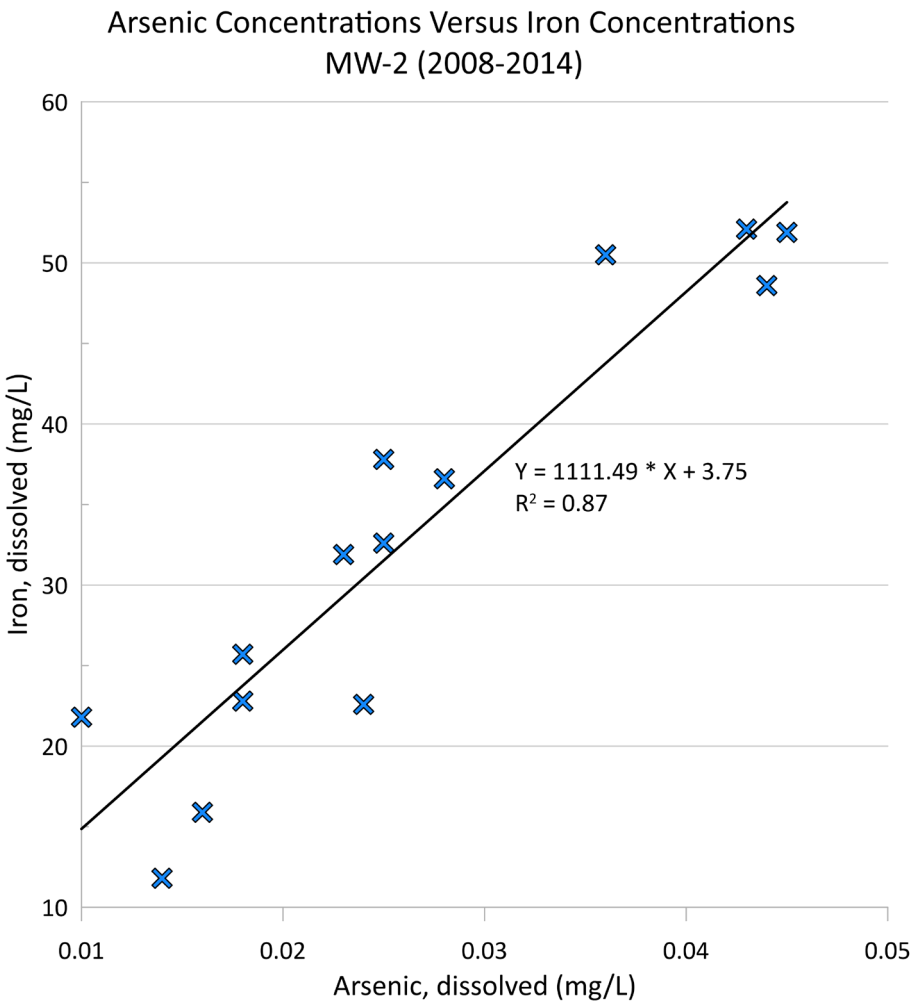


Figure F. Arsenic Concentrations Versus Iron Concentrations at Well MW-2 (2008-2014).

The presence of elevated concentrations of arsenic in background soil and groundwater in surrounding areas, as well as the presence of geochemical conditions (*i.e.*, reducing conditions) necessary to mobilize arsenic from soil to groundwater indicate that elevated concentrations of arsenic at monitoring wells MW-2, MW-10, and MW-13 are likely the result of naturally-occurring geochemical variations within the Uppermost Aquifer.

4. CONCLUSIONS

Based on the following three LOEs, it has been demonstrated that the arsenic SSLs at MW-2, MW-10, and MW-13, and the molybdenum SSL at MW-6 are not due to Miami Fort Pond System but are from a source other than the CCR unit being monitored:

1. Median arsenic and molybdenum concentrations in the Pond System source water are lower than the median arsenic and molybdenum concentrations observed in downgradient wells with arsenic and molybdenum SSLs.
2. Arsenic and molybdenum concentrations associated with monitoring wells MW-2, MW-10 and MW-13, and MW-6, respectively, are not correlated with boron concentrations, a common indicator for CCR impacts to groundwater.
3. Naturally-occurring concentrations of arsenic are commonly found in soils and groundwater in southwestern Ohio. MW-2, MW-10 and MW-13 are located in southwestern Ohio, along the banks of the Great Miami River and Ohio River, where they are susceptible to geochemical conditions that can mobilize naturally-occurring arsenic from the soils into groundwater.

This information serves as the written ASD prepared in accordance with 40 C.F.R. § 257.95(g)(3)(ii) that the SSLs for arsenic and molybdenum observed during the A3 sampling event were not due to the Pond System. Therefore, a corrective measures assessment is not required for arsenic and molybdenum at the Miami Fort Pond System.

5. REFERENCES

AECOM, 2017. Hydrogeologic Characterization Report, CCR Management Units 111 (Basin A) and 112 (Basin B). Prepared for Dynegy Miami Fort, LLC by AECOM. October 11, 2017.

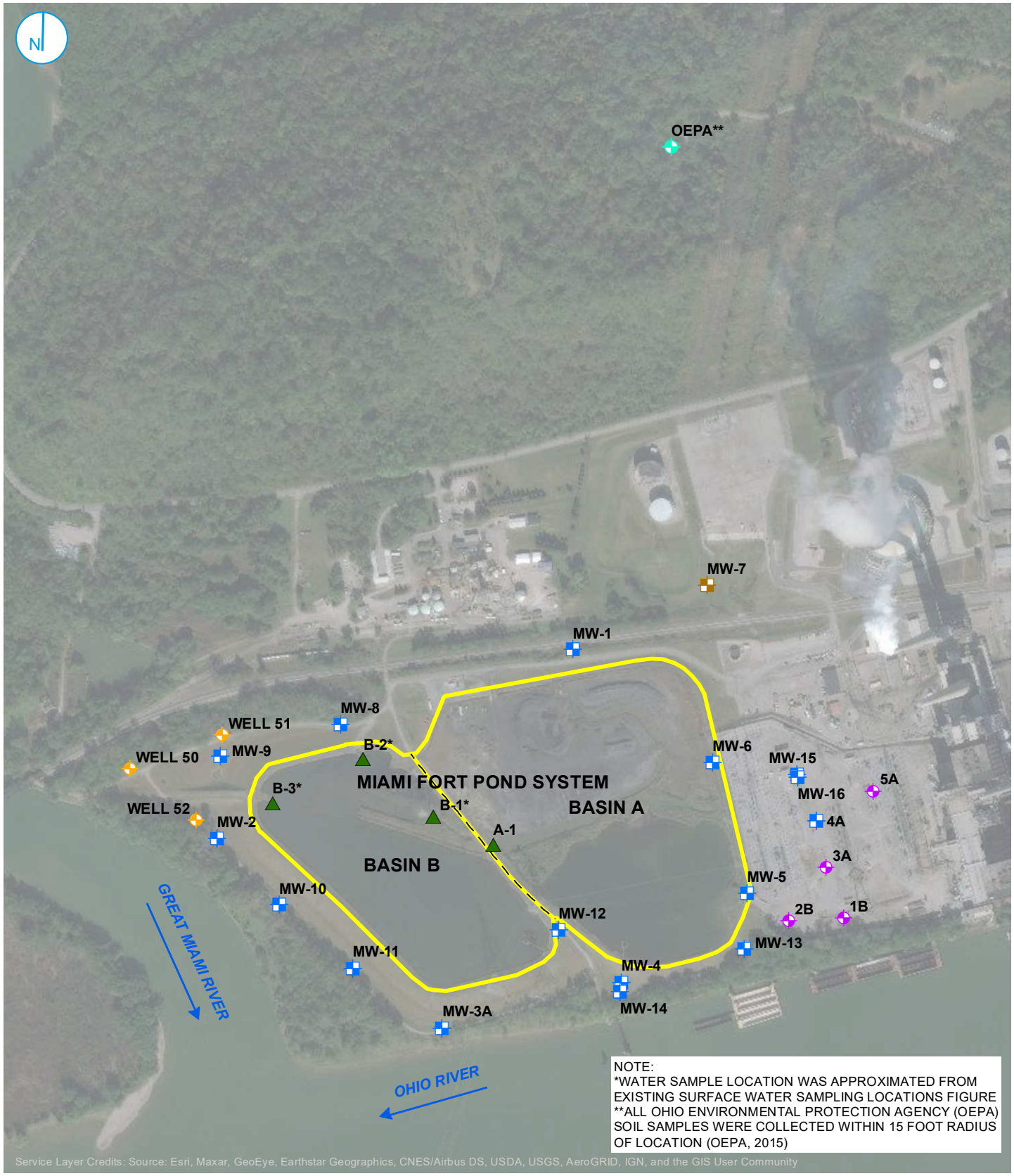
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Thomas, M.A., Schumann, T.L., and Pletsch, B.A., 2005, Arsenic in ground water in selected parts of southwestern Ohio, 2002–03: U.S. Geological Survey Scientific Investigations Report 2005–5138, 30 p.

FIGURES



PROJECT: 169000XXXX | DATED: 10/20/2020 | DESIGNER: galanmc

Y:\Mapping\Projects\22\2285\MXD\Miami_Fort\asd\A3\Figure 1_Monitoring Well and Sampling Locations.mxd

- DOWNGRADIENT CCR MONITORING WELL LOCATION
- BACKGROUND CCR MONITORING WELL LOCATION
- SOURCE WATER SAMPLING LOCATION
- OEPA SOIL SAMPLE LOCATION
- MIAMI FORT PRODUCTION WELL
- VEOLIA PRODUCTION WELL
- CCR MONITORED MULTI-UNIT
- BERM
- RIVER FLOW DIRECTION

0 300 600 Feet

MONITORING WELL AND SAMPLING LOCATION MAP

MIAMI FORT POND SYSTEM (UNIT ID:115) ALTERNATE SOURCE DEMONSTRATION

VISTRA ENERGY
MIAMI FORT POWER STATION
NORTH BEND, OHIO

FIGURE 1

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL



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PROJECT: 72799 | DATED: 10/22/2020 | DESIGNER: STOLZSD

- CCR MONITORING WELL LOCATION
- MIAMI FORT PRODUCTION WELLS
- VEOLIA PRODUCTION WELLS
- CCR MONITORED MULTI-UNIT
- BERM
- RIVER FLOW DIRECTION
- SURFACE WATER FEATURE
- GROUNDWATER ELEVATION CONTOUR (1-FOOT CONTOUR INTERVAL, NAVD 88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

0 250 500 Feet

GROUNDWATER ELEVATION CONTOUR MAP APRIL 6, 2020

MIAMI FORT POND SYSTEM (UNIT ID: 115)
ALTERNATE SOURCE DEMONSTRATION
MIAMI FORT POWER STATION
NORTH BEND, OHIO

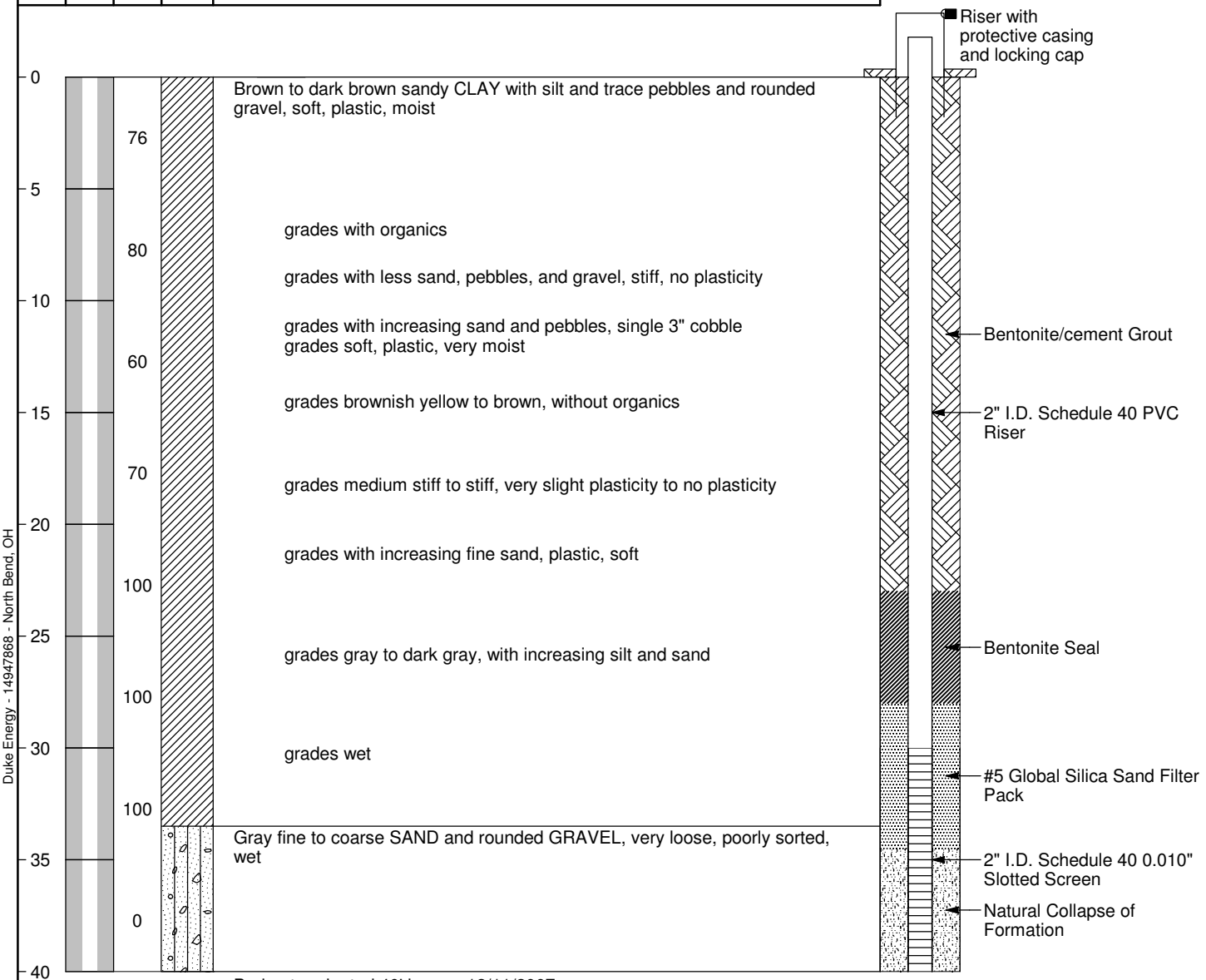
FIGURE 2

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

APPENDIX A
BORING LOGS FOR MONITORING WELLS MW-2, MW-3A, MW-4, MW-10, AND MW-11

Depth (Feet)	Sample Location	Percent Recovery	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL



Boring terminated 40' bgs on 12/11/2007.
2" I.D. Schedule 40 PVC monitoring well installed 40' bgs with 10' 0.010" slotted screen.

LEGEND:

Rotosonic

bgs Below ground surface

NR Not recorded

URS

JOB NO. 14947868

Duke Energy
Miami Fort Station
11021 Brower Road
North Bend, OH

MONITORING WELL
MW-2

Duke Energy - 14947868 - North Bend, OH
DUKE ENERGY MIAMI FORT STATION MIAMI FORT STATION.GPJ 2/5/08

Project: Duke Energy
Project Location: Miami Fort Station
Project Number: 14948624

Monitoring Well MW-3A

Date(s) Drilled	**2/25/2009**	Logged By	**K. Pritchard**	Checked By	**M. Wagner**
Drilling Method	**4.25 in. Hollow Stem Auger**	Drilling Contractor	**Belasco Drilling Services**	Total Depth of Borehole	**52.0 feet**
Drill Rig Type	**Truck-Mounted Auger**	Sampler Type	**Split Spoon**	Surface Elevation	**471.17 feet, msl**
Groundwater Elevation(s)	**456.42 ft, msl**	Hammer Weight and Drop	**140 lb, Dropped 30-inches**	Top of PVC Elevation	**473.23 feet, msl**
Diameter of Hole (inches)	**8.25** Diameter of Well (inches) **2**	Type of Well Casing	**Schedule 40 PVC**	Screen Perforation	**0.010-Inch**
Type of Sand Pack	**Natural Collapse**	Well Completion at Ground Surface	**Riser, With Locking Cap**		
Comments	**** Split spoon sampler advanced through interval under weight of hammer and rods only**				

Elevation, feet	Depth, feet	SAMPLES Type	Blows per 1-foot Interval	Percent Recovery	Graphic Log	MATERIAL DESCRIPTION
	0		12	83		Yellowish red CLAY TOPSOIL, moist
470						Gray to brownish gray clayey SILT with medium sand and organics, soft, moist to very moist
			19	100		
			6	83		grades brownish yellow with increasing clay
	5					Dark gray silty CLAY with trace fine sand and organics, plastic, very soft, moist
465			3	100		
			3	83		grades with increasing fine to medium sand, without organics, with iron staining grades with medium to coarse grained sand lenses, without staining
	10		3	75		grades high plasticity, very moist to wet
460						Yellowish brown clayey fine to coarse grained SAND, very loose, well sorted, wet
			2	100		Yellowish brown fine grained sandy to silty CLAY, very soft, high plasticity, very moist to wet
			1	100		
	15					grades wet with increasing fine sand
455			1	100		
						grades with fine grained sand lenses
			2	100		grades brown with increasing fine sand
	20		2	100		
450						
			2	100		grades with gray to reddish gray lenses, decreasing sand, without sand lenses
			**	100		grades gray, without gray to reddish gray lenses, medium plasticity grades high plasticity
	25					grades with increasing sand
445			3	100		
						grades with organics, sulphur odor, decreasing sand
			2	100		grades without sand, without odor grades with fine sand lenses, without organics
	30					

WELL CONSTRUCTION DETAILS

- Riser with protective casing and locking cap
- Bentonite/cement Grout
- 2" I.D. Schedule 40 PVC Riser

DUKE MIAMI FORT STATION MARCH 2009 MIAMI FORT STATION MW-3A.GPJ 4/28/09

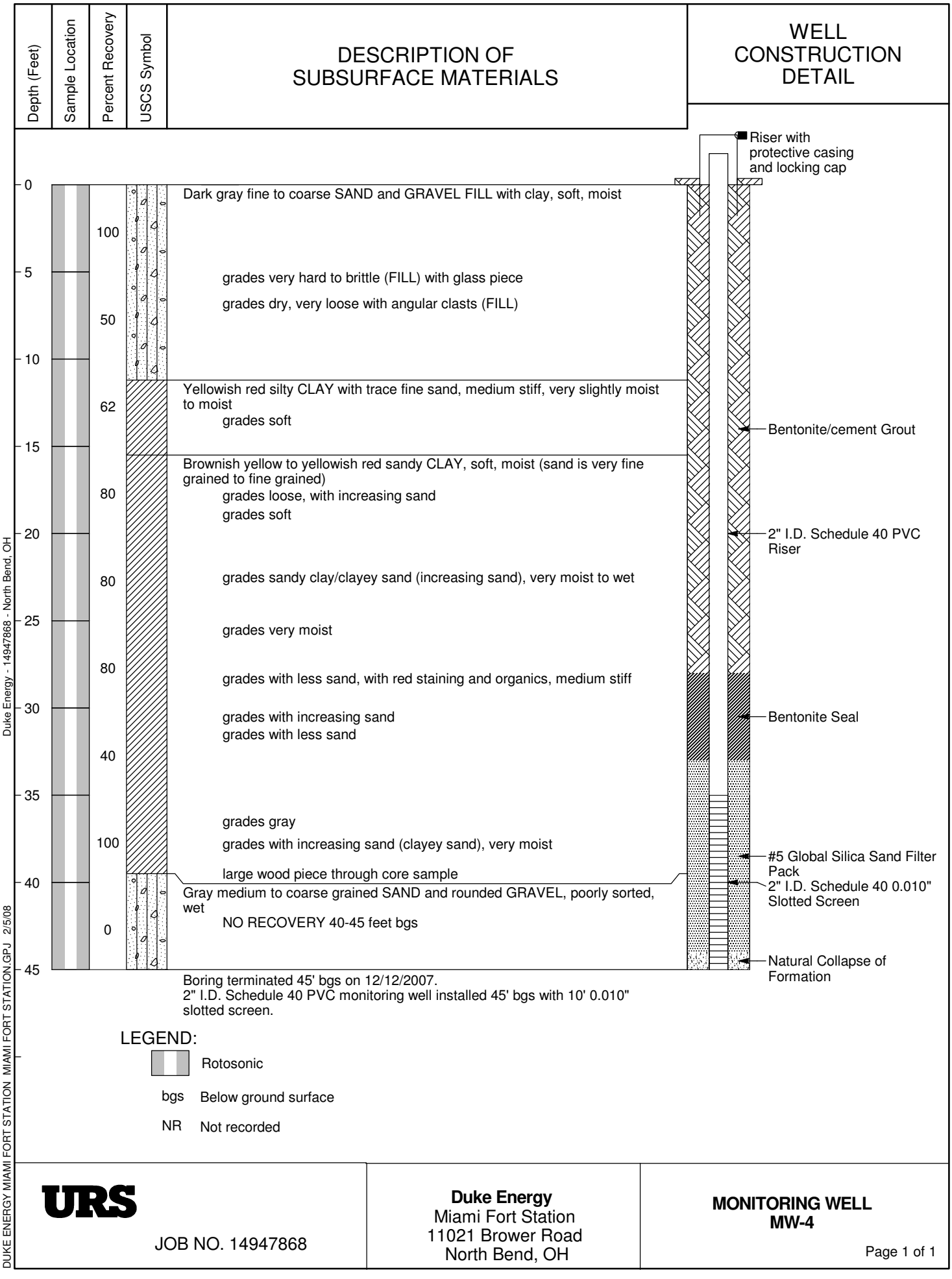
URS

Project: Duke Energy
Project Location: Miami Fort Station
Project Number: 14948624

Monitoring Well MW-3A

Elevation, feet	Depth, feet	SAMPLES: Type	SAMPLES: Blows per 1-foot Interval	SAMPLES: Percent Recovery	Graphic Log	MATERIAL DESCRIPTION	WELL CONSTRUCTION DETAILS
440	30		1	100		grades without sand, with trace organics	
			4	100		grades with sand, without organics	
	35		4	100		grades with trace fine sand and increasing silt, without sand lenses, medium plasticity	
435			3	100		grades with increasing sand, without organics	Bentonite Seal
			6	100		grades with increasing silt, trace sand, very low plasticity, stiff	
	40		4	100		grades with sand, plastic, very soft	
430			8	100		grades stiff, very low plasticity, very moist	
			14	42		grades with trace organcis, less sand, increasing silt	
	45					Gray fine to coarse grained SAND and sub-rounded to rounded GRAVEL, pebble-sized gravel with trace 1" diameter clasts, very loose, sorted, wet	
425			7	100			Natural Collapse of Formation
			22	63		grades with increasing diameter gravel	2" I.D. Schedule 40 0.010" Slotted Screen
	50		13	50			
420						Boring terminated 52' bgs on 2/25/2009. 2" I.D. Schedule 40 PVC monitoring well installed 52' bgs with 10' 0.010" slotted screen.	
	55						
415							
	60						
410							
	65						
405							
	70						

URS



DUKE ENERGY MIAMI FORT STATION MIAMI FORT STATION.GPJ 2/5/08

Duke Energy - 14947868 - North Bend, OH

URS

JOB NO. 14947868

Duke Energy
Miami Fort Station
11021 Brower Road
North Bend, OH

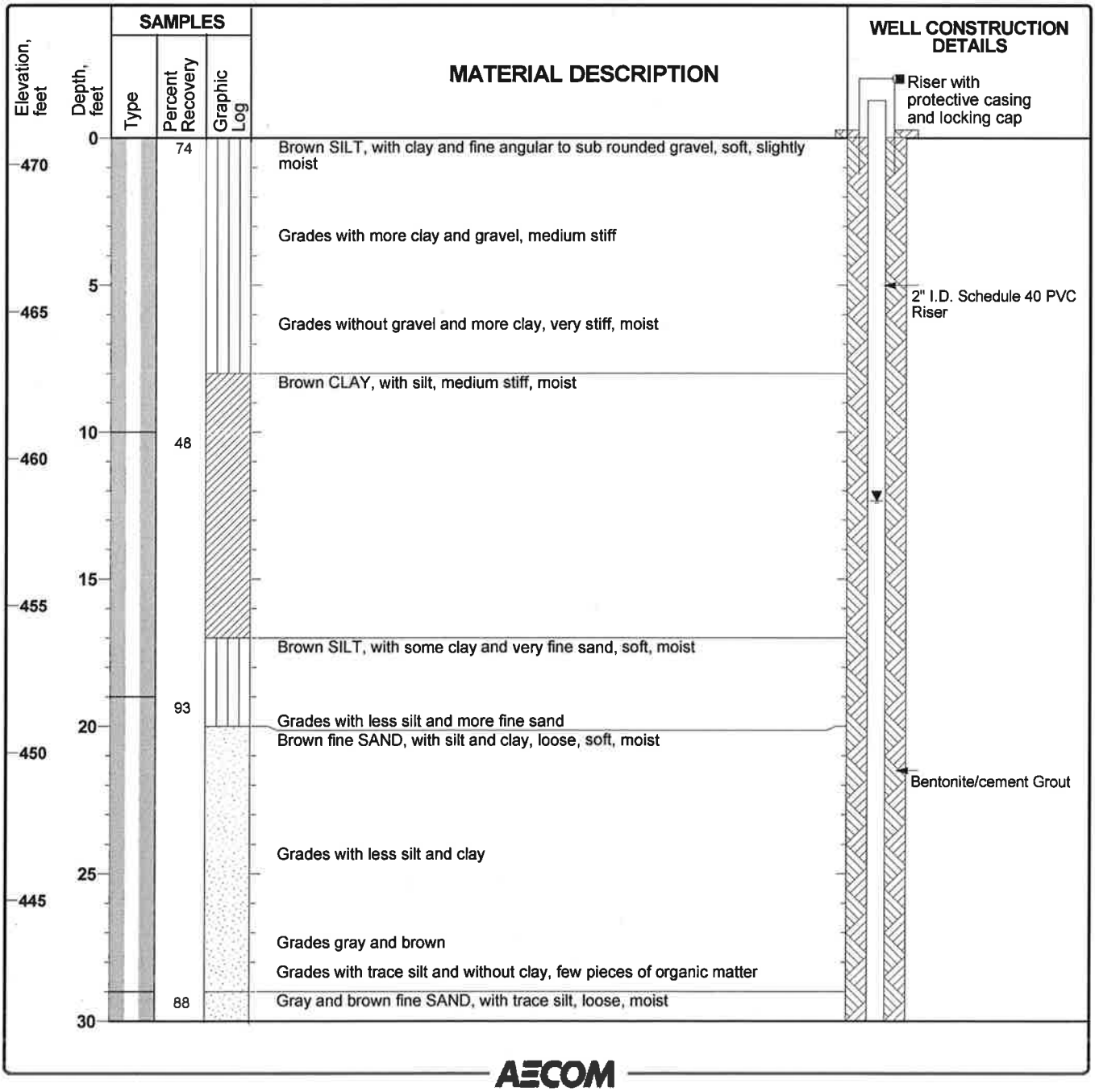
MONITORING WELL
MW-4

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-10

Sheet 1 of 2

Date(s) Drilled	4/10/2017	Logged By	J. Alten	Checked By	M. Wagner
Drilling Method	Rotosonic	Drilling Contractor	Frontz Drilling	Total Depth of Borehole	59.0 feet
Drill Rig Type	Rotosonic	Sampler Type	Sonic Sleeve	Surface Elevation	470.90 feet, msl
Depth to Groundwater	12.34 ft bgs	Seal Material	Hydrated 3/8-inch Bentonite Chips	Top of PVC Elevation	473.35 feet, msl
Diameter of Hole (inches)	6.0	Diameter of Well (inches)	2	Type of Well Casing	Schedule 40 PVC	Screen Perforation	0.010-Inch
Type of Sand Pack	#5 Silica Sand	Well Completion at Ground Surface	Riser, With locking cap and protective casing.		
Comments					



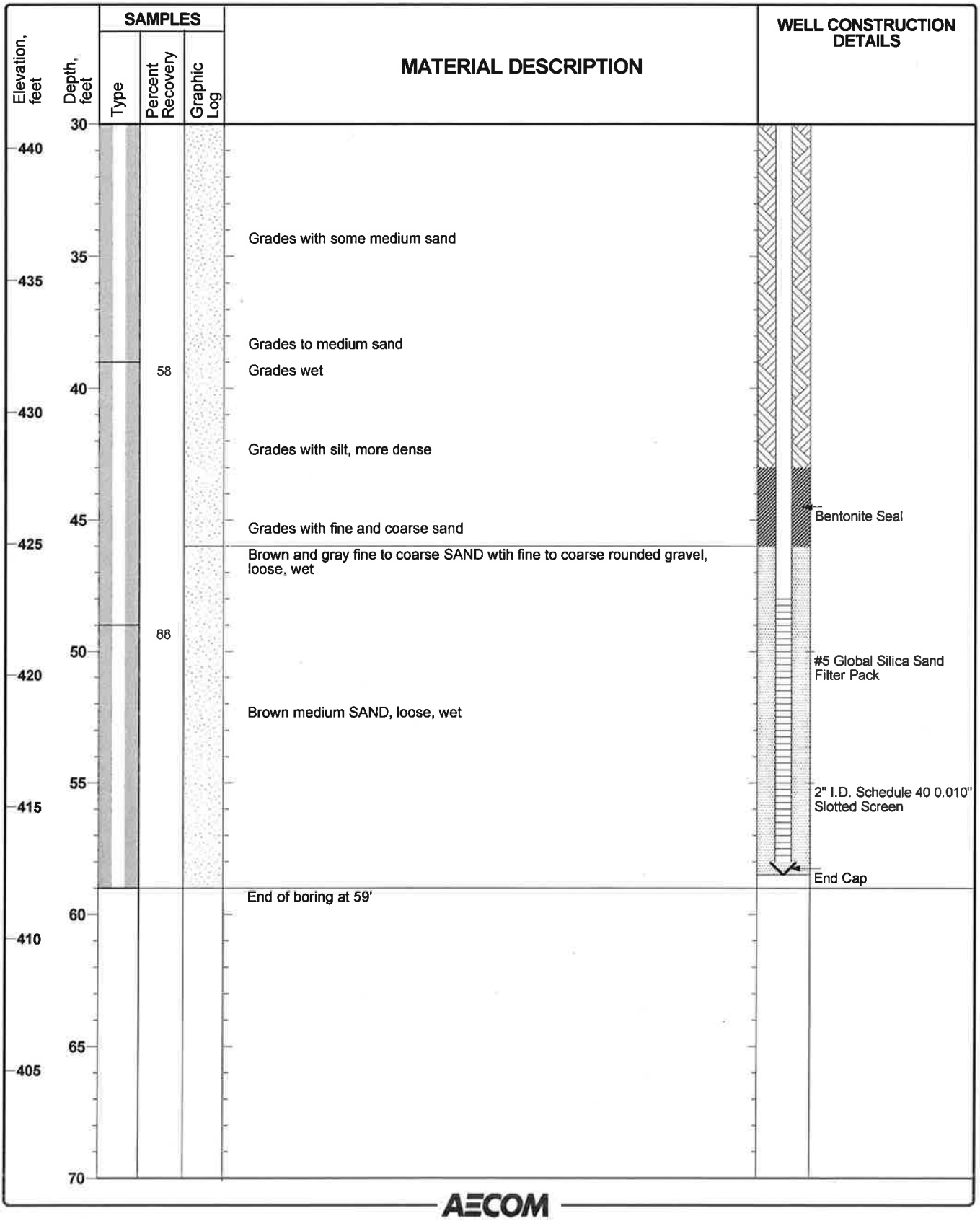
DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

AECOM

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-10

Sheet 2 of 2



AECOM

DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-11

Sheet 1 of 2

Date(s) Drilled	4/11/2017	Logged By	J. Alten	Checked By	M. Wagner
Drilling Method	Rotosonic	Drilling Contractor	Frontz Drilling	Total Depth of Borehole	59.0 feet
Drill Rig Type	Rotosonic	Sampler Type	Sonic Sleeve	Surface Elevation	471.81 feet, msl
Depth to Groundwater	13.25 ft bgs	Seal Material	Hydrated 3/8-inch Bentonite Chips	Top of PVC Elevation	474.45 feet, msl
Diameter of Hole (inches)	6.0	Diameter of Well (inches)	2	Type of Well Casing	Schedule 40 PVC	Screen Perforation	0.010-Inch
Type of Sand Pack	#5 Silica Sand	Well Completion at Ground Surface	Riser, With locking cap and protective casing.		
Comments					

Elevation, feet	Depth, feet	SAMPLES Type	Percent Recovery	Graphic Log	MATERIAL DESCRIPTION	WELL CONSTRUCTION DETAILS
	0		69		Gray coarse angluar limestone GRAVEL, with fines, medium dense, slightly moist (FILL)	Riser with protective casing and locking cap
470					Brown and tan with reddish mottled SILT with trace fine gravel, very stiff, moist	
					Grades with fine sand	
	5				Brown with red mottled fine SAND, soft, moist	2" I.D. Schedule 40 PVC Riser
465					Dark gray SILT with some clay, stiff, moist, trace organci matter	
					Grades with more clay	
	10		42		Gray and brown CLAY, with some silt, soft, moist	
460					Gray and brown SILT, with fine sand and some clay, soft, moist	
	15				Grades with less clay	
455						
			56			
	20				Grades gray without clay	
450						Bentonite/cement Grout
					Gray very fine SAND with silt, soft, moist	
	25					
445						
			53			
	30				Grades with dark gray and black wood fragments	

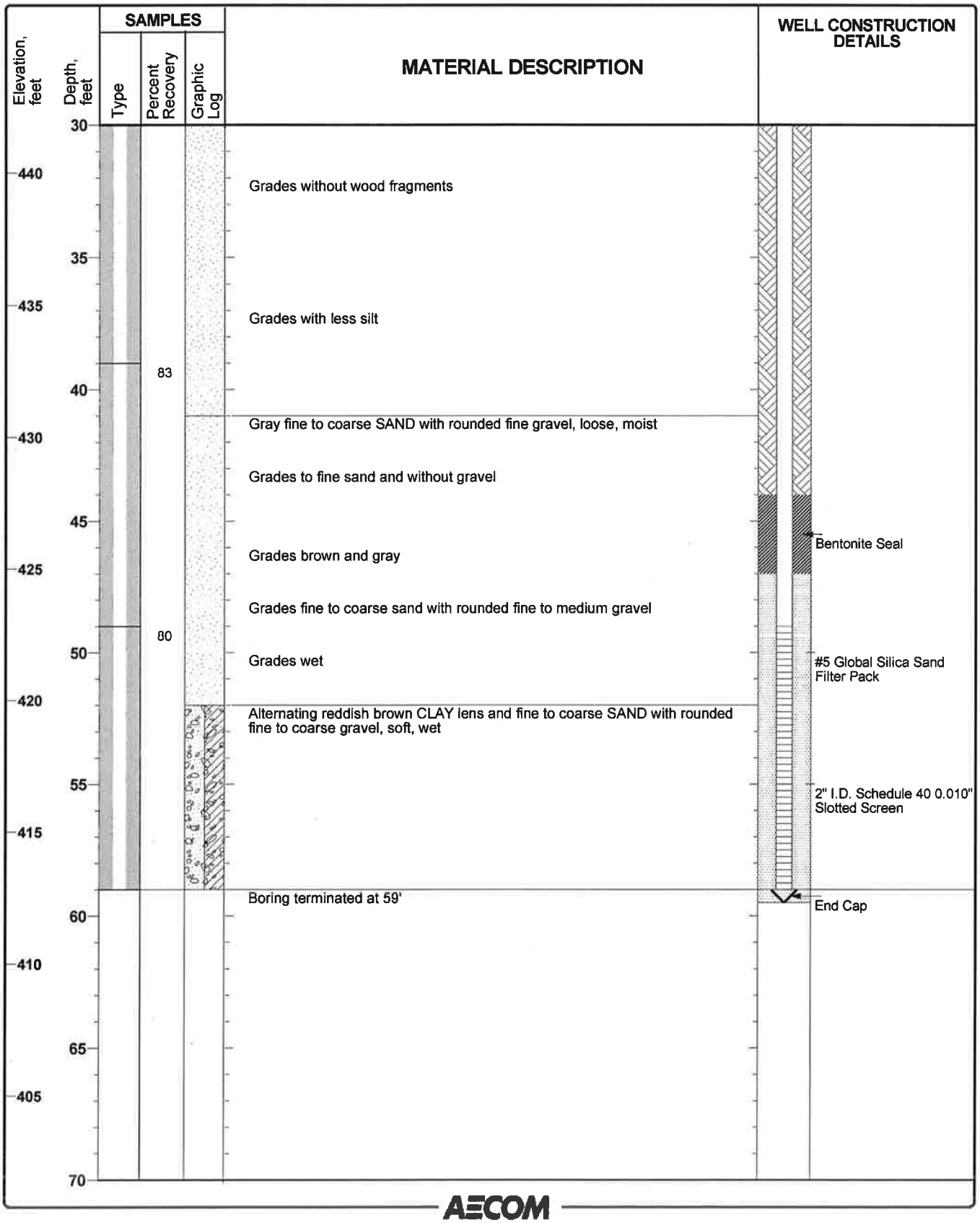
DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

AECOM

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-11

Sheet 2 of 2



DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

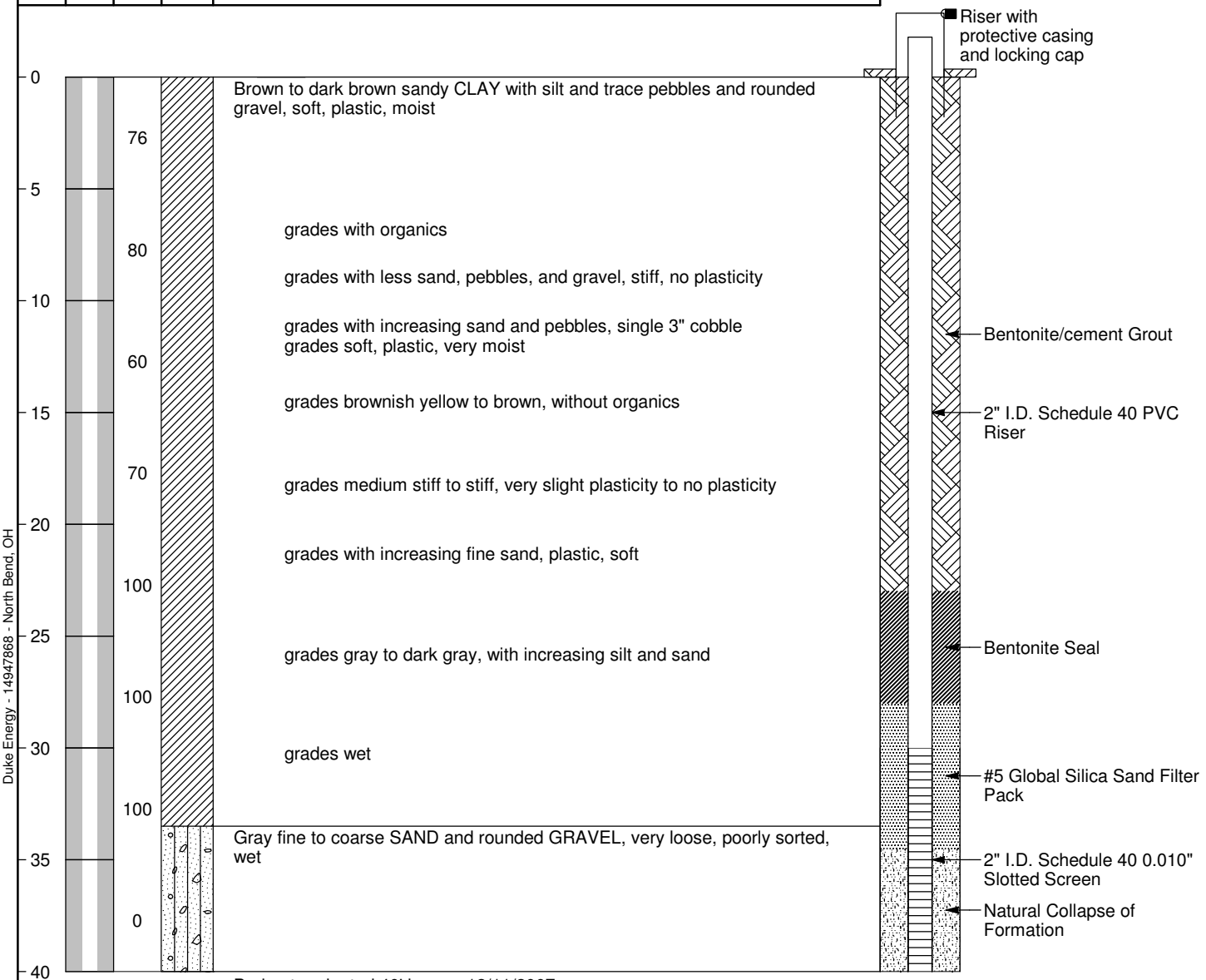
AECOM

Geosyntec consultants

ATTACHMENT 2

Adjacent Monitoring Well Boring Logs and Well Construction Forms

Depth (Feet)	Sample Location	Percent Recovery	USCS Symbol	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAIL



Boring terminated 40' bgs on 12/11/2007.
2" I.D. Schedule 40 PVC monitoring well installed 40' bgs with 10' 0.010" slotted screen.

LEGEND:

Rotosonic

bgs Below ground surface

NR Not recorded

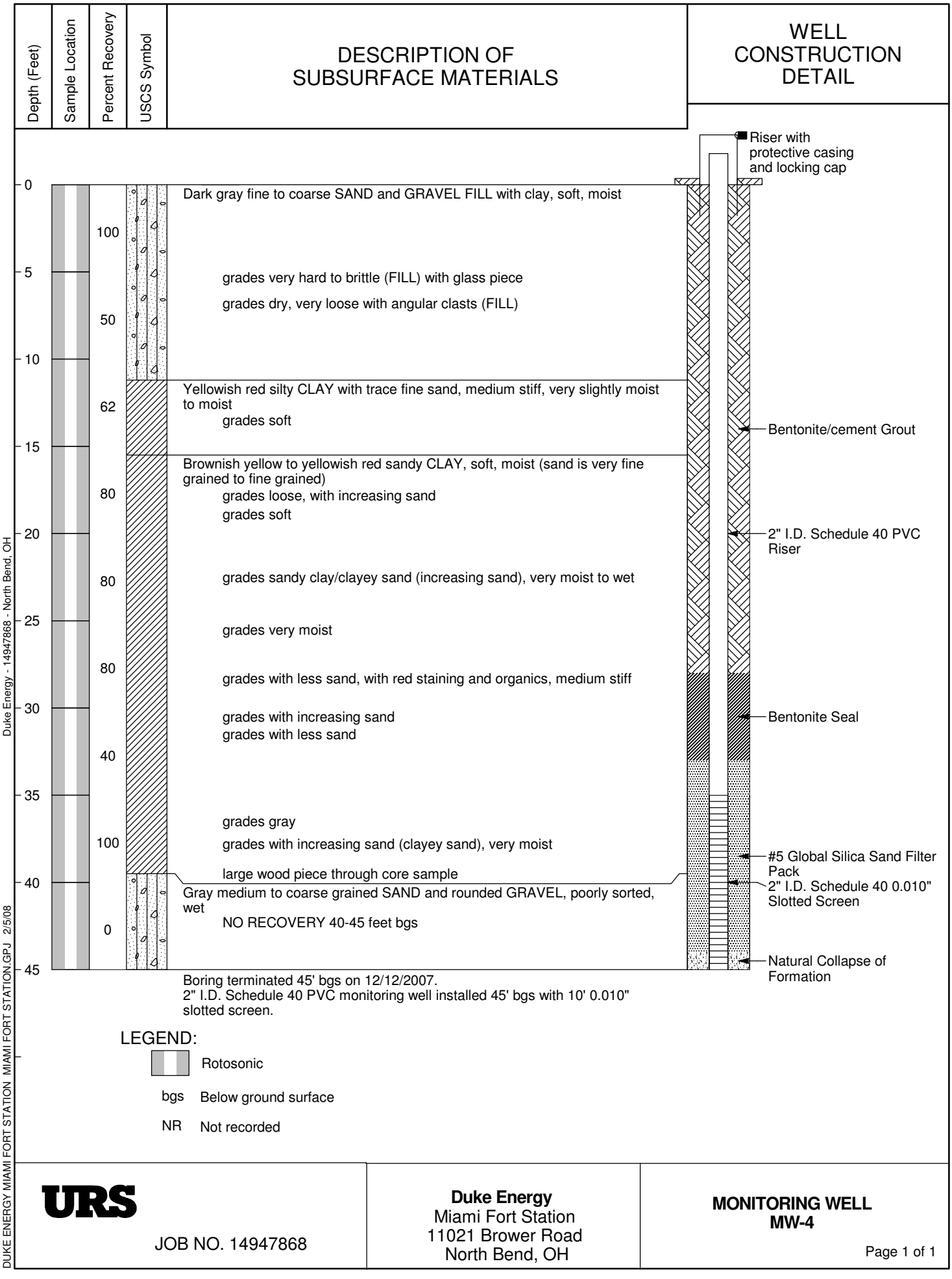
URS

JOB NO. 14947868

Duke Energy
Miami Fort Station
11021 Brower Road
North Bend, OH

MONITORING WELL
MW-2

Duke Energy - 14947868 - North Bend, OH
DUKE ENERGY MIAMI FORT STATION MIAMI FORT STATION.GPJ 2/5/08



DUKE ENERGY MIAMI FORT STATION MIAMI FORT STATION.GPJ 2/5/08

Duke Energy - 14947868 - North Bend, OH

URS

JOB NO. 14947868

Duke Energy
Miami Fort Station
11021 Brower Road
North Bend, OH

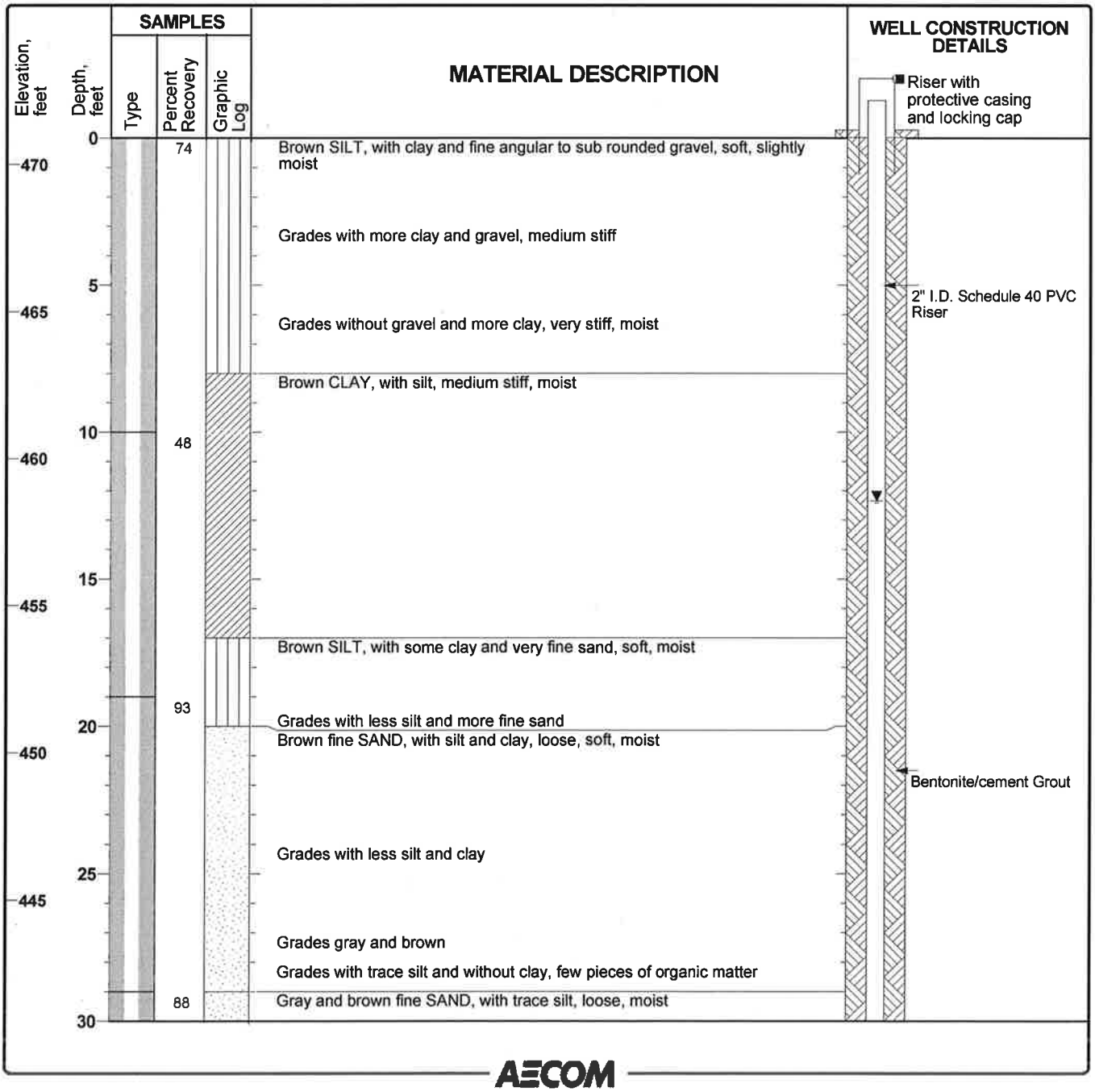
MONITORING WELL
MW-4

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-10

Sheet 1 of 2

Date(s) Drilled	4/10/2017	Logged By	J. Alten	Checked By	M. Wagner
Drilling Method	Rotosonic	Drilling Contractor	Frontz Drilling	Total Depth of Borehole	59.0 feet
Drill Rig Type	Rotosonic	Sampler Type	Sonic Sleeve	Surface Elevation	470.90 feet, msl
Depth to Groundwater	12.34 ft bgs	Seal Material	Hydrated 3/8-inch Bentonite Chips	Top of PVC Elevation	473.35 feet, msl
Diameter of Hole (inches)	6.0	Diameter of Well (inches)	2	Type of Well Casing	Schedule 40 PVC	Screen Perforation	0.010-Inch
Type of Sand Pack	#5 Silica Sand	Well Completion at Ground Surface	Riser, With locking cap and protective casing.		
Comments					



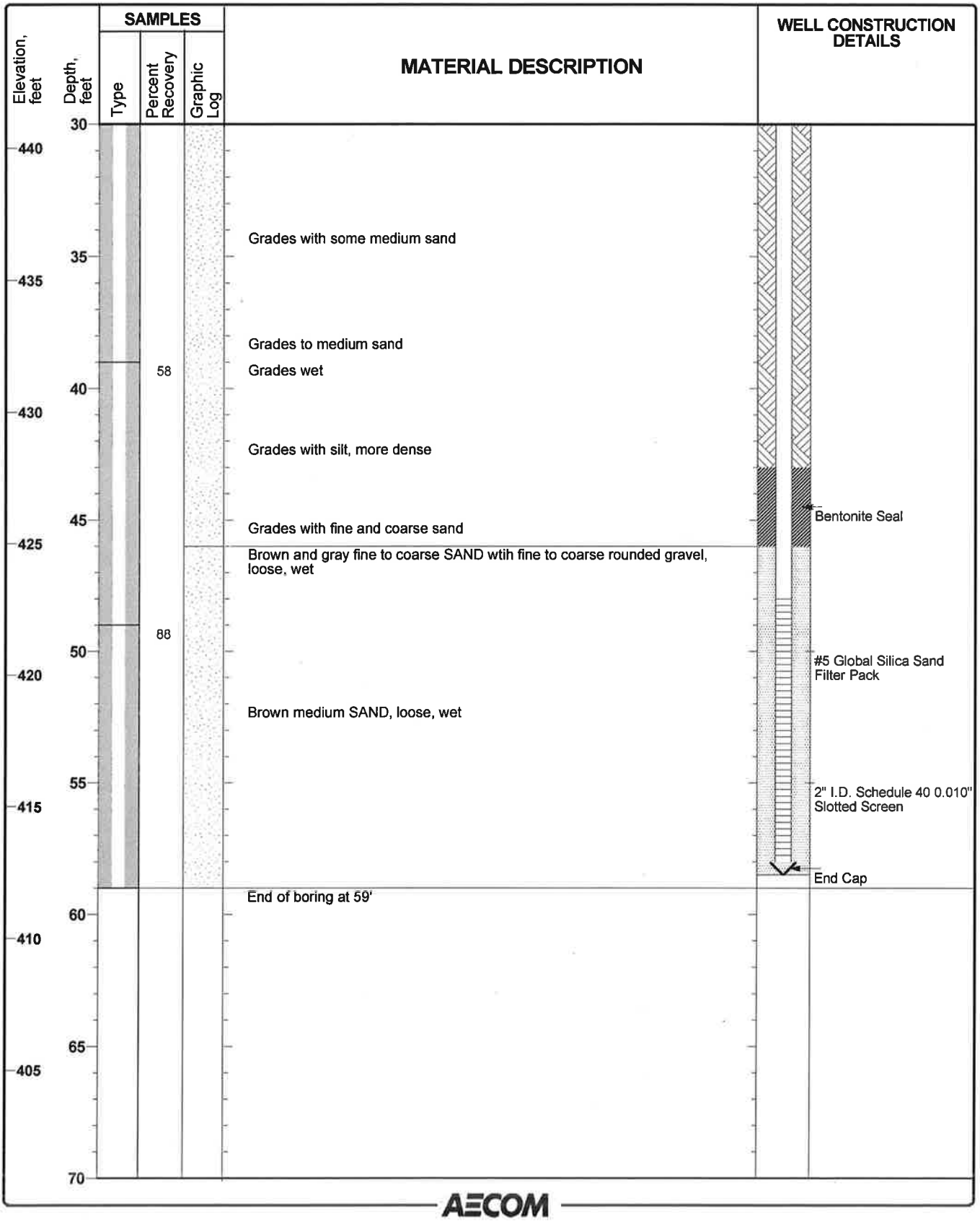
DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

AECOM

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-10

Sheet 2 of 2



AECOM

DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-10S

Sheet 1 of 1

Date(s) Drilled	**10/21/2015**	Logged By	**B. Smolenski**	Checked By	**M. Wagner**
Drilling Method	**Rotosonic**	Drilling Contractor	**Frontz**	Total Depth of Borehole	**29.0 feet**
Drill Rig Type	**Rotosonic**	Sampler Type	**Sonic Sleeve**	Surface Elevation	**471.31 feet, msl**
Depth to Groundwater	**12.51 ft bgs**	Seal Material	**Hydrated 3/8-inch Bentonite Chips**	Top of PVC Elevation	**473.51 feet, msl**
Diameter of Hole (inches)	**6.0**	Diameter of Well (inches) **2**	Type of Well Casing	**Schedule 40 PVC**	Screen Perforation	**0.010-Inch**
Type of Sand Pack	**#5 Silica Sand**	Well Completion at Ground Surface	**Riser, With locking cap and protective casing.**		
Comments					

Elevation, feet	Depth, feet	SAMPLES: Type	SAMPLES: Percent Recovery	SAMPLES: Graphic Log	MATERIAL DESCRIPTION
470	0		100		Brown SILT, with clay, stiff, slightly moist, with oxidation staining
					Dark gray silty CLAY, stiff, slightly moist
465	5		68		
	10				
460					Medium to dark brown SILTY with clay, very soft to soft, moist to wet
455	15				
	20		100		grades gray with black mottling grades sandy, very fine to fine grained
450					
445	25				
	30				End of boring at 29' bgs

WELL CONSTRUCTION DETAILS

- Riser with protective casing and locking cap
- 2" I.D. Schedule 40 PVC Riser
- Bentonite/cement Grout
- Bentonite Seal
- #5 Global Silica Sand Filter Pack
- 2" I.D. Schedule 40 0.010" Slotted Screen
- End Cap

URS

DYNEGY MIAMI FORT STATION CCR WELLS.GPJ 1/8/16

Basin A

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-13

Sheet 1 of 2

Date(s) Drilled	4/11/2017	Logged By	J. Alten	Checked By	M. Wagner
Drilling Method	Rotosonic	Drilling Contractor	Frontz Drilling	Total Depth of Borehole	59.0 feet
Drill Rig Type	Rotosonic	Sampler Type	Sonic Sleeve	Surface Elevation	478.13 feet, msl
Depth to Groundwater	18.2 ft bgs	Seal Material	Hydrated 3/8-inch Bentonite Chips	Top of PVC Elevation	480.70 feet, msl
Diameter of Hole (inches)	6.0	Diameter of Well (inches)	2	Type of Well Casing	Schedule 40 PVC	Screen Perforation	0.010-Inch
Type of Sand Pack	#5 Silica Sand	Well Completion at Ground Surface	Riser, With locking cap and protective casing.		
Comments					

Elevation, feet	Depth, feet	SAMPLES Type	Percent Recovery	Graphic Log	MATERIAL DESCRIPTION	WELL CONSTRUCTION DETAILS
	0		68		Brown SILT with coarse sand and trace gravel, medium stiff, moist	Riser with protective casing and locking cap
475					Grades softer	
					Grades stiff	
	5				Grades very stiff	2" I.D. Schedule 40 PVC Riser
					Grades with more gravel	
470					Brown and gray SAND with rounded gravel, loose, moist	
	10		95		Grades very dark brown	
					Medium brown and gray GRAVEL with silt and clay, soft, moist	
					Gray and brown silty CLAY with some fine to coarse sand, stiff, moist	
465						
	15				Grades with more silt, brown	
					Brown SILT with trace clay and fine sand, soft, moist	
460					Medium brown fine SAND with silt, soft, moist	
	20		64		Grades reddish brown, very soft	
455						Bentonite/cement Grout
	25					
450					Red and brown mottled CLAY, stiff, moist	
	30		69		Gray fine SAND with silt and trace clay, very soft, moist	

DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

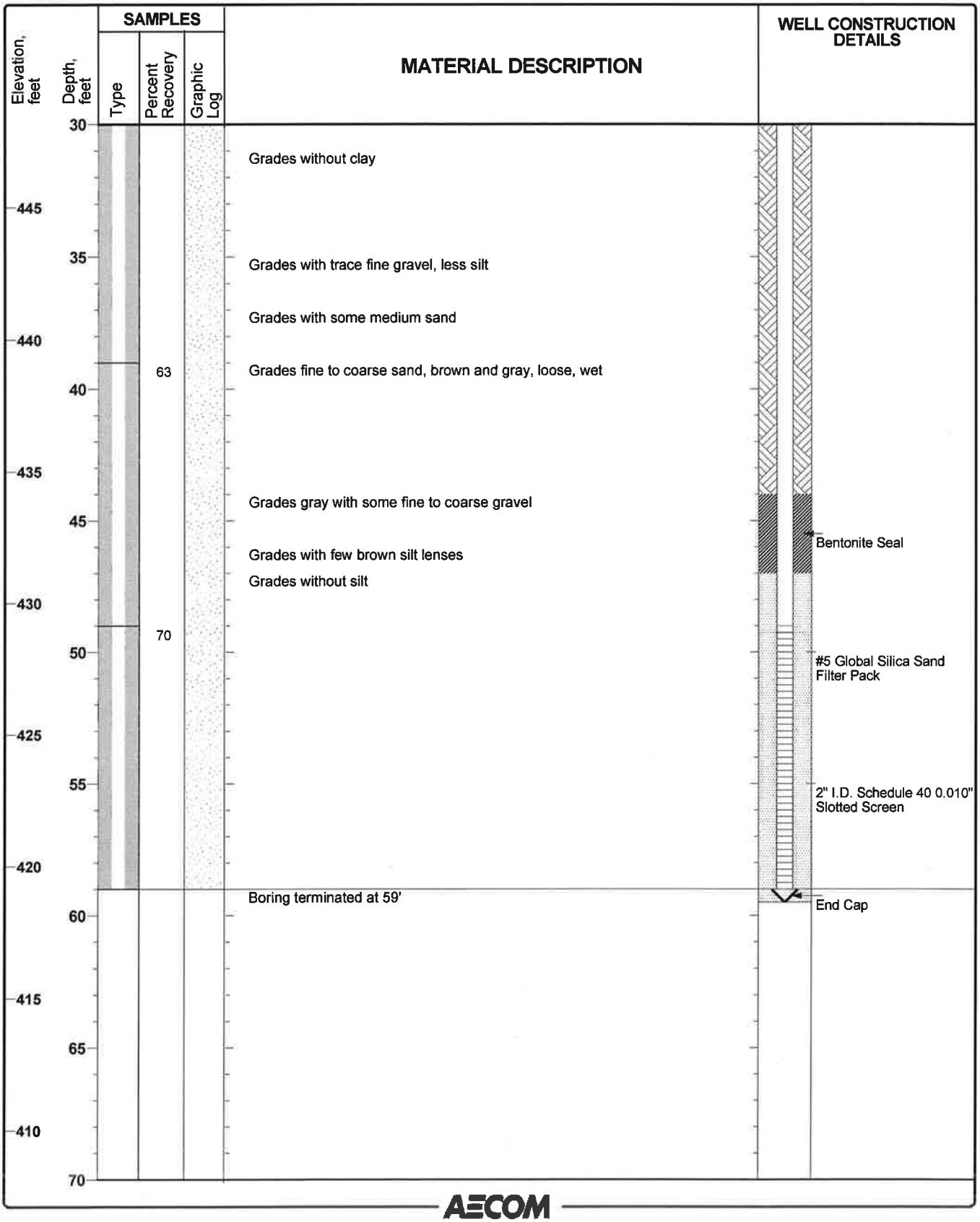
AECOM

Basin A

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-13

Sheet 2 of 2



DYNEGY CCR GENERAL MIAMI FORT STATION CCR WELLS.GPJ 5/18/17

AECOM

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-13S

Sheet 1 of 2

Date(s) Drilled	**10/21/2015**	Logged By	**B. Smolenski**	Checked By	**M. Wagner**
Drilling Method	**Rotosonic**	Drilling Contractor	**Frontz**	Total Depth of Borehole	**34.0 feet**
Drill Rig Type	**Rotosonic**	Sampler Type	**Sonic Sleeve**	Surface Elevation	**477.55 feet, msl**
Depth to Groundwater	**21.14 ft bgs**	Seal Material	**Hydrated 3/8-inch Bentonite Chips**	Top of PVC Elevation	**479.88 feet, msl**
Diameter of Hole (inches)	**6.0**	Diameter of Well (inches) **2**	Type of Well Casing	**Schedule 40 PVC**	Screen Perforation	**0.010-Inch**
Type of Sand Pack	**#5 Silica Sand**	Well Completion at Ground Surface	**Riser, With locking cap and protective casing.**		
Comments					

Elevation, feet	Depth, feet	SAMPLES Type	Percent Recovery	Graphic Log	MATERIAL DESCRIPTION	WELL CONSTRUCTION DETAILS
	0		100		Reddish brown silty CLAY, trace fine angular coal fragments, very stiff, dry, with black mottling	Riser with protective casing and locking cap
475					Black coarse SAND, with fine to medium angular gravel, loose, wet	
	5		60		Gray silty CLAY, stiff, slightly moist, with trace black mottling	
470						2" I.D. Schedule 40 PVC Riser
	10				grades reddish brown	Bentonite/cement Grout
465						
	15				Reddish brown very fine to fine sandy SILT, with clay, soft, moist	
460			45			
	20				Reddish brown clayey, silty, fine SAND, very soft, wet	Bentonite Seal
455						
	25				grades with black mottling and oxidation staining	
					grades fine to medium grained, with less fines	
450						#5 Global Silica Sand Filter Pack
	30		100		Reddish brown CLAY, with silt, medium stiff to stiff, slightly moist, with fine to	2" I.D. Schedule 40 0.010"

URS

DYNEGY MIAMI FORT STATION CCR WELLS.GPJ 1/8/16

Project: Dynegy
Project Location: Miami Fort Station
Project Number: 60442412

Monitoring Well MW-13S

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES: Type	SAMPLES: Percent Recovery	SAMPLES: Graphic Log	MATERIAL DESCRIPTION	WELL CONSTRUCTION DETAILS
445	30				medium grained sand layers spaced approximately 6" apart, black mottling, and oxidation staining	Slotted Screen
					End of boring at 34' bgs	End Cap
440	35					
435	40					
430	45					
425	50					
420	55					
415	60					
410	65					
	70					

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DYNEGY MIAMI FORT STATION CCR WELLS.GPJ 1/8/16

RAMBOLL

SOIL BORING LOG INFORMATION

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Miami Fort Power Station		MW-19

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Rick Tustin Cascade Drilling	8/11/2020	8/12/2020	Mini Sonic

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
MW-19	Feet (NAVD88)	498.58 Feet (NAVD88)	6.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒

State Plane 414,966.41 N, 1,314,727.57 E N/(S)

1/4 of 1/4 of Section , T N, R

Lat 39° 6' 59.17"

Long 84° 48' 16.18"

Local Grid Location

Feet ☐N ☐S Feet ☐E ☐W

Facility ID	County	State	Civil Town/City/ or Village
	Hamilton	OH	North Bend

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties: Compressive Strength (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 CS	120 120		0	0 - 1' **FILL, POORLY-GRADED GRAVEL WITH SAND:** (GP)s, grayish brown (10YR 5/2), coarse gravel, little fine to coarse sand, moist.	(FILL) (GP)s									
			1	1 - 6.4' **SILT:** ML, brown (10YR 5/3), trace fine sand, moist.	ML				1 1 1.5					
			6	6.4 - 27.8' **POORLY-GRADED SAND:** SP, light brown (10YR 6/4), fine to medium sand, trace subrounded fine to coarse gravel, trace silt, dry.	SP				1 3 3.5					
2 CS	120 120		10	10' grades little subrounded fine to coarse gravel.										
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature SH WK

Firm Ramboll
234 W Florida Street, 5th Floor, Milwaukee, WI 53204
Tel: (414)837-3607
Fax: (414)837-3608

Boring Number MW-19 Page 2 of 4

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties: Compressive Strength (tsf)	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			13	6.4 - 27.8' **POORLY-GRADED SAND:** SP, light brown (10YR 6/4), fine to medium sand, trace subrounded fine to coarse gravel, trace silt, dry. *(continued)*										
			14											
			15											
			16	16' little silt.										
			17	17' trace silt.										
			18											
			19											
3 CS	120 120		20	20' grades brown (10YR 5/3).	SP									
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28	27.8 - 34' **SILTY SAND:** SM, brown (10YR 5/3), very fine to fine sand, little silt, dry.										
			29											
4 CS	120 120		30		SM									
			31											
			32											

Boring Number MW-19 Page 3 of 4

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties: Compressive Strength (tsf)	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			33	27.8 - 34' **SILTY SAND:** SM, brown (10YR 5/3), very fine to fine sand, little silt, dry. *(continued)*	SM									
			34	34 - 35' **POORLY-GRADED SAND:** SP, brown (10YR 5/3), fine to medium sand, trace fine gravel, dry.	SP									
			35	35 - 44.9' **SILT:** ML, brown (10YR 5/3), trace very fine to fine sand, wet.										
			36											
			37											
			38											
			39											
5 CS	120 120		40		ML									
			41											
			42											
			43											
			44											
			45	44.9 - 54.8' **POORLY-GRADED SAND:** SP, brown (10YR 5/3), fine to medium sand, trace fine to coarse gravel, wet.										
			46											
			47											
			48		SP									
			49											
6 CS	120 120		50											
			51											
			52											

Boring Number MW-19 Page 4 of 4

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID 10.6 eV Lamp	Soil Properties: Compressive Strength (tsf)	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			53	44.9 - 54.8' **POORLY-GRADED SAND:** SP, brown (10YR 5/3), fine to medium sand, trace fine to coarse gravel, wet. *(continued)*	SP									
			54											
			55	54.8 - 70' **WELL-GRADED SAND:** SW, brown (10YR 5/3), fine to coarse sand, trace fine to coarse gravel, wet.										
			56											
			57											
			58											
			59											
7 CS	120 120		60	60' grades little subrounded fine to coarse gravel.										
			61											
			62		SW									
			63											
			64											
			65											
			66											
			67											
			68											
			69											
			70	70' End of boring.										

Geosyntec consultants

ATTACHMENT 3

Boring Logs (2021 and 2023 Field Efforts)

Client: Miami Fest

Project:

Address: 11021 Brewer Rd.

FIELD LOGGING FORM

Log of Boring/Well: XPW-01

Page: 1 of 5

Bore Clear Date: 2/22/2021
Bore Clear Co:
Bore Clear Method:
Drilling Start Date:
Drilling End Date:
Drilling Company: Cascade
Drilling Method: Sonic

Boring Depth (ft):
Boring Diameter (in):
Sampling Method(s):
Logged By:
Boring Location (X):
Boring Location (Y):
Boring Elevation (Z):
Dynamic DTW (ft): @

Well Depth (ft):
Well Diameter (in):
Screen Slot (in):
Riser Material:
Screen Material:
Seal Material(s):
Filter Pack:
Static DTW (ft): @

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	DESCRIBE: USCS symbol	DESCRIBE: FINES Clay	DESCRIBE: FINES Silt	DESCRIBE: SAND Fine	DESCRIBE: SAND Medium	DESCRIBE: SAND Coarse	DESCRIBE: GRAVEL Fine	DESCRIBE: GRAVEL Coarse	DESCRIBE: Plasticity/Grading	DESCRIBE: Consistency/Density	DESCRIBE: Moisture	DESCRIBE: Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
																			(surface)			
						1ft		SM		S	M				S		L	M	light brown, silty sand			
1										S	M						L	D	dark grey silty sand			1
2								Same as above														2
						5		GM											5in sand lense of gravelly			
3										M	S						S	S	gray silty sand (mostly silt)			3
4																						4
5						5		GM		M	S			S			S	S	dark gray pebbly silt			5
6								CL	M	S						M	M	S	silty clay, gray			6
7																						7
8						2		Same as above SM		S	M			S				M	gray brown silty sand with some pebbles			8
9																						9
10						5		Same as above GP				M		S			L	S	black, dark gray medium grained sand			10
11								SM			M			S			L	S	gray fine grained sand			11
12																						12
13																						13
14																						14
								Same as above														

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other
Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present
Plasticity (Fines): N - None L - Low M - Medium H - High
Grading (Coarse): W - Well-graded P - Poorly-graded
Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard
Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense
Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: _____

Project: _____

Address: _____

FIELD LOGGING FORM

Log of Boring/Well: XPN - 01

Page: 2 of 5

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	DESCRIBE: USCS symbol	DESCRIBE: FINES Clay	DESCRIBE: FINES Silt	DESCRIBE: SAND Fine	DESCRIBE: SAND Medium	DESCRIBE: SAND Coarse	DESCRIBE: GRAVEL Fine	DESCRIBE: GRAVEL Coarse	DESCRIBE: Plasticity/Grading	DESCRIBE: Consistency/Density	DESCRIBE: Moisture	DESCRIBE: Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
16								SP			M			S	SF		L	S	dark gray silty sand with pebbles and cobbles			16
17																						17
18						5 ft		SAA														18
19								ML	S	M	SF						S	S	light gray clay-silty ~~sand~~ layer			19
20								GM		S	M			F			L	S	dark gray silty sand			20
								SP	S	M							M	S	brown gray silty clay			
21																						21
22																						22
23																						23
24																						24
25																						25
26																						26
27																						27
28																			EOB at 20ft			28
29																						29
30																						30
31																						31
32																						32
33																						33
34																						34

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other

Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present

Plasticity (Fines): N - None L - Low M - Medium H - High

Grading (Coarse): W - Well-graded P - Poorly-graded

Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard

Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense

Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: Miami Fort

Project:

Address:

FIELD LOGGING FORM

Log of Boring/Well: MW-04/SB-2

Page: 1 of 5

Bore Clear Date: 2/23/2021
Bore Clear Co:
Bore Clear Method:
Drilling Start Date:
Drilling End Date:
Drilling Company: Cascade
Drilling Method: Sonic ng

Boring Depth (ft):
Boring Diameter (in):
Sampling Method(s):
Logged By:
Boring Location (X):
Boring Location (Y):
Boring Elevation (Z):
Dynamic DTW (ft): @

Well Depth (ft):
Well Diameter (in):
Screen Slot (in):
Riser Material:
Screen Material:
Seal Material(s):
Filter Pack:
Static DTW (ft): @

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	DESCRIBE: USCS symbol	FINES: Clay	FINES: Silt	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	Plasticity/Grading	Consistency/Density	Moisture	Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
1								CL	S	M				F			M	M	orange brown silty clay w/ orange and black streaks			1
2											same as above											2
3						5 ft		SW		S	S	M		S			L	S	dark gray silty sand with pebbles			3
4																						4
5											same as above											5
6						4 ft		CL	S	S	S						F	M	orange brown silty clay with black specks			6
7						5					same as above											7
8								CL	M	S	S			F			VF	D	orange brown clay			8
9								SW		S	M			S			MD	D	light brown silty sand with red and blk specks			9
10								CL	M	S	F			S			M	M	light brown silty clay			10
11											same as above											11
12								CL	M	S							M	M	orange-brown clay with blk streaks			12
13						4 ft		CL	M	S							M	M	same as above, no black stained layer			13
14						5																14

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other
Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present
Plasticity (Fines): N - None L - Low M - Medium H - High
Grading (Coarse): W - Well-graded P - Poorly-graded
Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard
Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense
Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: _____

Project: _____

Address: _____

FIELD LOGGING FORM

Log of Boring/Well: MW-4/SB-2

Page: 2 of 5

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	DESCRIBE: USCS symbol	DESCRIBE: FINES Clay	DESCRIBE: FINES Silt	DESCRIBE: SAND Fine	DESCRIBE: SAND Medium	DESCRIBE: SAND Coarse	DESCRIBE: GRAVEL Fine	DESCRIBE: GRAVEL Coarse	DESCRIBE: Plasticity/Grading	DESCRIBE: Consistency/Density	DESCRIBE: Moisture	DESCRIBE: Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
								CL	M	S							M	M	orange brown clay			
16																						16
17						5ft																17
18																						18
19																						19
20								Same as above														20
								SC	S	S	M						L	M	orange brown clayey sand			
21																						21
22						5ft																22
23																						23
24																						24
25								Same as above														25
								QL	M	S							S	S	orange brown silty clay			
26																						26
27						5ft																27
28								Same as above														28
								CL	M	S	S						S	M	orange brown silty clay with some sands and black streaks			
29																						29
30								Same as above											(continue 2/24/2021)			30
								SC	S		M	S					L	M	light brown ~~sandy~~			
31								CL	M			S					M	M	sands clayey sandy light brown clay with black and orange staining			31
32						5ft																32
33								Same as above														33
34								SC	S		M	F					S	M	light brown clayey sand with black staining/streaks			34
								Same as above														

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other

Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present

Plasticity (Fines): N - None L - Low M - Medium H - High

Grading (Coarse): W - Well-graded P - Poorly-graded

Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard

Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense

Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: _____

Project: _____

Address: _____

FIELD LOGGING FORM

Log of Boring/Well: MW-4/SB-2

Page: 3 of 5

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	DESCRIBE: USCS symbol	DESCRIBE: FINES Clay	DESCRIBE: FINES Silt	DESCRIBE: SAND Fine	DESCRIBE: SAND Medium	DESCRIBE: SAND Coarse	DESCRIBE: GRAVEL Fine	DESCRIBE: GRAVEL Coarse	DESCRIBE: Plasticity/Grading	DESCRIBE: Consistency/Density	DESCRIBE: Moisture	DESCRIBE: Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
36								SC	S		M	F					L	M	gray-brown clayey sand with red and black staining			36
37								same as above														37
38								CL	M	S	S						M	M	greenish-gray sandy clay with orange and black staining (grades from light brown)			38
39								CL	M	S	F						M	M				39
40								GC	S		same as above						L		greenish-gray sandy clay (primarily gray) with orange & black staining			40
41								SM		S	S	M					L	M				41
42								GC				M	S	S	F		L	S	light brown silty sands with pebbles and gravel			42
43								SP	same as above													43
44												S	M				L	S	light brown silty sands some black specks			44
45								same as above											gravelly sands			45
46				EOB @ 45 ft																		46
47																						47
48																						48
49																						49
50																						50
51																						51
52																						52
53																						53
54																						54

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other

Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present

Plasticity (Fines): N - None L - Low M - Medium H - High

Grading (Coarse): W - Well-graded P - Poorly-graded

Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard

Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense

Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: Miami Fort
Project:
Address:

FIELD LOGGING FORM

Log of Boring/Well: MW-19/SB-1
Page: 1 of 5

Bore Clear Date: 2/24/2021
Bore Clear Co:
Bore Clear Method:
Drilling Start Date:
Drilling End Date:
Drilling Company:
Drilling Method: Sonic

Boring Depth (ft):
Boring Diameter (in):
Sampling Method(s):
Logged By:
Boring Location (X):
Boring Location (Y):
Boring Elevation (Z):
Dynamic DTW (ft): @

Well Depth (ft):
Well Diameter (in):
Screen Slot (in):
Riser Material:
Screen Material:
Seal Material(s):
Filter Pack:
Static DTW (ft): @

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	Blows/0.5 foot	Recovery (ft)	Time	DESCRIBE: USCS symbol	FINES: Clay	FINES: Silt	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	Plasticity/Grading	Consistency/Density	Moisture	Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
0								CH	M					S	S	H	M	D	brown gravelly clay			0
1																						1
2						5 ft		SM-CL		M	S						L	D	orange brown sandy silt			2
3																						3
4																						4
5								CL	M	S	S	same as above			■	M	M	M	brown silty-sandy clay mix			5
6																						6
7						4.5 ft																	7
8									same as above													8
9								GW-SW				M	S	S	S	W	VL	D	brown sand and gravel			9
10									same as above		S	M		S		W	L	D	light brown gravelly sands			10
11										M							M	D	silt (brown)			11
12						9.5 ft		GW					S	S	S	M	W	L	D	pebbles and cobbles mixed with coarse grained sand			12
13						(10-20 inches)																	13
14												Same as above											14

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other
Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present
Plasticity (Fines): N - None L - Low M - Medium H - High
Grading (Coarse): W - Well-graded P - Poorly-graded
Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard
Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense
Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: _____

Project: _____

Address: _____

FIELD LOGGING FORM

Log of Boring/Well: MW-19/SB-1

Page: 2 of 5

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	DESCRIBE: USCS symbol	DESCRIBE: FINES Clay	DESCRIBE: FINES Silt	DESCRIBE: SAND Fine	DESCRIBE: SAND Medium	DESCRIBE: SAND Coarse	DESCRIBE: GRAVEL Fine	DESCRIBE: GRAVEL Coarse	DESCRIBE: Plasticity/Grading	DESCRIBE: Consistency/Density	DESCRIBE: Moisture	DESCRIBE: Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
16								GW					S	S	M	W	L	D	white/gray pebbles and cobbles mixed with coarse brown sand well graded			16
17																						17
								GW-SW				S	S	M		W	L	D	brownish white sands and gravel well-graded			
18																						18
19																						19
20								Same as above														20
								GW		F		S	M	S	S	W	VL	D	light brown to tan sand ~~with~~ (coarse grained mostly)			
21								SW-GW				S	M	S		W	VL	D				21
22																			light to dark brown, coarse grained sand with pebbles			22
23																						23
24																						24
25																						25
26																						26
27																						27
28																						28
29																						29
30								GW				S	M	S	S	W	VL	D	white to light sand w/ pebbles/cobbles			30
31								SW				M	S	S		W	VL	D	dark brown sand with pebbles			31
32																						32
33																						33
34																						34

5 ft (20-30 ft material)

10 ft (25-40 ft material)

same as above

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other

Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present

Plasticity (Fines): N - None L - Low M - Medium H - High

Grading (Coarse): W - Well-graded P - Poorly-graded

Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard

Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense

Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: _____

Project: _____

Address: _____

FIELD LOGGING FORM

Log of Boring/Well: _____

Page: 3 of 5

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	DESCRIBE: USCS symbol	FINES: Clay	FINES: Silt	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	Plasticity/Grading	Consistency/Density	Moisture	Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
36								SM-SC	S	S	M						L	D	orange brown clayey-silty sand			36
37																						37
38																						38
39																						39
40											same as above											40
41								SM-SC	S	S	M						L	D	orange brown clayey sand			41
42																						42
43																						43
44								CL	M	S	F						M	W	moistly silty light brown clay			44
45											same as above											45
46								SC	S		M						S	S	clayey light brown sand			46
47																						47
48																						48
49											same as above											49
50								SC	S		M						S	W	light brown, clayey sand			50
51								SP			S	M					L	S	light brown sand			51
52								SP			S	M		F			L	D	light brown poorly graded sand with scattered pebbles			52
53																						53
54																						54

(40-50 ft bgs)

same as above

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other

Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present

Plasticity (Fines): N - None L - Low M - Medium H - High

Grading (Coarse): W - Well-graded P - Poorly-graded

Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard

Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense

Moisture: D - Dry M - Moist W - Wet S - Saturated

Client: _____

Project: _____

Address: _____

FIELD LOGGING FORM

Log of Boring/Well: MW-19/SB-1

Page: 4 of 5

Depth (ft)	Graphic Log	Boring Backfill	Well Construction	COLLECT: Sampling Method	COLLECT: Blows/0.5 foot	COLLECT: Recovery (ft)	COLLECT: Time	USCS symbol	FINES: Clay	FINES: Silt	SAND: Fine	SAND: Medium	SAND: Coarse	GRAVEL: Fine	GRAVEL: Coarse	Plasticity/Grading	Consistency/Density	Moisture	Color (qualitative or Munsell); Notes	MEASURE: PID (ppm)	MEASURE: Sample ID	Depth (ft)
56								SP			S	M		F S			L	D	light brown sand			56
57																						57
58						10 ft (50-60 ft)																	58
59											same as above											59
60								SP			S	M		S					light brown sand with some pebbles			60
61								SW			SAA	S	M	S			L	S M	(gravely sand) brown gravely sand			61
62								SW				S	M	S			L	M	dark brown gravely sand			62
63																						63
64																						64
65																						65
66						15 ft (65-70 ft)																	66
67																						67
68																						68
69																						69
70											same as above											70
71								SW				S	M	S	F		L	M	dark brown gravely sands			71
72																						72
73																						73
74											SAA								EOB @ 75 ft			74

Sampling method: GR - Grab EN - Encor SS - SPT MC - Mod CA SH - Shelby Tube CO - Core Barrel DP - Direct Push OT - Other

Enter T-Trace, F-Few, L-Little, S-Some, M-Mostly for each (silt/clay) or main (sand/gravel) grain size present, and "x" for other sand/gravel grain sizes present

Plasticity (Fines): N - None L - Low M - Medium H - High

Grading (Coarse): W - Well-graded P - Poorly-graded

Consistency (Fines): VS - Very soft S - Soft M - Medium F - Stiff VF - Very stiff H - Hard

Density (Coarse): VL - Very loose L - Loose MD - Medium dense D - Dense VD - Very dense

Moisture: D - Dry M - Moist W - Wet S - Saturated

Geosyntec consultants

Page 1 of 4

SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	**BORING NUMBER/WELL NAME:** B23-12
DRILLER INFO FIRM: SM&E	**GEOSYNTEC REPRESENTATIVE** GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle
DRILLER NAME(S): Brandon Kenyon	**OFFICE:** Cincinnati
DATE/TIME STARTED: 13:42 7/12/23	**DATE/TIME FINISHED:** 18:15 7/12/23
BOREHOLE DEPTH: 53.5 ft	**DRILLING METHOD:** CMT split spoon
BOREHOLE DIA.: 8 inches	
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
0 - 1.5'	12"	19 19 13	1	Brown to dark brown sandy clay w/ silt, large gravel rounded, well graded, fill material		
			2 3 4	Auger		
4 - 5.5'	05"	3 4 2	5	Brown to dark brown silty clay, med plasticity, less silt, coal fines, w/ organics, moist		
			6 7 8 9	Auger		
9 - 10.5'	05"	1 1 1	10	Brown to dark brown clay, black organics, soft, low plasticity, moist		
			11 12 13 14	Auger		
14 - 15.5'	16.5"	2 1 1	15	SAA, med plasticity, decayed wood ~ 15.5', organics		

Geosyntec consultants

Page 2 of 4

SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	**BORING NUMBER/WELL NAME:** B23-12
DRILLER INFO FIRM: SM&E	**GEOSYNTEC REPRESENTATIVE** GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle
DRILLER NAME(S): Brandon Kenyon	**OFFICE:** Cincinnati
DATE/TIME STARTED: 13:42 7/12/23	**DATE/TIME FINISHED:** 18:15 7/12/23
BOREHOLE DEPTH: 53.5 ft	**DRILLING METHOD:** CME Split spoon
BOREHOLE DIA.: 8 inches	
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
			15			
			16			
			17	Auger		
			18			
			19	H2O @ 19'		
19 – 20.5	7.5"	WH " " "	20	Brown to dk brown clay, low plasticity, small gravel, soft, moist to wet		
			21	Auger		
21.5 – 23'	5"	WR WR 1	22	SAA, black mottling, large gravel		collected 1 bag of sample
			23			
23 – 24.5'	20"	WH 1 1	24	Medium brown silty clay, grades sandy, very fine grained, uniform pockets of sand, moist to wet		
			25			
			26			
			27	Auger		
			28			
			29			
29 – 30.5'	14.5"	WH 1 1	30	Brown to dk brown clay, grades gray to dk gray w/ inc silt & sand		collected 1 bag of sample 30 – 30.5'

Geosyntec consultants

Page 3 of 4

SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	**BORING NUMBER/WELL NAME:** B23-12
DRILLER INFO FIRM: SM&E; DRILLER NAME(S): Brandon Kenyon	**GEOSYNTEC REPRESENTATIVE** GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle; OFFICE: Cincinnati
	DATE/TIME STARTED: 13:42 7/12/23
	DATE/TIME FINISHED: 18:15 7/12/23
	BOREHOLE DEPTH: ~~53.5~~ ft
	BOREHOLE DIA.: 8 inches
	DRILLING METHOD: CME split spoon
BORING LOCATION:	N; E; Lat: Long:

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
			30			
30.5 – 32'	18"	WH " " " "	31	30.5-31.4' brown clay, iron oxide staining, moist to wet, low plasticity ~~med~~ soft 31.4-32' dk gray clay low plasticity, moist to wet		collected 1 bag 30.5-31.4' collected 1 bag 31.4-32'
32 – 33.5'	17"	1 2 3	32 33	~~32-33.5' brown clay~~ dk gray clay, ¼" silty sand seam, low plasticity, decayed wood/organics		collected 1 bag 32-33.5'
33.5 – 35'	10"	3 3 4	34	Brown/gray fine to coarse sand, very loose, poorly sorted, wet *JH thinks likely is not a representative sample*		collected 3 bags 33.5-35'
			35	Auger		
35.5 – 37'	13.5"	3 3 4	36 37	SAA, rounded gravel, well graded *JH thinks this is a representative sand sample*		collected 1 bag 35.5-37'
			38	Auger		
38.5 – 40'	16"	2 13 14	39 40	Brown and gray fine to coarse sand w/ coarse rounded gravel, loose, wet well graded		
			41 42 43	Auger		
43.5 – 45'	17"	3 11 13	44 45	Brown and gray fine well graded sand, large rounded med gravel, wet		collected 1 bag ~~43.5~~ 44-45' 43.5-44' was likely residual fallen in material

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SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	**BORING NUMBER/WELL NAME:** B23-12
DRILLER INFO FIRM: SM&E DRILLER NAME(S): Brandon Kenyon	**GEOSYNTEC REPRESENTATIVE** GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle OFFICE: Cincinnati
	DATE/TIME STARTED: 13:42 7/12/23
	DATE/TIME FINISHED: 10:15 7/13/23
	BOREHOLE DEPTH: 53.5 ft
	BOREHOLE DIA.: 8 inches
	DRILLING METHOD: CME split spoon
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
			45			
			46			
			47			
			48	Auger		
			49			
			50			
S0.5 - S2'	10.5"	8 8 9	51	Brown med sand, well graded, loose, wet		collected 1 bag 51.5-52'
S2 - S3.5'	11"	3 9 8	52	Brown med sand, well graded, loose, wet		collected 1 bag 52-53.5'
			53			
			54			

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28.5 H20 7/11, seepage 23.5'
23.5' H20 7/12 Page 1 of 3

SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	**BORING NUMBER/WELL NAME:** B23-1
DRILLER INFO FIRM: SM&E DRILLER NAME(S): Brandon Kenyon	**GEOSYNTEC REPRESENTATIVE** GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle OFFICE: Cincinnati
DATE/TIME STARTED: 14:12 7/11/23	**DATE/TIME FINISHED:** 17:00 7/11/23
BOREHOLE DEPTH: 45 ft	**DRILLING METHOD:** Split spoon CME
BOREHOLE DIA.: 8 outside 3 1/4 inside inches	
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
0-1.5'	13"	5 4 5	1	Brown silty clay w/ coal fines, trace gravel, med stiff, dry		
			2	Auger		
			3			
3.5-5'	13.5"	4 5 5	4	3.5-4' Brown silty clay SAA, 4-4.5' black coarse loose dry sand 4.5-4.6' clay SAA		
			5			
			6	Auger		
			7			
			8			
8.5-10'	14"	3 8 11	9	8.5-9' Brown silty clay w/ orange mottling, coal fines, end of fill, SAA 9-10' brown & gray sand w/ rounded gravel, loose, dry		
			10			
			11			
			12	Auger		
			13			
13.5-15'	<1"	3 5 4	14	Moist brown & gray sand w/ rounded gravel, loose, little recovery		
			15			

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SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	**BORING NUMBER/WELL NAME:** B23-1
DRILLER INFO FIRM: SM&E; DRILLER NAME(S): Brandon Kenyon	**GEOSYNTEC REPRESENTATIVE** GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle; OFFICE: Cincinnati	**DATE/TIME STARTED:** 14:12 7/11/23; **DATE/TIME FINISHED:** 17:00 7/11/23; **BOREHOLE DEPTH:** 45 ft; **BOREHOLE DIA.:** 8 inches; **DRILLING METHOD:** CME
BORING LOCATION: N ____ E ____ Lat: ____ Long: ____	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
			15–18	Auger		
18.5–20'	2"	2 3 2	19	Silty clay, low recovery (likely missing sand layer) brown w/black mottling soft, moist, low plasticity		
			20–23	Auger	seepage	23.3' H_2O gauged 7/12 AM
23.5–25'	17"	WH 1 2	24	23.5-23.8' brown wet silty clay, soft, more sand than clay 23.8-25' brown clay, very soft, moist, low plasticity, mint odor		
			25–28	Auger		
29.5–30'	12"	2 1 1	29	wet to moist brown clay, soft, low plasticity, coal fines, silty clay	H_2O	Collected 1 bag ~30.5'

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SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	**BORING NUMBER/WELL NAME:** B23-1
DRILLER INFO FIRM: SM&E; DRILLER NAME(S): Brandon Kenyon	**GEOSYNTEC REPRESENTATIVE** GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle; OFFICE: Cincinnati
	DATE/TIME STARTED: 14:12 7/11/23; DATE/TIME FINISHED: 17:00 7/11/23
	BOREHOLE DEPTH: 45 ft; BOREHOLE DIA.: 8 inches; DRILLING METHOD: CME Split Spoon
BORING LOCATION: N ____ E ____ Lat: ____ Long: ____	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
			30	Auger		
30.5 - 32'	18"	3 2 2	31	30.5-31.5' wet to moist silty brown clay, low plasticity 31.5-32' brown moist clay w/ oxidation		Collected 1 bag 30.5-31.5' oxidation Collected 1 bag 31.5-32' SAA
32 - 33.5'	18.5"	1 2 3	32 33	32-33' SAA 33-33.2' gray sandy layer 33.2-33.5' wet to moist silty brown clay, low plasticity		Collected 1 bag 32-33' sandy interval w/ clay Collected 1 bag 33-33.2' sandy g/b Collected 1 bag 33.2-33.5' oxidation
33.5 - 35'	17.5"	1 2 2	34	lean clay w ¼" fine sand/silty seam, similar oxidation w/ orange mottling 33.5-34.5' 34.5-35' sandy silty clay, more sand		Collected 1 bag 33.5-34.5' moist silty clay layer w/ oxidation Collected 1 bag 34.5-35' moist silty clay sandy interval less clay
			35 36 37 38 39 40	Auger		
40.5 - 42'	20"	1 2 2	41	40.5-41.9' gray silty fine sand w/ trace clay, very soft, moist 41.9-42' decayed wood organic layer in predominately clay, brown, moist, silty		Collected 1 bag 40.5-41.9' gray sand lense Collected 1 bag 41.9-42' brown clay w/ organic layer, silty clay
42 - 43.5'	17.5"	1 1/12"	42 43	Brown gravely sand fine to med grain size - coarse		Collected 1 bag 42-43.5' brown gravely sand fine to med grain size to coarse sand
43.5 - 45'	16"	1 2 3	44 45	Fine to medium to coarse sand, SAA		Collected 1 bag SAA, fine to med to coarse sand

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SOIL BORING LOG
REVISED 11/07

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PROJECT NAME: Vistra Miami Fort GLP8066	BORING NUMBER/WELL NAME: B23-2
DRILLER INFO FIRM: SM&E	DATE/TIME STARTED: 7/20/23 11:42
DRILLER NAME(S): Brandon Kenyon	GEOSYNTEC REPRESENTATIVE GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle OFFICE: Cincinnati
	DATE/TIME FINISHED: 7/24 2:30
	BOREHOLE DEPTH: 40.5 ft
	BOREHOLE DIA.: 4.25 inches
	DRILLING METHOD: HSA, ID ST & split-spoon
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
			1			
2 - 3.5	17"	7 3 3 5	2 3	2-2.7' bottom ash, gravel fill 2.7-3.5' brown/dk gray clay low plasticity, trace fines dry		
3.5 - 5'	14"	4 4 4	4 5	3.5-4' gravel & dk brown/dk gray clay w/ ash, low plasticity, wet dry 4-5' SAA, no gravel, silty clay, moist, poorly graded uniform fine-med sand		
5 - 6.5'	15.5"	5 4 10	6	5-5.5' SAA, w/ gravel 5.5-6.25' limestone/gravel 6.25-6.5' slag (crushed up)		
6.5 - 8'	14"	2 4 4	7 8	6.5-8' slag mixed w/ sand, and gravel, dry, well graded fine-med.		
8 - 9.5'	10"	3 2 2	9	SAA		
9.5 - 11'	8.5"	3 2 3	10 11	9.5-9.8' SAA 9.8-11' brown clay, dry, orange mottling, hard, low plasticity		
11 - 12.5'	13.5"	2 2 3	12	11-11.5' SAA, med plasticity, dry 11.5-12.5' dk brown clay w/ black mottling, med plasticity, dry silty clay		
12.5 - 14'	11"	6 5 5	13 14	12.5-14' SAA, black & orange mottling, some silt		
14 - 15.5'	7.5"	2 2 2	15	silty clay, less silt than before dry, soft, med plasticity, orange mottling, decayed wood, med gravel		

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SOIL BORING LOG

REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	BORING NUMBER/WELL NAME: B23-2
DRILLER INFO FIRM: SM&E	GEOSYNTEC REPRESENTATIVE GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle
DRILLER NAME(S): Brandon Kelyor	OFFICE: Cincinnati
DATE/TIME STARTED: 7/20/23 11:42	DATE/TIME FINISHED: 7/24/23 2:30
BOREHOLE DEPTH: 70.5 ft	DRILLING METHOD: ST & split spoon HSA, ID
BOREHOLE DIA.: 4.25 inches	
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
			15			
15.5 – 17'	0"	4 5 5	16	Limestone blocked shoe, poor recovery		
			17			
				Auger		
			18			
18.0 – 19.5'	13"	2 4 6	19	Brown silty clay, med soft, low plasticity, ash residual, black mottling, dry		
19.5 – 21'	19"	4 4 8	20	SAA		
			21			
21 – 23'	19"	ST	22	Shelby tube		
			23			
23 – 24.5'	19.5"	1 3 3	24	brown silty clay, no mottling, moist, soft, low plasticity		
24.5 – 26'	19"	2 3 4	25	brown silty clay, more silty than before, low plasticity, moist, soft		
			26			
26 – 27.5'	11"	3 3 3	27	SAA, low-med plasticity, slag residual		
27.5 – 29'	15"	4 3 2	28	brown silty sandy clay, low-med plasticity		
			29			
				Auger		
			30			

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SOIL BORING LOG
REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	BORING NUMBER/WELL NAME: B23-2
DRILLER INFO FIRM: SM&E DRILLER NAME(S): Brandon Kenyon	GEOSYNTEC REPRESENTATIVE GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle OFFICE: Cincinnati
	DATE/TIME STARTED: 7/20/23 11:42 DATE/TIME FINISHED: 7/24/23 2:30
	BOREHOLE DEPTH: 70.5 ft BOREHOLE DIA.: 4.25 inches
	DRILLING METHOD: PT & split spoon HSA, ID
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
		ST	30 31 32	Shelby tube		
32 - 33.5'	17.5"	WH 2 3	33	moist, brown, silty clay, low plasticity		
33.5 - 35'	18"	WH 3 4	34 35	33.5-34.5' SAA 34.5-35' brown sand, moist, w/ some clay, small grain size		seepage @ 35'
35 - 36.5'	18"	1 2 3	36	35-35.5' brown moist sandy clay 35.5-36.5' moist brown sandy, silty layer, small grain size		
36.5 - 38'	15"	WH WH 2	37 38	SAA		
38 - 39.5'	15"	WH WH 1	39	~~SAA~~, orange mottling		
39.5 - 40'	18"	WH WH WH	40 41	SAA, moist silty sandy clay, more sand than clay, no orange mottling		Groundwater 39.5'
41 - 42.5'	18"	WH 2 3	42	41-42' SAA, black mottling 42-42.5' ~~SAA~~, no black mottling, orange mottling		42-42.5' collected 1 bag of sample
42.5 - 44'	18"	WH 2 9	43 44	42.5-43.6' SAA, orange mottling 43.6-44' gravel/sand, well graded, med-large gravel		42.5-43.6' collected 1 bag of sample
			45	Auger		

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SOIL BORING LOG

REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	BORING NUMBER/WELL NAME: B23-2
DRILLER INFO FIRM: SM&E DRILLER NAME(S): Brandon Kenyon	GEOSYNTEC REPRESENTATIVE GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle OFFICE: Cincinnati
DATE/TIME STARTED:	
DATE/TIME FINISHED:	
BOREHOLE DEPTH: 70.5 ft	DRILLING METHOD: 8" & split spoon HSA, ID
BOREHOLE DIA.: 4.25 inches	
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
45 - 46.5'	14"	2 2 4	45 46	45-45.8' wet silty, sandy, clay, no orange mottling 44.8-45.5' clay/gravel/sand; med-large gravel		45-46.5' collected 1 bag of sample (Jar from SM&E)
			47 48 49	Auger		
49 - 50.5'	0"	WH 4 1	50	poor recovery, < 1" gravel/sand		
			51 52 53 54	Auger		52.3' Mr GW reading before drilling HA' was added to hole
54 - 55.5'	12"	8 9 12	55	med gravel w/ silty clay		
			56 57 58 59	Auger		
59 - 60.5'	15.5"	9 20 10	60	med dense - fine clay w/ sand, wet		59-60.5' 1 bag sample collected

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SOIL BORING LOG

REVISED 11/07

PROJECT NAME: Vistra Miami Fort GLP8066	BORING NUMBER/WELL NAME: B23-2
DRILLER INFO FIRM: SM&E DRILLER NAME(S): Brandon Kenyon	GEOSYNTEC REPRESENTATIVE GEOLOGIST/ENGINEER: Brianna O'Neil-Hankle OFFICE: Cincinnati
DATE/TIME STARTED: 7/20/23 11:42	
DATE/TIME FINISHED: 7/20/23 2:30 PM	
BOREHOLE DEPTH: 70.5 ft	DRILLING METHOD: ST & Split Spoon HSA, SD
BOREHOLE DIA.: 4.25 inches	
BORING LOCATION: N E Lat: Long:	

Sample Number / Type	Sample Recovery / Attempted	Blow Counts	Depth in Feet	Soil/Rock Description (Density, Color, USCS Classification, moisture, plasticity, cohesiveness, structure, other)	PID READING	Comments
59-60.5			60			
			61			
			62	Auger		
			63			
			64	~~Auger cuttings~~		
			65			
			66			
			67			
			68			
			69	~~Screened interval~~	OOC	fell in to 67', setting screen there.
69-70.5	8.5'	12 14 14	70	69-70.5' silty sand, sand/l-medium gravel, well graded, wet w/ med dense clay		69-70.5' collected 1 bag of sample
			71			Initial targeted screened interval 59-69' but because of fallen in sand, moved to ~57-67'
			72			
			73			
			74			
			75			

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ATTACHMENT 4

Sequential Extraction Procedure Laboratory Analytical Report (2021 and 2023 Field Efforts)

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-22107-1
Client Project/Site: SEP Analysis - Miami Fort

For:
Geosyntec Consultants, Inc.
941 Chatham Lane
Suite 103
Columbus, Ohio 43221

Attn: Allison Kreinberg

Ryan Henry

Authorized for release by:
3/30/2021 4:22:28 PM

Ryan Henry, Project Manager I
(865)291-3000
williamr.henry@eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Certification Summary 26
Method Summary 27
Chain of Custody 28

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 140-22107-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative
140-22107-1

Receipt
The samples were received on 2/27/2021 at 11:15am and arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.1º C.

Metals
7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

· Step 1 - Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO4), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 2 - Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 3 - Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 4 - Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 5 - Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 6 - Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCl-HNO3-H2O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 7 - Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

Result, µg/g or mg/Kg, dry weight = (C × V × V1 × D) / (W × S × V2)

Where:
C = Concentration from instrument readout, µg/mL
V = Final volume of digestate, mL
D = Instrument dilution factor
V1 = Total volume of leachate, mL
V2 = Volume of leachate digested, mL
W = Wet weight of sample, g
S = Percent solids/100

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in

Job ID: 140-22107-1 (Continued)

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

Magnesium was not reported for step 1 because the extraction solution for this step (magnesium sulfate) contains high levels of magnesium. Sodium was not reported for steps 2 and 5 since the extraction solutions for these steps contain high levels of sodium. The sum of steps 1 through 7 is much higher than the total result for sodium and magnesium due to the magnesium and sodium introduced by the extraction solutions.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Method 6010B SEP: The following sample was diluted due to the presence of titanium which interferes with Cobalt: SB-2 - 20210224 (140-22107-2). Elevated reporting limits (RLs) are provided.

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

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

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-22107-1	SB-1 - 20210224	Solid	02/24/21 13:35	02/27/21 11:15	
140-22107-2	SB-2 - 20210224	Solid	02/24/21 08:45	02/27/21 11:15	

Client Sample ID: SB-1 - 20210224

Date Collected: 02/24/21 13:35
Date Received: 02/27/21 11:15

Lab Sample ID: 140-22107-1

Matrix: Solid
Percent Solids: 87.5

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		11	0.21	mg/Kg	☼	03/11/21 08:00	03/23/21 12:57	4
Molybdenum	ND		9.1	0.37	mg/Kg	☼	03/11/21 08:00	03/23/21 12:57	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.1**	**J**	8.6	0.22	mg/Kg	☼	03/16/21 08:00	03/23/21 14:34	3
Molybdenum	ND		6.9	0.28	mg/Kg	☼	03/16/21 08:00	03/23/21 14:34	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.3**	**J**	2.9	0.051	mg/Kg	☼	03/17/21 08:00	03/23/21 16:03	1
Molybdenum	ND		2.3	0.094	mg/Kg	☼	03/17/21 08:00	03/23/21 16:03	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**2.5**	**J**	2.9	0.061	mg/Kg	☼	03/18/21 08:00	03/24/21 12:14	1
Molybdenum	**0.32**	**J**	2.3	0.094	mg/Kg	☼	03/18/21 08:00	03/24/21 12:14	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		43	0.69	mg/Kg	☼	03/22/21 08:00	03/24/21 13:41	5
Molybdenum	ND		34	1.4	mg/Kg	☼	03/22/21 08:00	03/24/21 13:41	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**2.0**	**J**	2.9	0.053	mg/Kg	☼	03/22/21 08:00	03/24/21 15:21	1
Molybdenum	**0.47**	**J**	2.3	0.11	mg/Kg	☼	03/22/21 08:00	03/24/21 15:21	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.54**	**J**	2.9	0.030	mg/Kg	☼	03/23/21 08:00	03/26/21 11:30	1
Molybdenum	ND		2.3	0.094	mg/Kg	☼	03/23/21 08:00	03/26/21 11:30	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**7.3**		2.5	0.023	mg/Kg			03/30/21 14:25	1
Molybdenum	**0.79**	**J**	2.0	0.082	mg/Kg			03/30/21 14:25	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**6.0**		2.9	0.030	mg/Kg	☼	03/10/21 08:00	03/28/21 11:06	1
Molybdenum	**0.86**	**J**	2.3	0.094	mg/Kg	☼	03/10/21 08:00	03/28/21 11:06	1

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: SB-2 - 20210224

Date Collected: 02/24/21 08:45
Date Received: 02/27/21 11:15

Lab Sample ID: 140-22107-2

Matrix: Solid
Percent Solids: 85.4

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.79**	**J**	12	0.21	mg/Kg	☼	03/11/21 08:00	03/23/21 13:02	4
Molybdenum	ND		9.4	0.38	mg/Kg	☼	03/11/21 08:00	03/23/21 13:02	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.59**	**J**	8.8	0.22	mg/Kg	☼	03/16/21 08:00	03/23/21 14:39	3
Molybdenum	ND		7.0	0.29	mg/Kg	☼	03/16/21 08:00	03/23/21 14:39	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.4**	**J**	2.9	0.053	mg/Kg	☼	03/17/21 08:00	03/23/21 16:08	1
Molybdenum	**0.14**	**J**	2.3	0.096	mg/Kg	☼	03/17/21 08:00	03/23/21 16:08	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**4.1**		2.9	0.062	mg/Kg	☼	03/18/21 08:00	03/24/21 12:19	1
Molybdenum	**0.55**	**J**	2.3	0.096	mg/Kg	☼	03/18/21 08:00	03/24/21 12:19	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		44	0.70	mg/Kg	☼	03/22/21 08:00	03/24/21 13:56	5
Molybdenum	ND		35	1.5	mg/Kg	☼	03/22/21 08:00	03/24/21 13:56	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**2.7**	**J**	2.9	0.054	mg/Kg	☼	03/22/21 08:00	03/24/21 15:26	1
Molybdenum	**0.34**	**J**	2.3	0.12	mg/Kg	☼	03/22/21 08:00	03/24/21 15:26	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.92**	**J**	5.9	0.061	mg/Kg	☼	03/23/21 08:00	03/26/21 14:23	2
Molybdenum	ND		2.3	0.096	mg/Kg	☼	03/23/21 08:00	03/26/21 11:35	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**11**		2.5	0.023	mg/Kg			03/30/21 14:25	1
Molybdenum	**1.0**	**J**	2.0	0.082	mg/Kg			03/30/21 14:25	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**8.7**		2.9	0.030	mg/Kg	☼	03/10/21 08:00	03/28/21 11:11	1
Molybdenum	**1.1**	**J**	2.3	0.096	mg/Kg	☼	03/10/21 08:00	03/28/21 11:11	1

Default Detection Limits

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Method: 6010B SEP - SEP Metals (ICP) - Step 1
Prep: 3010A
SEP: Exchangeable

Analyte	RL	MDL	Units
Cobalt	2.5	0.045	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 2
Prep: 3010A
SEP: Carbonate

Analyte	RL	MDL	Units
Cobalt	2.5	0.063	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 3
Prep: 3010A
SEP: Non-Crystalline

Analyte	RL	MDL	Units
Cobalt	2.5	0.045	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 4
Prep: 3010A
SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Cobalt	2.5	0.053	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 5
Prep: 3010A
SEP: Organic-Bound

Analyte	RL	MDL	Units
Cobalt	7.5	0.12	mg/Kg
Molybdenum	6.0	0.25	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 6
SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Cobalt	2.5	0.046	mg/Kg
Molybdenum	2.0	0.099	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 7
Prep: Residual

Analyte	RL	MDL	Units
Cobalt	2.5	0.026	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	RL	MDL	Units
Cobalt	2.5	0.023	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Default Detection Limits

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Method: 6010B - SEP Metals (ICP) - Total

Prep: Total

Analyte	RL	MDL	Units
Cobalt	2.5	0.026	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Lab Sample ID: MB 140-47551/13-A
Matrix: Solid
Analysis Batch: 48227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47551

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.026	mg/Kg		03/10/21 08:00	03/28/21 10:46	1
Molybdenum	ND		2.0	0.082	mg/Kg		03/10/21 08:00	03/28/21 10:46	1

Lab Sample ID: LCS 140-47551/14-A
Matrix: Solid
Analysis Batch: 48227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47551

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.17		mg/Kg		103	80 - 125
Molybdenum	25.0	25.4		mg/Kg		102	80 - 125

Lab Sample ID: LCSD 140-47551/15-A
Matrix: Solid
Analysis Batch: 48227

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47551

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	5.14		mg/Kg		103	80 - 125	1	30
Molybdenum	25.0	25.3		mg/Kg		101	80 - 125	0	30

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-47631/13-B ^4
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Method Blank
Prep Type: Step 1
Prep Batch: 47642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		10	0.18	mg/Kg		03/11/21 08:00	03/23/21 12:42	4
Molybdenum	ND		8.0	0.33	mg/Kg		03/11/21 08:00	03/23/21 12:42	4

Lab Sample ID: LCS 140-47631/14-B ^5
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Lab Control Sample
Prep Type: Step 1
Prep Batch: 47642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.95	J	mg/Kg		99	80 - 120
Molybdenum	25.0	24.3		mg/Kg		97	80 - 120

Lab Sample ID: LCSD 140-47631/15-B ^5
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 1
Prep Batch: 47642

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	5.08	J	mg/Kg		102	80 - 120	3	30
Molybdenum	25.0	24.7		mg/Kg		99	80 - 120	1	30

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: MB 140-47643/13-B ^3
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Method Blank
Prep Type: Step 2
Prep Batch: 47679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		7.5	0.19	mg/Kg		03/16/21 08:00	03/23/21 14:10	3
Molybdenum	ND		6.0	0.25	mg/Kg		03/16/21 08:00	03/23/21 14:10	3

Lab Sample ID: LCS 140-47643/14-B ^5
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Lab Control Sample
Prep Type: Step 2
Prep Batch: 47679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.28	J	mg/Kg		86	80 - 120
Molybdenum	25.0	18.7		mg/Kg		75	70 - 120

Lab Sample ID: LCSD 140-47643/15-B ^5
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 2
Prep Batch: 47679

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.30	J	mg/Kg		86	80 - 120	0	30
Molybdenum	25.0	18.8		mg/Kg		75	70 - 120	0	30

Lab Sample ID: MB 140-47680/13-B
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Method Blank
Prep Type: Step 3
Prep Batch: 47796

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.045	mg/Kg		03/17/21 08:00	03/23/21 15:49	1
Molybdenum	ND		2.0	0.082	mg/Kg		03/17/21 08:00	03/23/21 15:49	1

Lab Sample ID: LCS 140-47680/14-B
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Lab Control Sample
Prep Type: Step 3
Prep Batch: 47796

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.90		mg/Kg		98	80 - 120
Molybdenum	25.0	23.9		mg/Kg		95	80 - 120

Lab Sample ID: LCSD 140-47680/15-B
Matrix: Solid
Analysis Batch: 48064

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 3
Prep Batch: 47796

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	4.78		mg/Kg		96	80 - 120	3	30
Molybdenum	25.0	23.4		mg/Kg		94	80 - 120	2	30

Lab Sample ID: MB 140-47797/13-B
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Method Blank
Prep Type: Step 4
Prep Batch: 47850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.053	mg/Kg		03/18/21 08:00	03/24/21 12:00	1
Molybdenum	ND		2.0	0.082	mg/Kg		03/18/21 08:00	03/24/21 12:00	1

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: LCS 140-47797/14-B
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Lab Control Sample
Prep Type: Step 4
Prep Batch: 47850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	5.16		mg/Kg		103	80 - 120
Molybdenum	25.0	25.3		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 140-47797/15-B
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 4
Prep Batch: 47850

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	5.00	5.16		mg/Kg		103	80 - 120	0	30
Molybdenum	25.0	25.3		mg/Kg		101	80 - 120	0	30

Lab Sample ID: MB 140-47851/13-B ^5
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Method Blank
Prep Type: Step 5
Prep Batch: 47922

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		38	0.60	mg/Kg		03/22/21 08:00	03/24/21 13:27	5
Molybdenum	ND		30	1.3	mg/Kg		03/22/21 08:00	03/24/21 13:27	5

Lab Sample ID: LCS 140-47851/14-B ^5
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Lab Control Sample
Prep Type: Step 5
Prep Batch: 47922

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	15.0	2.02	J	mg/Kg		13	1 - 60
Molybdenum	75.0	51.7		mg/Kg		69	60 - 100

Lab Sample ID: LCSD 140-47851/15-B ^5
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 5
Prep Batch: 47922

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	15.0	2.13	J	mg/Kg		14	1 - 60	5	30
Molybdenum	75.0	51.8		mg/Kg		69	60 - 100	0	30

Lab Sample ID: MB 140-47923/13-A
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Method Blank
Prep Type: Step 6
Prep Batch: 47923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.046	mg/Kg		03/22/21 08:00	03/24/21 15:06	1
Molybdenum	ND		2.0	0.099	mg/Kg		03/22/21 08:00	03/24/21 15:06	1

Lab Sample ID: LCS 140-47923/14-A
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Lab Control Sample
Prep Type: Step 6
Prep Batch: 47923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	5.00	4.98		mg/Kg		100	80 - 120
Molybdenum	25.0	23.9		mg/Kg		96	80 - 120

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: LCSD 140-47923/15-A
Matrix: Solid
Analysis Batch: 48108

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 6
Prep Batch: 47923

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt			5.00	5.09		mg/Kg		102	80 - 120	2	30
Molybdenum			25.0	24.2		mg/Kg		97	80 - 120	1	30

Lab Sample ID: MB 140-47981/13-A
Matrix: Solid
Analysis Batch: 48208

Client Sample ID: Method Blank
Prep Type: Step 7
Prep Batch: 47981

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		2.5	0.026	mg/Kg		03/23/21 08:00	03/26/21 11:11	1
Molybdenum	ND		2.0	0.082	mg/Kg		03/23/21 08:00	03/26/21 11:11	1

Lab Sample ID: LCS 140-47981/14-A
Matrix: Solid
Analysis Batch: 48208

Client Sample ID: Lab Control Sample
Prep Type: Step 7
Prep Batch: 47981

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cobalt			5.00	5.20		mg/Kg		104	80 - 125		
Molybdenum			25.0	25.7		mg/Kg		103	80 - 125		

Lab Sample ID: LCSD 140-47981/15-A
Matrix: Solid
Analysis Batch: 48208

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 7
Prep Batch: 47981

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt			5.00	5.15		mg/Kg		103	80 - 125	1	30
Molybdenum			25.0	25.4		mg/Kg		102	80 - 125	1	30

Metals

Prep Batch: 47551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Total/NA	Solid	Total	
140-22107-2	SB-2 - 20210224	Total/NA	Solid	Total	
MB 140-47551/13-A	Method Blank	Total/NA	Solid	Total	
LCS 140-47551/14-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-47551/15-A	Lab Control Sample Dup	Total/NA	Solid	Total	

SEP Batch: 47631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 1	Solid	Exchangeable	
140-22107-2	SB-2 - 20210224	Step 1	Solid	Exchangeable	
MB 140-47631/13-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-47631/14-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-47631/15-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	

Prep Batch: 47642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 1	Solid	3010A	47631
140-22107-2	SB-2 - 20210224	Step 1	Solid	3010A	47631
MB 140-47631/13-B ^4	Method Blank	Step 1	Solid	3010A	47631
LCS 140-47631/14-B ^5	Lab Control Sample	Step 1	Solid	3010A	47631
LCSD 140-47631/15-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	47631

SEP Batch: 47643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 2	Solid	Carbonate	
140-22107-2	SB-2 - 20210224	Step 2	Solid	Carbonate	
MB 140-47643/13-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-47643/14-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-47643/15-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	

Prep Batch: 47679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 2	Solid	3010A	47643
140-22107-2	SB-2 - 20210224	Step 2	Solid	3010A	47643
MB 140-47643/13-B ^3	Method Blank	Step 2	Solid	3010A	47643
LCS 140-47643/14-B ^5	Lab Control Sample	Step 2	Solid	3010A	47643
LCSD 140-47643/15-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	47643

SEP Batch: 47680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 3	Solid	Non-Crystalline	
140-22107-2	SB-2 - 20210224	Step 3	Solid	Non-Crystalline	
MB 140-47680/13-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-47680/14-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-47680/15-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	

Prep Batch: 47796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 3	Solid	3010A	47680
140-22107-2	SB-2 - 20210224	Step 3	Solid	3010A	47680
MB 140-47680/13-B	Method Blank	Step 3	Solid	3010A	47680

Metals (Continued)

Prep Batch: 47796 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 140-47680/14-B	Lab Control Sample	Step 3	Solid	3010A	47680
LCSD 140-47680/15-B	Lab Control Sample Dup	Step 3	Solid	3010A	47680

SEP Batch: 47797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 4	Solid	Metal Hydroxide	
140-22107-2	SB-2 - 20210224	Step 4	Solid	Metal Hydroxide	
MB 140-47797/13-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-47797/14-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-47797/15-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	

Prep Batch: 47850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 4	Solid	3010A	47797
140-22107-2	SB-2 - 20210224	Step 4	Solid	3010A	47797
MB 140-47797/13-B	Method Blank	Step 4	Solid	3010A	47797
LCS 140-47797/14-B	Lab Control Sample	Step 4	Solid	3010A	47797
LCSD 140-47797/15-B	Lab Control Sample Dup	Step 4	Solid	3010A	47797

SEP Batch: 47851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 5	Solid	Organic-Bound	
140-22107-2	SB-2 - 20210224	Step 5	Solid	Organic-Bound	
MB 140-47851/13-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-47851/14-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-47851/15-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	

Prep Batch: 47922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 5	Solid	3010A	47851
140-22107-2	SB-2 - 20210224	Step 5	Solid	3010A	47851
MB 140-47851/13-B ^5	Method Blank	Step 5	Solid	3010A	47851
LCS 140-47851/14-B ^5	Lab Control Sample	Step 5	Solid	3010A	47851
LCSD 140-47851/15-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	47851

SEP Batch: 47923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 6	Solid	Acid/Sulfide	
140-22107-2	SB-2 - 20210224	Step 6	Solid	Acid/Sulfide	
MB 140-47923/13-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-47923/14-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-47923/15-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	

Prep Batch: 47981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 7	Solid	Residual	
140-22107-2	SB-2 - 20210224	Step 7	Solid	Residual	
MB 140-47981/13-A	Method Blank	Step 7	Solid	Residual	
LCS 140-47981/14-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-47981/15-A	Lab Control Sample Dup	Step 7	Solid	Residual	

Metals

Analysis Batch: 48064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 1	Solid	6010B SEP	47642
140-22107-1	SB-1 - 20210224	Step 2	Solid	6010B SEP	47679
140-22107-1	SB-1 - 20210224	Step 3	Solid	6010B SEP	47796
140-22107-2	SB-2 - 20210224	Step 1	Solid	6010B SEP	47642
140-22107-2	SB-2 - 20210224	Step 2	Solid	6010B SEP	47679
140-22107-2	SB-2 - 20210224	Step 3	Solid	6010B SEP	47796
MB 140-47631/13-B ^4	Method Blank	Step 1	Solid	6010B SEP	47642
MB 140-47643/13-B ^3	Method Blank	Step 2	Solid	6010B SEP	47679
MB 140-47680/13-B	Method Blank	Step 3	Solid	6010B SEP	47796
LCS 140-47631/14-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	47642
LCS 140-47643/14-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	47679
LCS 140-47680/14-B	Lab Control Sample	Step 3	Solid	6010B SEP	47796
LCSD 140-47631/15-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	47642
LCSD 140-47643/15-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	47679
LCSD 140-47680/15-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	47796

Analysis Batch: 48108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 4	Solid	6010B SEP	47850
140-22107-1	SB-1 - 20210224	Step 5	Solid	6010B SEP	47922
140-22107-1	SB-1 - 20210224	Step 6	Solid	6010B SEP	47923
140-22107-2	SB-2 - 20210224	Step 4	Solid	6010B SEP	47850
140-22107-2	SB-2 - 20210224	Step 5	Solid	6010B SEP	47922
140-22107-2	SB-2 - 20210224	Step 6	Solid	6010B SEP	47923
MB 140-47797/13-B	Method Blank	Step 4	Solid	6010B SEP	47850
MB 140-47851/13-B ^5	Method Blank	Step 5	Solid	6010B SEP	47922
MB 140-47923/13-A	Method Blank	Step 6	Solid	6010B SEP	47923
LCS 140-47797/14-B	Lab Control Sample	Step 4	Solid	6010B SEP	47850
LCS 140-47851/14-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	47922
LCS 140-47923/14-A	Lab Control Sample	Step 6	Solid	6010B SEP	47923
LCSD 140-47797/15-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	47850
LCSD 140-47851/15-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	47922
LCSD 140-47923/15-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	47923

Analysis Batch: 48208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Step 7	Solid	6010B SEP	47981
140-22107-2	SB-2 - 20210224	Step 7	Solid	6010B SEP	47981
140-22107-2	SB-2 - 20210224	Step 7	Solid	6010B SEP	47981
MB 140-47981/13-A	Method Blank	Step 7	Solid	6010B SEP	47981
LCS 140-47981/14-A	Lab Control Sample	Step 7	Solid	6010B SEP	47981
LCSD 140-47981/15-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	47981

Analysis Batch: 48227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Total/NA	Solid	6010B	47551
140-22107-2	SB-2 - 20210224	Total/NA	Solid	6010B	47551
MB 140-47551/13-A	Method Blank	Total/NA	Solid	6010B	47551
LCS 140-47551/14-A	Lab Control Sample	Total/NA	Solid	6010B	47551
LCSD 140-47551/15-A	Lab Control Sample Dup	Total/NA	Solid	6010B	47551

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Metals

Analysis Batch: 48306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Sum of Steps 1-7	Solid	6010B SEP	
140-22107-2	SB-2 - 20210224	Sum of Steps 1-7	Solid	6010B SEP	

General Chemistry

Analysis Batch: 47479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22107-1	SB-1 - 20210224	Total/NA	Solid	Moisture	
140-22107-2	SB-2 - 20210224	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: SB-1 - 20210224

Date Collected: 02/24/21 13:35
Date Received: 02/27/21 11:15

Lab Sample ID: 140-22107-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			48306	03/30/21 14:25	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			47479	03/05/21 07:52	BKD	TAL KNX
	Instrument ID: W3									

Client Sample ID: SB-1 - 20210224

Date Collected: 02/24/21 13:35
Date Received: 02/27/21 11:15

Lab Sample ID: 140-22107-1

Matrix: Solid
Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	47551	03/10/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			48227	03/28/21 11:06	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	47631	03/10/21 10:45	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	47642	03/11/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			48064	03/23/21 12:57	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	47643	03/11/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	47679	03/16/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			48064	03/23/21 14:34	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	47680	03/16/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	47796	03/17/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48064	03/23/21 16:03	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	47797	03/17/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	47850	03/18/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48108	03/24/21 12:14	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	47851	03/18/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	47922	03/22/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48108	03/24/21 13:41	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	47923	03/22/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48108	03/24/21 15:21	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	47981	03/23/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			48208	03/26/21 11:30	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: SB-2 - 20210224
Date Collected: 02/24/21 08:45
Date Received: 02/27/21 11:15

Lab Sample ID: 140-22107-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			48306	03/30/21 14:25	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			47479	03/05/21 07:52	BKD	TAL KNX
	Instrument ID: W3									

Client Sample ID: SB-2 - 20210224
Date Collected: 02/24/21 08:45
Date Received: 02/27/21 11:15

Lab Sample ID: 140-22107-2
Matrix: Solid
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	47551	03/10/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			48227	03/28/21 11:11	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	47631	03/10/21 10:45	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	47642	03/11/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			48064	03/23/21 13:02	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	47643	03/11/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	47679	03/16/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			48064	03/23/21 14:39	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	47680	03/16/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	47796	03/17/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48064	03/23/21 16:08	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	47797	03/17/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	47850	03/18/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48108	03/24/21 12:19	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	47851	03/18/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	47922	03/22/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48108	03/24/21 13:56	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	47923	03/22/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48108	03/24/21 15:26	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	47981	03/23/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			48208	03/26/21 11:35	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	47981	03/23/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		2			48208	03/26/21 14:23	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47551/13-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	47551	03/10/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			48227	03/28/21 10:46	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47631/13-B ^4
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	47631	03/10/21 10:45	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	47642	03/11/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			48064	03/23/21 12:42	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47643/13-B ^3
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	47643	03/11/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	47679	03/16/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			48064	03/23/21 14:10	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47680/13-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	47680	03/16/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	47796	03/17/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48064	03/23/21 15:49	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47797/13-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	47797	03/17/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	47850	03/18/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48108	03/24/21 12:00	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47851/13-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	47851	03/18/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	47922	03/22/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48108	03/24/21 13:27	KNC	TAL KNX
	Instrument ID:	DUO								

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47923/13-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	47923	03/22/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48108	03/24/21 15:06	KNC	TAL KNX
	Instrument ID:	DUO								

Client Sample ID: Method Blank
Lab Sample ID: MB 140-47981/13-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	47981	03/23/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			48208	03/26/21 11:11	KNC	TAL KNX
	Instrument ID:	DUO								

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-47551/14-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	47551	03/10/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			48227	03/28/21 10:51	KNC	TAL KNX
	Instrument ID:	DUO								

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-47631/14-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	47631	03/10/21 10:45	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	47642	03/11/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			48064	03/23/21 12:47	KNC	TAL KNX
	Instrument ID:	DUO								

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-47643/14-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	47643	03/11/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	47679	03/16/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			48064	03/23/21 14:15	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-47680/14-B
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	47680	03/16/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	47796	03/17/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48064	03/23/21 15:54	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-47797/14-B
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	47797	03/17/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	47850	03/18/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48108	03/24/21 12:05	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-47851/14-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	47851	03/18/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	47922	03/22/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48108	03/24/21 13:32	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-47923/14-A
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	47923	03/22/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48108	03/24/21 15:11	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-47981/14-A
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	47981	03/23/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			48208	03/26/21 11:16	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-47551/15-A
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	47551	03/10/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			48227	03/28/21 10:56	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-47631/15-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	47631	03/10/21 10:45	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	47642	03/11/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			48064	03/23/21 17:31	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-47643/15-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	47643	03/11/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	47679	03/16/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			48064	03/23/21 14:29	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-47680/15-B
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	47680	03/16/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	47796	03/17/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48064	03/23/21 15:59	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-47797/15-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	47797	03/17/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	47850	03/18/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48108	03/24/21 12:09	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-47851/15-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	47851	03/18/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	47922	03/22/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48108	03/24/21 13:37	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-47923/15-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	47923	03/22/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48108	03/24/21 15:16	KNC	TAL KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-47981/15-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	47981	03/23/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			48208	03/26/21 11:20	KNC	TAL KNX
	Instrument ID: DUO									

Laboratory References:
TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Laboratory: Eurofins TestAmerica, Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
ANAB	ISO/IEC 17025	L2311	02-14-22
Arkansas DEQ	State	88-0688	06-17-21
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-21 *
Connecticut	State	PH-0223	09-30-21
Florida	NELAP	E87177	07-01-21
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	10-31-21
Kentucky (DW)	State	90101	12-31-21
Louisiana	NELAP	83979	06-30-21
Louisiana (DW)	State	LA019	12-31-21
Maryland	State	277	03-31-22
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-21
New Hampshire	NELAP	299919	01-17-22
New Jersey	NELAP	TN001	07-01-21
New York	NELAP	10781	04-01-21
North Carolina (DW)	State	21705	07-31-21
North Carolina (WW/SW)	State	64	12-31-21
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-21
Oregon	NELAP	TNI0189	01-01-22
Pennsylvania	NELAP	68-00576	12-31-21
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-21
Virginia	NELAP	460176	09-14-21
Washington	State	C593	01-19-22
West Virginia (DW)	State	9955C	01-02-22
West Virginia DEP	State	345	05-01-21
Wisconsin	State	998044300	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: SEP Analysis - Miami Fort

Job ID: 140-22107-1

Method	Method Description	Protocol	Laboratory
6010B	SEP Metals (ICP) - Total	SW846	TAL KNX
6010B SEP	SEP Metals (ICP)	SW846	TAL KNX
Moisture	Percent Moisture	EPA	TAL KNX
3010A	Preparation, Total Metals	SW846	TAL KNX
Acid/Sulfide	Sequential Extraction Procedure, Acid/Sulfide Fraction	TAL-KNOX	TAL KNX
Carbonate	Sequential Extraction Procedure, Carbonate Fraction	TAL-KNOX	TAL KNX
Exchangeable	Sequential Extraction Procedure, Exchangeable Fraction	TAL-KNOX	TAL KNX
Metal Hydroxide	Sequential Extraction Procedure, Metal Hydroxide Fraction	TAL-KNOX	TAL KNX
Non-Crystalline	Sequential Extraction Procedure, Non-crystalline Materials	TAL-KNOX	TAL KNX
Organic-Bound	Sequential Extraction Procedure, Organic Bound Fraction	TAL-KNOX	TAL KNX
Residual	Sequential Extraction Procedure, Residual Fraction	TAL-KNOX	TAL KNX
Total	Preparation, Total Material	TAL-KNOX	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-KNOX = TestAmerica Laboratories, Knoxville, Facility Standard Operating Procedure.

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Phone: 865-291-3000 Fax: 865-584-4315

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Brian Acos	Lab PM: Henry, Ryan	Carrier Tracking No(s):	COC No: 140-8978-2733.1
Client Contact: Allison Kreinberg	Phone: 513-235-3497	E-Mail: williamr.henry@eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Geosyntec Consultants, Inc.	PWSID:			Job #:
Address: 941 Chatham Lane Suite 103	Due Date Requested:			
City: Columbus	TAT Requested (days): standard			
State, Zip: OH, 43221	Compliance Project: Δ Yes Δ No			
Phone: 614-468-0421(Tel)	PO #: Purchase Order not required			
Email: akreinberg@geosyntec.com	WO #:			
Project Name: Miami Fact	Project #: 14006199			
Site: Miami Fact Gen. station	SSOW#:			

Analysis Requested

140-22107 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B_SEP - SEP Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
SB-1-20210224	2/24/21	1335	C	S	N	N	✓		
SB-2-20210224	2/24/21	845	C	S	N	N	✓		

BA

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Brian Acos	2/25/21 1730	GST			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 11 01 2020

Loc: 140
22107

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : vC68 Correction factor: +0.0	✓			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

RT: 4.1°c CT: 4.1°c, 1 cooler
Custody seal intact
FedEx #7841 2979 8554
FedEx First OVM
KW 2/27/21

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14006199 PM Instructions: _____

Sample Receiving Associate: KW Date: 2/27/21

QA026R32.doc, 062719

3/30/2021

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Allison Kreinberg
Geosyntec Consultants Inc
941 Chatham Lane
Suite 103
Columbus, Ohio 43221

Generated 8/28/2023 3:37:02 PM

JOB DESCRIPTION

Vistra / Miami Fort - SEP

JOB NUMBER

140-32884-1

Eurofins Knoxville
5815 Middlebrook Pike
Knoxville TN 37921

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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8/28/2023 3:37:02 PM

Authorized for release by
Ryan Henry, Project Manager I
WilliamR.Henry@et.eurofinsus.com
(865)291-3006

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Definitions/Glossary

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 140-32884-1

Laboratory: Eurofins Knoxville

Narrative

Job Narrative
140-32884-1

Receipt
The samples were received on 7/28/2023 at 1:45pm and arrived in good condition. The temperature of the cooler at receipt was 32.3º C.

Receipt Exceptions
The Field Sampler was not listed on the Chain of Custody.

Metals
7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

· Step 1 - Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO4), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 2 - Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 3 - Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 4 - Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 5 - Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 6 - Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCl-HNO3-H2O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
· Step 7 - Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

Result, µg/g or mg/Kg, dry weight = (C × V × V1 × D) / (W × S × V2)

Where:
C = Concentration from instrument readout, µg/mL
V = Final volume of digestate, mL
D = Instrument dilution factor
V1 = Total volume of leachate, mL
V2 = Volume of leachate digested, mL
W = Wet weight of sample, g
S = Percent solids/100

Job ID: 140-32884-1 (Continued)

Laboratory: Eurofins Knoxville (Continued)

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

Magnesium was not reported for step 1 because the extraction solution for this step (magnesium sulfate) contains high levels of magnesium.

Sodium was not reported for steps 2 and 5 since the extraction solution for these steps contain high levels of sodium.

The sum of steps 1 through 7 is much higher than the total result for sodium and magnesium due to the magnesium and sodium introduced by the extraction solutions.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Method 6010B: The sample duplicate (DUP) precision for preparation batch 140-75970 and analytical batch 140-76934 was outside control limits. Sample non-homogeneity is suspected.

Method 6010B: The serial dilution performed for the following samples associated with batch 140-76934 was outside control limits: B23-12 31.5-33.5 20230712 (140-32884-2), (140-32884-A-2-A SD) and (140-32884-A-2-A SD ^5)

Methods 6010B, 6010B SEP: The following samples were diluted due to the presence of Silicon which interferes with Arsenic: B23-1 43.5-45 20230711 (140-32884-1), B23-12 31.5-33.5 20230712 (140-32884-2), B23-12 38.5-39.8 20230712 (140-32884-3) and B23-12 51.5-53.5 20230712 (140-32884-4). Elevated reporting limits (RLs) are provided.

Methods 6010B, 6010B SEP: The following samples were diluted due to the presence of Silicon which interferes with Cobalt: B23-12 31.5-33.5 20230712 (140-32884-2), B23-2 42-43.6 20230724 (140-32884-5) and B23-2 59-60.5 20230724 (140-32884-6). Elevated reporting limits (RLs) are provided.

Methods 6010B, 6010B SEP: The following samples were diluted due to the presence of Titanium which interferes with Cobalt: B23-12 31.5-33.5 20230712 (140-32884-2) and B23-2 42-43.6 20230724 (140-32884-5). Elevated reporting limits (RLs) are provided.

Method 6010B SEP: The sample duplicate (DUP) precision for preparation batch 140-76044, 140-76084, 140-76085 and 140-76118 and analytical batch 140-76517 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

General Chemistry
% Moisture: The samples were analyzed for percent moisture using SOP number KNOX-WC-0012 (based on Modified MCAWW 160.3 and SM2540B and on the percent moisture determinations described in methods 3540C and 3550B).

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

Sample Summary

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-32884-1	B23-1 43.5-45 20230711	Solid	07/11/23 14:45	07/28/23 13:45
140-32884-2	B23-12 31.5-33.5 20230712	Solid	07/12/23 14:15	07/28/23 13:45
140-32884-3	B23-12 38.5-39.8 20230712	Solid	07/12/23 14:30	07/28/23 13:45
140-32884-4	B23-12 51.5-53.5 20230712	Solid	07/12/23 14:45	07/28/23 13:45
140-32884-5	B23-2 42-43.6 20230724	Solid	07/24/23 09:30	07/28/23 13:45
140-32884-6	B23-2 59-60.5 20230724	Solid	07/24/23 11:00	07/28/23 13:45

Client Sample ID: B23-1 43.5-45 20230711

Date Collected: 07/11/23 14:45
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-1

Matrix: Solid
Percent Solids: 83.7

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.4	0.62	mg/Kg	☼	08/02/23 08:00	08/15/23 11:07	4
Iron	ND		24	14	mg/Kg	☼	08/02/23 08:00	08/15/23 11:07	4
Manganese	**0.87**	**J**	3.6	0.15	mg/Kg	☼	08/02/23 08:00	08/15/23 11:07	4

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.8	0.47	mg/Kg	☼	08/03/23 08:00	08/15/23 12:11	3
Iron	**45**		18	10	mg/Kg	☼	08/03/23 08:00	08/15/23 12:11	3
Manganese	**180**		2.7	1.0	mg/Kg	☼	08/03/23 08:00	08/15/23 12:11	3

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.35**	**J**	0.60	0.16	mg/Kg	☼	08/04/23 08:00	08/15/23 13:16	1
Iron	**180**		6.0	3.5	mg/Kg	☼	08/04/23 08:00	08/15/23 13:16	1
Manganese	**120**	**B**	0.90	0.032	mg/Kg	☼	08/04/23 08:00	08/15/23 13:16	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.62**		0.60	0.26	mg/Kg	☼	08/07/23 08:00	08/15/23 14:21	1
Iron	**2600**		6.0	3.5	mg/Kg	☼	08/07/23 08:00	08/15/23 14:21	1
Manganese	**140**		0.90	0.16	mg/Kg	☼	08/07/23 08:00	08/15/23 14:21	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		9.0	2.3	mg/Kg	☼	08/09/23 08:00	08/21/23 14:24	5
Iron	ND		90	53	mg/Kg	☼	08/09/23 08:00	08/21/23 14:24	5
Manganese	**9.7**	**J**	13	2.2	mg/Kg	☼	08/09/23 08:00	08/21/23 14:24	5

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.2**		0.60	0.18	mg/Kg	☼	08/08/23 11:30	08/21/23 15:29	1
Iron	**6000**		6.0	3.5	mg/Kg	☼	08/08/23 11:30	08/21/23 15:29	1
Manganese	**58**		0.90	0.30	mg/Kg	☼	08/08/23 11:30	08/21/23 15:29	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.4**		1.2	0.72	mg/Kg	☼	08/09/23 08:00	08/24/23 14:27	2
Iron	**3400**		6.0	4.9	mg/Kg	☼	08/09/23 08:00	08/24/23 12:31	1
Manganese	**57**		0.90	0.37	mg/Kg	☼	08/09/23 08:00	08/24/23 12:31	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.6**		0.50	0.13	mg/Kg			08/25/23 14:43	1
Iron	**12000**		5.0	4.1	mg/Kg			08/25/23 14:43	1
Manganese	**570**		0.75	0.052	mg/Kg			08/25/23 14:43	1

Method: SW846 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.9**		1.2	0.72	mg/Kg	☼	08/09/23 08:00	08/24/23 15:16	2
Iron	**11000**		6.0	4.9	mg/Kg	☼	08/09/23 08:00	08/24/23 13:23	1
Manganese	**510**		0.90	0.37	mg/Kg	☼	08/09/23 08:00	08/24/23 13:23	1

Client Sample ID: B23-12 31.5-33.5 20230712
Date Collected: 07/12/23 14:15
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-2
Matrix: Solid
Percent Solids: 77.0

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.6	0.68	mg/Kg	☼	08/02/23 08:00	08/15/23 11:12	4
Iron	ND		26	15	mg/Kg	☼	08/02/23 08:00	08/15/23 11:12	4
Manganese	**62**		3.9	0.16	mg/Kg	☼	08/02/23 08:00	08/15/23 11:12	4

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.9	0.51	mg/Kg	☼	08/03/23 08:00	08/15/23 12:16	3
Iron	**290**		19	11	mg/Kg	☼	08/03/23 08:00	08/15/23 12:16	3
Manganese	**47**		2.9	1.1	mg/Kg	☼	08/03/23 08:00	08/15/23 12:16	3

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.8**		0.65	0.17	mg/Kg	☼	08/04/23 08:00	08/15/23 13:21	1
Iron	**4800**		6.5	3.8	mg/Kg	☼	08/04/23 08:00	08/15/23 13:21	1
Manganese	**170**	**B**	0.97	0.035	mg/Kg	☼	08/04/23 08:00	08/15/23 13:21	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.99**		0.65	0.29	mg/Kg	☼	08/07/23 08:00	08/15/23 14:26	1
Iron	**6400**		6.5	3.8	mg/Kg	☼	08/07/23 08:00	08/15/23 14:26	1
Manganese	**98**		0.97	0.17	mg/Kg	☼	08/07/23 08:00	08/15/23 14:26	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		9.7	2.5	mg/Kg	☼	08/09/23 08:00	08/21/23 14:29	5
Iron	ND		97	57	mg/Kg	☼	08/09/23 08:00	08/21/23 14:29	5
Manganese	**8.7**	**J**	15	2.4	mg/Kg	☼	08/09/23 08:00	08/21/23 14:29	5

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.4**		0.65	0.19	mg/Kg	☼	08/08/23 11:30	08/21/23 15:34	1
Iron	**6900**		6.5	3.8	mg/Kg	☼	08/08/23 11:30	08/21/23 15:34	1
Manganese	**38**		0.97	0.32	mg/Kg	☼	08/08/23 11:30	08/21/23 15:34	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.7**		1.3	0.78	mg/Kg	☼	08/09/23 08:00	08/24/23 14:32	2
Iron	**5000**		6.5	5.3	mg/Kg	☼	08/09/23 08:00	08/24/23 12:37	1
Manganese	**35**		0.97	0.40	mg/Kg	☼	08/09/23 08:00	08/24/23 12:37	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.9**		0.50	0.13	mg/Kg			08/25/23 14:43	1
Iron	**23000**		5.0	4.1	mg/Kg			08/25/23 14:43	1
Manganese	**460**		0.75	0.052	mg/Kg			08/25/23 14:43	1

Method: SW846 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.7**		0.65	0.39	mg/Kg	☼	08/09/23 08:00	08/24/23 13:28	1
Iron	**19000**		6.5	5.3	mg/Kg	☼	08/09/23 08:00	08/24/23 13:28	1
Manganese	**510**		0.97	0.40	mg/Kg	☼	08/09/23 08:00	08/24/23 13:28	1

Client Sample ID: B23-12 38.5-39.8 20230712

Date Collected: 07/12/23 14:30
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-3

Matrix: Solid
Percent Solids: 89.1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.2	0.58	mg/Kg	☼	08/02/23 08:00	08/15/23 11:21	4
Iron	ND		22	13	mg/Kg	☼	08/02/23 08:00	08/15/23 11:21	4
Manganese	**4.3**		3.4	0.14	mg/Kg	☼	08/02/23 08:00	08/15/23 11:21	4

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.7	0.44	mg/Kg	☼	08/03/23 08:00	08/15/23 12:26	3
Iron	**150**		17	9.8	mg/Kg	☼	08/03/23 08:00	08/15/23 12:26	3
Manganese	**130**		2.5	0.94	mg/Kg	☼	08/03/23 08:00	08/15/23 12:26	3

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.77**		0.56	0.15	mg/Kg	☼	08/04/23 08:00	08/15/23 13:31	1
Iron	**1400**		5.6	3.3	mg/Kg	☼	08/04/23 08:00	08/15/23 13:31	1
Manganese	**79**	**B**	0.84	0.030	mg/Kg	☼	08/04/23 08:00	08/15/23 13:31	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.43**	**J**	0.56	0.25	mg/Kg	☼	08/07/23 08:00	08/15/23 14:50	1
Iron	**2600**		5.6	3.3	mg/Kg	☼	08/07/23 08:00	08/15/23 14:50	1
Manganese	**160**		0.84	0.15	mg/Kg	☼	08/07/23 08:00	08/15/23 14:50	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		8.4	2.1	mg/Kg	☼	08/09/23 08:00	08/21/23 14:39	5
Iron	ND		84	49	mg/Kg	☼	08/09/23 08:00	08/21/23 14:39	5
Manganese	**11**	**J**	13	2.1	mg/Kg	☼	08/09/23 08:00	08/21/23 14:39	5

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.5**		0.56	0.17	mg/Kg	☼	08/08/23 11:30	08/21/23 15:44	1
Iron	**7200**		5.6	3.3	mg/Kg	☼	08/08/23 11:30	08/21/23 15:44	1
Manganese	**70**		0.84	0.28	mg/Kg	☼	08/08/23 11:30	08/21/23 15:44	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.3**		1.1	0.67	mg/Kg	☼	08/09/23 08:00	08/24/23 14:41	2
Iron	**6300**		5.6	4.6	mg/Kg	☼	08/09/23 08:00	08/24/23 12:57	1
Manganese	**100**		0.84	0.35	mg/Kg	☼	08/09/23 08:00	08/24/23 12:57	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.0**		0.50	0.13	mg/Kg			08/25/23 14:43	1
Iron	**18000**		5.0	4.1	mg/Kg			08/25/23 14:43	1
Manganese	**560**		0.75	0.052	mg/Kg			08/25/23 14:43	1

Method: SW846 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.0**		1.1	0.67	mg/Kg	☼	08/09/23 08:00	08/24/23 15:31	2
Iron	**12000**		5.6	4.6	mg/Kg	☼	08/09/23 08:00	08/24/23 13:53	1
Manganese	**440**		0.84	0.35	mg/Kg	☼	08/09/23 08:00	08/24/23 13:53	1

Client Sample ID: B23-12 51.5-53.5 20230712
Date Collected: 07/12/23 14:45
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-4
Matrix: Solid
Percent Solids: 84.6

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.4	0.61	mg/Kg	☼	08/02/23 08:00	08/15/23 11:26	4
Iron	ND		24	14	mg/Kg	☼	08/02/23 08:00	08/15/23 11:26	4
Manganese	**4.7**		3.5	0.15	mg/Kg	☼	08/02/23 08:00	08/15/23 11:26	4

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.8	0.46	mg/Kg	☼	08/03/23 08:00	08/15/23 12:31	3
Iron	**150**		18	10	mg/Kg	☼	08/03/23 08:00	08/15/23 12:31	3
Manganese	**98**		2.7	0.99	mg/Kg	☼	08/03/23 08:00	08/15/23 12:31	3

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.49**	**J**	0.59	0.15	mg/Kg	☼	08/04/23 08:00	08/15/23 13:51	1
Iron	**890**		5.9	3.4	mg/Kg	☼	08/04/23 08:00	08/15/23 13:51	1
Manganese	**54**	**B**	0.89	0.032	mg/Kg	☼	08/04/23 08:00	08/15/23 13:51	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.53**	**J**	0.59	0.26	mg/Kg	☼	08/07/23 08:00	08/15/23 14:55	1
Iron	**1900**		5.9	3.4	mg/Kg	☼	08/07/23 08:00	08/15/23 14:55	1
Manganese	**67**		0.89	0.15	mg/Kg	☼	08/07/23 08:00	08/15/23 14:55	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.4**	**J**	8.9	2.2	mg/Kg	☼	08/09/23 08:00	08/21/23 14:44	5
Iron	ND		89	52	mg/Kg	☼	08/09/23 08:00	08/21/23 14:44	5
Manganese	**4.1**	**J**	13	2.2	mg/Kg	☼	08/09/23 08:00	08/21/23 14:44	5

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.7**		0.59	0.18	mg/Kg	☼	08/08/23 11:30	08/21/23 15:49	1
Iron	**6400**		5.9	3.4	mg/Kg	☼	08/08/23 11:30	08/21/23 15:49	1
Manganese	**46**		0.89	0.30	mg/Kg	☼	08/08/23 11:30	08/21/23 15:49	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.8**		1.2	0.71	mg/Kg	☼	08/09/23 08:00	08/24/23 14:46	2
Iron	**7700**		5.9	4.8	mg/Kg	☼	08/09/23 08:00	08/24/23 13:02	1
Manganese	**67**		0.89	0.37	mg/Kg	☼	08/09/23 08:00	08/24/23 13:02	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.9**		0.50	0.13	mg/Kg			08/25/23 14:43	1
Iron	**17000**		5.0	4.1	mg/Kg			08/25/23 14:43	1
Manganese	**340**		0.75	0.052	mg/Kg			08/25/23 14:43	1

Method: SW846 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.8**		1.2	0.71	mg/Kg	☼	08/09/23 08:00	08/24/23 15:36	2
Iron	**12000**		5.9	4.8	mg/Kg	☼	08/09/23 08:00	08/24/23 13:59	1
Manganese	**280**		0.89	0.37	mg/Kg	☼	08/09/23 08:00	08/24/23 13:59	1

Client Sample ID: B23-2 42-43.6 20230724

Date Collected: 07/24/23 09:30
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-5

Matrix: Solid
Percent Solids: 79.2

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		13	0.23	mg/Kg	☼	08/02/23 08:00	08/15/23 11:31	4
Iron	ND		25	15	mg/Kg	☼	08/02/23 08:00	08/15/23 11:31	4
Manganese	**3.6**	**J**	3.8	0.16	mg/Kg	☼	08/02/23 08:00	08/15/23 11:31	4

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		9.5	0.24	mg/Kg	☼	08/03/23 08:00	08/15/23 12:51	3
Iron	ND		19	11	mg/Kg	☼	08/03/23 08:00	08/15/23 12:51	3
Manganese	**2.5**	**J**	2.8	1.1	mg/Kg	☼	08/03/23 08:00	08/15/23 12:51	3

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**3.9**		3.2	0.057	mg/Kg	☼	08/04/23 08:00	08/15/23 13:56	1
Iron	**900**		6.3	3.7	mg/Kg	☼	08/04/23 08:00	08/15/23 13:56	1
Manganese	**120**	**B**	0.95	0.034	mg/Kg	☼	08/04/23 08:00	08/15/23 13:56	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**2.9**	**J**	3.2	0.067	mg/Kg	☼	08/07/23 08:00	08/15/23 15:00	1
Iron	**11000**		6.3	3.7	mg/Kg	☼	08/07/23 08:00	08/15/23 15:00	1
Manganese	**110**		0.95	0.16	mg/Kg	☼	08/07/23 08:00	08/15/23 15:00	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		47	0.76	mg/Kg	☼	08/09/23 08:00	08/21/23 14:49	5
Iron	ND		95	56	mg/Kg	☼	08/09/23 08:00	08/21/23 14:49	5
Manganese	**2.4**	**J**	14	2.3	mg/Kg	☼	08/09/23 08:00	08/21/23 14:49	5

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**3.1**	**J**	3.2	0.058	mg/Kg	☼	08/08/23 11:30	08/21/23 16:08	1
Iron	**12000**		6.3	3.7	mg/Kg	☼	08/08/23 11:30	08/21/23 16:08	1
Manganese	**71**		0.95	0.32	mg/Kg	☼	08/08/23 11:30	08/21/23 16:08	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.46**	**J**	6.3	0.066	mg/Kg	☼	08/09/23 08:00	08/24/23 14:51	2
Iron	**4600**		6.3	5.2	mg/Kg	☼	08/09/23 08:00	08/24/23 13:08	1
Manganese	**34**		0.95	0.39	mg/Kg	☼	08/09/23 08:00	08/24/23 13:08	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**10**		2.5	0.023	mg/Kg			08/25/23 14:43	1
Iron	**28000**		5.0	4.1	mg/Kg			08/25/23 14:43	1
Manganese	**340**		0.75	0.052	mg/Kg			08/25/23 14:43	1

Method: SW846 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**9.6**		6.3	0.066	mg/Kg	☼	08/09/23 08:00	08/24/23 15:41	2
Iron	**24000**		6.3	5.2	mg/Kg	☼	08/09/23 08:00	08/24/23 14:05	1
Manganese	**300**		0.95	0.39	mg/Kg	☼	08/09/23 08:00	08/24/23 14:05	1

Client Sample ID: B23-2 59-60.5 20230724
Date Collected: 07/24/23 11:00
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-6
Matrix: Solid
Percent Solids: 85.2

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		12	0.21	mg/Kg	☼	08/02/23 08:00	08/15/23 11:51	4
Iron	ND		23	14	mg/Kg	☼	08/02/23 08:00	08/15/23 11:51	4
Manganese	**0.15**	**J**	3.5	0.15	mg/Kg	☼	08/02/23 08:00	08/15/23 11:51	4

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		8.8	0.22	mg/Kg	☼	08/03/23 08:00	08/15/23 12:57	3
Iron	**47**		18	10	mg/Kg	☼	08/03/23 08:00	08/15/23 12:57	3
Manganese	**81**		2.6	0.99	mg/Kg	☼	08/03/23 08:00	08/15/23 12:57	3

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.8**	**J**	2.9	0.053	mg/Kg	☼	08/04/23 08:00	08/15/23 14:01	1
Iron	**130**		5.9	3.4	mg/Kg	☼	08/04/23 08:00	08/15/23 14:01	1
Manganese	**200**	**B**	0.88	0.032	mg/Kg	☼	08/04/23 08:00	08/15/23 14:01	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.3**	**J**	2.9	0.062	mg/Kg	☼	08/07/23 08:00	08/15/23 15:05	1
Iron	**1600**		5.9	3.4	mg/Kg	☼	08/07/23 08:00	08/15/23 15:05	1
Manganese	**200**		0.88	0.15	mg/Kg	☼	08/07/23 08:00	08/15/23 15:05	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		44	0.70	mg/Kg	☼	08/09/23 08:00	08/21/23 15:09	5
Iron	ND		88	52	mg/Kg	☼	08/09/23 08:00	08/21/23 15:09	5
Manganese	**29**		13	2.2	mg/Kg	☼	08/09/23 08:00	08/21/23 15:09	5

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**2.8**	**J**	2.9	0.054	mg/Kg	☼	08/08/23 11:30	08/21/23 16:13	1
Iron	**6300**		5.9	3.4	mg/Kg	☼	08/08/23 11:30	08/21/23 16:13	1
Manganese	**76**		0.88	0.29	mg/Kg	☼	08/08/23 11:30	08/21/23 16:13	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.56**	**J**	5.9	0.061	mg/Kg	☼	08/09/23 08:00	08/24/23 14:56	2
Iron	**3700**		5.9	4.8	mg/Kg	☼	08/09/23 08:00	08/24/23 13:13	1
Manganese	**75**		0.88	0.36	mg/Kg	☼	08/09/23 08:00	08/24/23 13:13	1

Method: SW846 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**6.5**		2.5	0.023	mg/Kg			08/25/23 14:43	1
Iron	**12000**		5.0	4.1	mg/Kg			08/25/23 14:43	1
Manganese	**660**		0.75	0.052	mg/Kg			08/25/23 14:43	1

Method: SW846 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**7.0**		5.9	0.061	mg/Kg	☼	08/09/23 08:00	08/24/23 15:46	2
Iron	**11000**		5.9	4.8	mg/Kg	☼	08/09/23 08:00	08/24/23 14:10	1
Manganese	**530**		0.88	0.36	mg/Kg	☼	08/09/23 08:00	08/24/23 14:10	1

Default Detection Limits

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Prep: 3010A

SEP: Exchangeable

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Cobalt	2.5	0.045	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.031	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Prep: 3010A

SEP: Carbonate

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Cobalt	2.5	0.063	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.28	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Prep: 3010A

SEP: Non-Crystalline

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Cobalt	2.5	0.045	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.027	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Prep: 3010A

SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Arsenic	0.50	0.22	mg/Kg
Cobalt	2.5	0.053	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.13	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Prep: 3010A

SEP: Organic-Bound

Analyte	RL	MDL	Units
Arsenic	1.5	0.38	mg/Kg
Cobalt	7.5	0.12	mg/Kg
Iron	15	8.8	mg/Kg
Manganese	2.3	0.37	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 6

SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Arsenic	0.50	0.15	mg/Kg
Cobalt	2.5	0.046	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.25	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Default Detection Limits

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Prep: Residual

Analyte	RL	MDL	Units
Arsenic	0.50	0.30	mg/Kg
Cobalt	2.5	0.026	mg/Kg
Iron	5.0	4.1	mg/Kg
Manganese	0.75	0.31	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Cobalt	2.5	0.023	mg/Kg
Iron	5.0	4.1	mg/Kg
Manganese	0.75	0.052	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Prep: Total

Analyte	RL	MDL	Units
Arsenic	0.50	0.30	mg/Kg
Cobalt	2.5	0.026	mg/Kg
Iron	5.0	4.1	mg/Kg
Manganese	0.75	0.31	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Lab Sample ID: MB 140-75970/8-A
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 75970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.30	mg/Kg		08/09/23 08:00	08/24/23 12:17	1
Cobalt	ND		2.5	0.026	mg/Kg		08/09/23 08:00	08/24/23 12:17	1
Iron	ND		5.0	4.1	mg/Kg		08/09/23 08:00	08/24/23 12:17	1
Manganese	ND		0.75	0.31	mg/Kg		08/09/23 08:00	08/24/23 12:17	1

Lab Sample ID: LCS 140-75970/9-A
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 75970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.00	4.93		mg/Kg		99	80 - 120
Cobalt	5.00	5.02		mg/Kg		100	80 - 125
Iron	50.0	51.5		mg/Kg		103	80 - 120
Manganese	5.00	5.06		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 140-75970/10-A
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 75970

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	5.00	4.89		mg/Kg		98	80 - 120	1	30
Cobalt	5.00	5.00		mg/Kg		100	80 - 125	0	30
Iron	50.0	52.0		mg/Kg		104	80 - 120	1	30
Manganese	5.00	5.01		mg/Kg		100	80 - 120	1	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Total/NA
Prep Batch: 75970

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	5.7		5.85		mg/Kg	☼	3	30
Iron	19000		18600		mg/Kg	☼	5	30
Manganese	510		299	F3	mg/Kg	☼	52	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Total/NA
Prep Batch: 75970

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cobalt	10		10.1		mg/Kg	☼	2	30

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-75971/8-B ^4
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Method Blank
Prep Type: Step 1
Prep Batch: 76022

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.52	mg/Kg		08/02/23 08:00	08/15/23 10:52	4
Cobalt	ND		10	0.18	mg/Kg		08/02/23 08:00	08/15/23 10:52	4

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: MB 140-75971/8-B ^4
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Method Blank
Prep Type: Step 1
Prep Batch: 76022

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		20	12	mg/Kg		08/02/23 08:00	08/15/23 10:52	4
Manganese	ND		3.0	0.12	mg/Kg		08/02/23 08:00	08/15/23 10:52	4

Lab Sample ID: LCS 140-75971/9-B ^5
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample
Prep Type: Step 1
Prep Batch: 76022

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.00	4.76		mg/Kg		95	80 - 120
Cobalt	5.00	4.93	J	mg/Kg		99	80 - 120
Iron	50.0	50.2		mg/Kg		100	80 - 120
Manganese	5.00	4.99		mg/Kg		100	80 - 120

Lab Sample ID: LCSD 140-75971/10-B ^5
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 1
Prep Batch: 76022

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	5.00	4.69		mg/Kg		94	80 - 120	2	30
Cobalt	5.00	4.88	J	mg/Kg		98	80 - 120	1	30
Iron	50.0	49.8		mg/Kg		100	80 - 120	1	30
Manganese	5.00	4.92		mg/Kg		98	80 - 120	1	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 1
Prep Batch: 76022

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	ND		ND		mg/Kg	☼	NC	30
Cobalt	0.41	J	0.384	J	mg/Kg	☼	5	30
Iron	ND		33.2		mg/Kg	☼	NC	30
Manganese	62		66.8		mg/Kg	☼	7	30

Lab Sample ID: MB 140-76044/8-B ^3
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Method Blank
Prep Type: Step 2
Prep Batch: 76085

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.5	0.39	mg/Kg		08/03/23 08:00	08/15/23 11:56	3
Cobalt	ND		7.5	0.19	mg/Kg		08/03/23 08:00	08/15/23 11:56	3
Iron	ND		15	8.7	mg/Kg		08/03/23 08:00	08/15/23 11:56	3
Manganese	ND		2.3	0.84	mg/Kg		08/03/23 08:00	08/15/23 11:56	3

Lab Sample ID: LCS 140-76044/9-B ^5
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample
Prep Type: Step 2
Prep Batch: 76085

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.00	3.97		mg/Kg		79	60 - 120
Cobalt	5.00	4.71	J	mg/Kg		94	80 - 120

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCS 140-76044/9-B ^5
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample
Prep Type: Step 2
Prep Batch: 76085

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron			50.0	ND		mg/Kg		3			
Manganese			5.00	4.73		mg/Kg		95	80 - 120		

Lab Sample ID: LCSD 140-76044/10-B ^5
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 2
Prep Batch: 76085

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			5.00	4.22		mg/Kg		84	60 - 120	6	30
Cobalt			5.00	4.80	J	mg/Kg		96	80 - 120	2	30
Iron			50.0	ND		mg/Kg		4		19	
Manganese			5.00	4.83		mg/Kg		97	80 - 120	2	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 2
Prep Batch: 76085

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	ND			ND		mg/Kg	☼			NC	30
Cobalt	0.40	J		0.843	J F5	mg/Kg	☼			72	30
Iron	290			619		mg/Kg	☼			73	
Manganese	47			71.6	F3	mg/Kg	☼			42	30

Lab Sample ID: MB 140-76084/8-B
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Method Blank
Prep Type: Step 3
Prep Batch: 76118

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.13	mg/Kg		08/04/23 08:00	08/15/23 13:02	1
Cobalt	ND		2.5	0.045	mg/Kg		08/04/23 08:00	08/15/23 13:02	1
Iron	ND		5.0	2.9	mg/Kg		08/04/23 08:00	08/15/23 13:02	1
Manganese	0.0960	J	0.75	0.027	mg/Kg		08/04/23 08:00	08/15/23 13:02	1

Lab Sample ID: LCS 140-76084/9-B
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample
Prep Type: Step 3
Prep Batch: 76118

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			5.00	4.83		mg/Kg		97	80 - 120		
Cobalt			5.00	4.87		mg/Kg		97	80 - 120		
Iron			50.0	50.5		mg/Kg		101	80 - 120		
Manganese			5.00	4.79		mg/Kg		96	80 - 120		

Lab Sample ID: LCSD 140-76084/10-B
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 3
Prep Batch: 76118

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			5.00	4.85		mg/Kg		97	80 - 120	1	30
Cobalt			5.00	4.92		mg/Kg		98	80 - 120	1	30

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCSD 140-76084/10-B
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 3
Prep Batch: 76118

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron			50.0	50.2		mg/Kg		100	80 - 120	1	30
Manganese			5.00	4.82		mg/Kg		96	80 - 120	1	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 3
Prep Batch: 76118

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	1.8			1.62		mg/Kg	☼			13	30
Cobalt	2.0	J		1.91	J	mg/Kg	☼			3	30
Iron	4800			4990		mg/Kg	☼			4	30
Manganese	170	B		249	F3	mg/Kg	☼			39	30

Lab Sample ID: MB 140-76125/8-B
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Method Blank
Prep Type: Step 4
Prep Batch: 76167

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.22	mg/Kg		08/07/23 08:00	08/15/23 14:06	1
Cobalt	ND		2.5	0.053	mg/Kg		08/07/23 08:00	08/15/23 14:06	1
Iron	ND		5.0	2.9	mg/Kg		08/07/23 08:00	08/15/23 14:06	1
Manganese	ND		0.75	0.13	mg/Kg		08/07/23 08:00	08/15/23 14:06	1

Lab Sample ID: LCS 140-76125/9-B
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample
Prep Type: Step 4
Prep Batch: 76167

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic			5.00	4.93		mg/Kg		99	80 - 130
Cobalt			5.00	4.92		mg/Kg		98	80 - 120
Iron			50.0	49.0		mg/Kg		98	80 - 120
Manganese			5.00	4.84		mg/Kg		97	80 - 120

Lab Sample ID: LCSD 140-76125/10-B
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 4
Prep Batch: 76167

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			5.00	4.91		mg/Kg		98	80 - 130	0	30
Cobalt			5.00	4.88		mg/Kg		98	80 - 120	1	30
Iron			50.0	48.1		mg/Kg		96	80 - 120	2	30
Manganese			5.00	4.79		mg/Kg		96	80 - 120	1	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 4
Prep Batch: 76167

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	0.99			1.00		mg/Kg	☼			1	30
Cobalt	4.6			4.64		mg/Kg	☼			2	30

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76517

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 4
Prep Batch: 76167

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	6400		6380		mg/Kg	☼	0.5	30
Manganese	98		116		mg/Kg	☼	17	30

Lab Sample ID: MB 140-76168/8-B ^5
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: Method Blank
Prep Type: Step 5
Prep Batch: 76267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		7.5	1.9	mg/Kg		08/09/23 08:00	08/21/23 14:08	5
Cobalt	ND		38	0.60	mg/Kg		08/09/23 08:00	08/21/23 14:08	5
Iron	ND		75	44	mg/Kg		08/09/23 08:00	08/21/23 14:08	5
Manganese	ND		11	1.9	mg/Kg		08/09/23 08:00	08/21/23 14:08	5

Lab Sample ID: LCS 140-76168/9-B ^5
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: Lab Control Sample
Prep Type: Step 5
Prep Batch: 76267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	15.0	11.3		mg/Kg		75	60 - 100
Cobalt	15.0	3.03	J	mg/Kg		20	1 - 60
Iron	150	ND		mg/Kg		3	
Manganese	15.0	3.62	J	mg/Kg		24	1 - 60

Lab Sample ID: LCSD 140-76168/10-B ^5
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 5
Prep Batch: 76267

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	15.0	10.6		mg/Kg		71	60 - 100	7	30
Cobalt	15.0	2.95	J	mg/Kg		20	1 - 60	3	30
Iron	150	ND		mg/Kg		2		45	
Manganese	15.0	3.27	J	mg/Kg		22	1 - 60	10	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 5
Prep Batch: 76267

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	ND		ND		mg/Kg	☼	NC	30
Cobalt	ND		ND		mg/Kg	☼	NC	30
Iron	ND		ND		mg/Kg	☼	NC	
Manganese	8.7	J	10.8	J	mg/Kg	☼	22	30

Lab Sample ID: MB 140-76252/8-A
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: Method Blank
Prep Type: Step 6
Prep Batch: 76252

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.15	mg/Kg		08/08/23 11:30	08/21/23 15:14	1
Cobalt	ND		2.5	0.046	mg/Kg		08/08/23 11:30	08/21/23 15:14	1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: MB 140-76252/8-A
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: Method Blank
Prep Type: Step 6
Prep Batch: 76252

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		5.0	2.9	mg/Kg		08/08/23 11:30	08/21/23 15:14	1
Manganese	ND		0.75	0.25	mg/Kg		08/08/23 11:30	08/21/23 15:14	1

Lab Sample ID: LCS 140-76252/9-A
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: Lab Control Sample
Prep Type: Step 6
Prep Batch: 76252

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			5.00	5.33		mg/Kg		107	80 - 120		
Cobalt			5.00	5.00		mg/Kg		100	80 - 120		
Iron			50.0	50.5		mg/Kg		101	80 - 120		
Manganese			5.00	5.13		mg/Kg		103	80 - 120		

Lab Sample ID: LCSD 140-76252/10-A
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 6
Prep Batch: 76252

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			5.00	5.32		mg/Kg		106	80 - 120	0	30
Cobalt			5.00	5.03		mg/Kg		101	80 - 120	1	30
Iron			50.0	50.7		mg/Kg		101	80 - 120	0	30
Manganese			5.00	5.17		mg/Kg		103	80 - 120	1	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76738

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 6
Prep Batch: 76252

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	2.4			1.82		mg/Kg	☼			27	30
Cobalt	2.1	J		2.26	J	mg/Kg	☼			7	30
Iron	6900			6890		mg/Kg	☼			0.08	30
Manganese	38			40.0		mg/Kg	☼			4	30

Lab Sample ID: MB 140-76270/8-A
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: Method Blank
Prep Type: Step 7
Prep Batch: 76270

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.30	mg/Kg		08/09/23 08:00	08/24/23 12:02	1
Cobalt	ND		2.5	0.026	mg/Kg		08/09/23 08:00	08/24/23 12:02	1
Iron	ND		5.0	4.1	mg/Kg		08/09/23 08:00	08/24/23 12:02	1
Manganese	ND		0.75	0.31	mg/Kg		08/09/23 08:00	08/24/23 12:02	1

Lab Sample ID: LCS 140-76270/9-A
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: Lab Control Sample
Prep Type: Step 7
Prep Batch: 76270

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			5.00	4.99		mg/Kg		100	80 - 120		
Cobalt			5.00	5.08		mg/Kg		102	80 - 125		

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCS 140-76270/9-A
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: Lab Control Sample
Prep Type: Step 7
Prep Batch: 76270

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	50.0	52.4		mg/Kg		105	80 - 120
Manganese	5.00	5.12		mg/Kg		102	80 - 120

Lab Sample ID: LCSD 140-76270/10-A
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 7
Prep Batch: 76270

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	5.00	4.92		mg/Kg		98	80 - 120	2	30
Cobalt	5.00	5.03		mg/Kg		101	80 - 125	1	30
Iron	50.0	51.8		mg/Kg		104	80 - 120	1	30
Manganese	5.00	5.06		mg/Kg		101	80 - 120	1	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 7
Prep Batch: 76270

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	5000		4690		mg/Kg	☼	6	30
Manganese	35		33.3		mg/Kg	☼	5	30

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Analysis Batch: 76934

Client Sample ID: B23-12 31.5-33.5 20230712
Prep Type: Step 7
Prep Batch: 76270

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	2.7		2.27		mg/Kg	☼	17	30
Cobalt	0.74	J	0.614	J	mg/Kg	☼	19	30

Metals

Prep Batch: 75970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Total/NA	Solid	Total	
140-32884-2	B23-12 31.5-33.5 20230712	Total/NA	Solid	Total	
140-32884-3	B23-12 38.5-39.8 20230712	Total/NA	Solid	Total	
140-32884-4	B23-12 51.5-53.5 20230712	Total/NA	Solid	Total	
140-32884-5	B23-2 42-43.6 20230724	Total/NA	Solid	Total	
140-32884-6	B23-2 59-60.5 20230724	Total/NA	Solid	Total	
MB 140-75970/8-A	Method Blank	Total/NA	Solid	Total	
LCS 140-75970/9-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-75970/10-A	Lab Control Sample Dup	Total/NA	Solid	Total	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Total/NA	Solid	Total	

SEP Batch: 75971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 1	Solid	Exchangeable	
140-32884-2	B23-12 31.5-33.5 20230712	Step 1	Solid	Exchangeable	
140-32884-3	B23-12 38.5-39.8 20230712	Step 1	Solid	Exchangeable	
140-32884-4	B23-12 51.5-53.5 20230712	Step 1	Solid	Exchangeable	
140-32884-5	B23-2 42-43.6 20230724	Step 1	Solid	Exchangeable	
140-32884-6	B23-2 59-60.5 20230724	Step 1	Solid	Exchangeable	
MB 140-75971/8-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-75971/9-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-75971/10-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 1	Solid	Exchangeable	

Prep Batch: 76022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 1	Solid	3010A	75971
140-32884-2	B23-12 31.5-33.5 20230712	Step 1	Solid	3010A	75971
140-32884-3	B23-12 38.5-39.8 20230712	Step 1	Solid	3010A	75971
140-32884-4	B23-12 51.5-53.5 20230712	Step 1	Solid	3010A	75971
140-32884-5	B23-2 42-43.6 20230724	Step 1	Solid	3010A	75971
140-32884-6	B23-2 59-60.5 20230724	Step 1	Solid	3010A	75971
MB 140-75971/8-B ^4	Method Blank	Step 1	Solid	3010A	75971
LCS 140-75971/9-B ^5	Lab Control Sample	Step 1	Solid	3010A	75971
LCSD 140-75971/10-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	75971
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 1	Solid	3010A	75971

SEP Batch: 76044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 2	Solid	Carbonate	
140-32884-2	B23-12 31.5-33.5 20230712	Step 2	Solid	Carbonate	
140-32884-3	B23-12 38.5-39.8 20230712	Step 2	Solid	Carbonate	
140-32884-4	B23-12 51.5-53.5 20230712	Step 2	Solid	Carbonate	
140-32884-5	B23-2 42-43.6 20230724	Step 2	Solid	Carbonate	
140-32884-6	B23-2 59-60.5 20230724	Step 2	Solid	Carbonate	
MB 140-76044/8-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-76044/9-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-76044/10-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 2	Solid	Carbonate	

Metals

SEP Batch: 76084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 3	Solid	Non-Crystalline	
140-32884-2	B23-12 31.5-33.5 20230712	Step 3	Solid	Non-Crystalline	
140-32884-3	B23-12 38.5-39.8 20230712	Step 3	Solid	Non-Crystalline	
140-32884-4	B23-12 51.5-53.5 20230712	Step 3	Solid	Non-Crystalline	
140-32884-5	B23-2 42-43.6 20230724	Step 3	Solid	Non-Crystalline	
140-32884-6	B23-2 59-60.5 20230724	Step 3	Solid	Non-Crystalline	
MB 140-76084/8-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-76084/9-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-76084/10-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 3	Solid	Non-Crystalline	

Prep Batch: 76085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 2	Solid	3010A	76044
140-32884-2	B23-12 31.5-33.5 20230712	Step 2	Solid	3010A	76044
140-32884-3	B23-12 38.5-39.8 20230712	Step 2	Solid	3010A	76044
140-32884-4	B23-12 51.5-53.5 20230712	Step 2	Solid	3010A	76044
140-32884-5	B23-2 42-43.6 20230724	Step 2	Solid	3010A	76044
140-32884-6	B23-2 59-60.5 20230724	Step 2	Solid	3010A	76044
MB 140-76044/8-B ^3	Method Blank	Step 2	Solid	3010A	76044
LCS 140-76044/9-B ^5	Lab Control Sample	Step 2	Solid	3010A	76044
LCSD 140-76044/10-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	76044
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 2	Solid	3010A	76044

Prep Batch: 76118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 3	Solid	3010A	76084
140-32884-2	B23-12 31.5-33.5 20230712	Step 3	Solid	3010A	76084
140-32884-3	B23-12 38.5-39.8 20230712	Step 3	Solid	3010A	76084
140-32884-4	B23-12 51.5-53.5 20230712	Step 3	Solid	3010A	76084
140-32884-5	B23-2 42-43.6 20230724	Step 3	Solid	3010A	76084
140-32884-6	B23-2 59-60.5 20230724	Step 3	Solid	3010A	76084
MB 140-76084/8-B	Method Blank	Step 3	Solid	3010A	76084
LCS 140-76084/9-B	Lab Control Sample	Step 3	Solid	3010A	76084
LCSD 140-76084/10-B	Lab Control Sample Dup	Step 3	Solid	3010A	76084
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 3	Solid	3010A	76084

SEP Batch: 76125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 4	Solid	Metal Hydroxide	
140-32884-2	B23-12 31.5-33.5 20230712	Step 4	Solid	Metal Hydroxide	
140-32884-3	B23-12 38.5-39.8 20230712	Step 4	Solid	Metal Hydroxide	
140-32884-4	B23-12 51.5-53.5 20230712	Step 4	Solid	Metal Hydroxide	
140-32884-5	B23-2 42-43.6 20230724	Step 4	Solid	Metal Hydroxide	
140-32884-6	B23-2 59-60.5 20230724	Step 4	Solid	Metal Hydroxide	
MB 140-76125/8-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-76125/9-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-76125/10-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 4	Solid	Metal Hydroxide	

Metals

Prep Batch: 76167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 4	Solid	3010A	76125
140-32884-2	B23-12 31.5-33.5 20230712	Step 4	Solid	3010A	76125
140-32884-3	B23-12 38.5-39.8 20230712	Step 4	Solid	3010A	76125
140-32884-4	B23-12 51.5-53.5 20230712	Step 4	Solid	3010A	76125
140-32884-5	B23-2 42-43.6 20230724	Step 4	Solid	3010A	76125
140-32884-6	B23-2 59-60.5 20230724	Step 4	Solid	3010A	76125
MB 140-76125/8-B	Method Blank	Step 4	Solid	3010A	76125
LCS 140-76125/9-B	Lab Control Sample	Step 4	Solid	3010A	76125
LCSD 140-76125/10-B	Lab Control Sample Dup	Step 4	Solid	3010A	76125
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 4	Solid	3010A	76125

SEP Batch: 76168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 5	Solid	Organic-Bound	
140-32884-2	B23-12 31.5-33.5 20230712	Step 5	Solid	Organic-Bound	
140-32884-3	B23-12 38.5-39.8 20230712	Step 5	Solid	Organic-Bound	
140-32884-4	B23-12 51.5-53.5 20230712	Step 5	Solid	Organic-Bound	
140-32884-5	B23-2 42-43.6 20230724	Step 5	Solid	Organic-Bound	
140-32884-6	B23-2 59-60.5 20230724	Step 5	Solid	Organic-Bound	
MB 140-76168/8-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-76168/9-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-76168/10-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 5	Solid	Organic-Bound	

SEP Batch: 76252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 6	Solid	Acid/Sulfide	
140-32884-2	B23-12 31.5-33.5 20230712	Step 6	Solid	Acid/Sulfide	
140-32884-3	B23-12 38.5-39.8 20230712	Step 6	Solid	Acid/Sulfide	
140-32884-4	B23-12 51.5-53.5 20230712	Step 6	Solid	Acid/Sulfide	
140-32884-5	B23-2 42-43.6 20230724	Step 6	Solid	Acid/Sulfide	
140-32884-6	B23-2 59-60.5 20230724	Step 6	Solid	Acid/Sulfide	
MB 140-76252/8-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-76252/9-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-76252/10-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 6	Solid	Acid/Sulfide	

Prep Batch: 76267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 5	Solid	3010A	76168
140-32884-2	B23-12 31.5-33.5 20230712	Step 5	Solid	3010A	76168
140-32884-3	B23-12 38.5-39.8 20230712	Step 5	Solid	3010A	76168
140-32884-4	B23-12 51.5-53.5 20230712	Step 5	Solid	3010A	76168
140-32884-5	B23-2 42-43.6 20230724	Step 5	Solid	3010A	76168
140-32884-6	B23-2 59-60.5 20230724	Step 5	Solid	3010A	76168
MB 140-76168/8-B ^5	Method Blank	Step 5	Solid	3010A	76168
LCS 140-76168/9-B ^5	Lab Control Sample	Step 5	Solid	3010A	76168
LCSD 140-76168/10-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	76168
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 5	Solid	3010A	76168

Metals

Prep Batch: 76270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 7	Solid	Residual	
140-32884-2	B23-12 31.5-33.5 20230712	Step 7	Solid	Residual	
140-32884-3	B23-12 38.5-39.8 20230712	Step 7	Solid	Residual	
140-32884-4	B23-12 51.5-53.5 20230712	Step 7	Solid	Residual	
140-32884-5	B23-2 42-43.6 20230724	Step 7	Solid	Residual	
140-32884-6	B23-2 59-60.5 20230724	Step 7	Solid	Residual	
MB 140-76270/8-A	Method Blank	Step 7	Solid	Residual	
LCS 140-76270/9-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-76270/10-A	Lab Control Sample Dup	Step 7	Solid	Residual	
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 7	Solid	Residual	

Analysis Batch: 76517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 1	Solid	6010B SEP	76022
140-32884-1	B23-1 43.5-45 20230711	Step 2	Solid	6010B SEP	76085
140-32884-1	B23-1 43.5-45 20230711	Step 3	Solid	6010B SEP	76118
140-32884-1	B23-1 43.5-45 20230711	Step 4	Solid	6010B SEP	76167
140-32884-2	B23-12 31.5-33.5 20230712	Step 1	Solid	6010B SEP	76022
140-32884-2	B23-12 31.5-33.5 20230712	Step 2	Solid	6010B SEP	76085
140-32884-2	B23-12 31.5-33.5 20230712	Step 3	Solid	6010B SEP	76118
140-32884-2	B23-12 31.5-33.5 20230712	Step 4	Solid	6010B SEP	76167
140-32884-3	B23-12 38.5-39.8 20230712	Step 1	Solid	6010B SEP	76022
140-32884-3	B23-12 38.5-39.8 20230712	Step 2	Solid	6010B SEP	76085
140-32884-3	B23-12 38.5-39.8 20230712	Step 3	Solid	6010B SEP	76118
140-32884-3	B23-12 38.5-39.8 20230712	Step 4	Solid	6010B SEP	76167
140-32884-4	B23-12 51.5-53.5 20230712	Step 1	Solid	6010B SEP	76022
140-32884-4	B23-12 51.5-53.5 20230712	Step 2	Solid	6010B SEP	76085
140-32884-4	B23-12 51.5-53.5 20230712	Step 3	Solid	6010B SEP	76118
140-32884-4	B23-12 51.5-53.5 20230712	Step 4	Solid	6010B SEP	76167
140-32884-5	B23-2 42-43.6 20230724	Step 1	Solid	6010B SEP	76022
140-32884-5	B23-2 42-43.6 20230724	Step 2	Solid	6010B SEP	76085
140-32884-5	B23-2 42-43.6 20230724	Step 3	Solid	6010B SEP	76118
140-32884-5	B23-2 42-43.6 20230724	Step 4	Solid	6010B SEP	76167
140-32884-6	B23-2 59-60.5 20230724	Step 1	Solid	6010B SEP	76022
140-32884-6	B23-2 59-60.5 20230724	Step 2	Solid	6010B SEP	76085
140-32884-6	B23-2 59-60.5 20230724	Step 3	Solid	6010B SEP	76118
140-32884-6	B23-2 59-60.5 20230724	Step 4	Solid	6010B SEP	76167
MB 140-75971/8-B ^4	Method Blank	Step 1	Solid	6010B SEP	76022
MB 140-76044/8-B ^3	Method Blank	Step 2	Solid	6010B SEP	76085
MB 140-76084/8-B	Method Blank	Step 3	Solid	6010B SEP	76118
MB 140-76125/8-B	Method Blank	Step 4	Solid	6010B SEP	76167
LCS 140-75971/9-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	76022
LCS 140-76044/9-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	76085
LCS 140-76084/9-B	Lab Control Sample	Step 3	Solid	6010B SEP	76118
LCS 140-76125/9-B	Lab Control Sample	Step 4	Solid	6010B SEP	76167
LCSD 140-75971/10-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	76022
LCSD 140-76044/10-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	76085
LCSD 140-76084/10-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	76118
LCSD 140-76125/10-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	76167
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 1	Solid	6010B SEP	76022
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 2	Solid	6010B SEP	76085

Metals (Continued)

Analysis Batch: 76517 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 3	Solid	6010B SEP	76118
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 4	Solid	6010B SEP	76167

Analysis Batch: 76738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 5	Solid	6010B SEP	76267
140-32884-1	B23-1 43.5-45 20230711	Step 6	Solid	6010B SEP	76252
140-32884-2	B23-12 31.5-33.5 20230712	Step 5	Solid	6010B SEP	76267
140-32884-2	B23-12 31.5-33.5 20230712	Step 6	Solid	6010B SEP	76252
140-32884-3	B23-12 38.5-39.8 20230712	Step 5	Solid	6010B SEP	76267
140-32884-3	B23-12 38.5-39.8 20230712	Step 6	Solid	6010B SEP	76252
140-32884-4	B23-12 51.5-53.5 20230712	Step 5	Solid	6010B SEP	76267
140-32884-4	B23-12 51.5-53.5 20230712	Step 6	Solid	6010B SEP	76252
140-32884-5	B23-2 42-43.6 20230724	Step 5	Solid	6010B SEP	76267
140-32884-5	B23-2 42-43.6 20230724	Step 6	Solid	6010B SEP	76252
140-32884-6	B23-2 59-60.5 20230724	Step 5	Solid	6010B SEP	76267
140-32884-6	B23-2 59-60.5 20230724	Step 6	Solid	6010B SEP	76252
MB 140-76168/8-B ^5	Method Blank	Step 5	Solid	6010B SEP	76267
MB 140-76252/8-A	Method Blank	Step 6	Solid	6010B SEP	76252
LCS 140-76168/9-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	76267
LCS 140-76252/9-A	Lab Control Sample	Step 6	Solid	6010B SEP	76252
LCSD 140-76168/10-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	76267
LCSD 140-76252/10-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	76252
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 5	Solid	6010B SEP	76267
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 6	Solid	6010B SEP	76252

Analysis Batch: 76934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Step 7	Solid	6010B SEP	76270
140-32884-1	B23-1 43.5-45 20230711	Step 7	Solid	6010B SEP	76270
140-32884-1	B23-1 43.5-45 20230711	Total/NA	Solid	6010B	75970
140-32884-1	B23-1 43.5-45 20230711	Total/NA	Solid	6010B	75970
140-32884-2	B23-12 31.5-33.5 20230712	Step 7	Solid	6010B SEP	76270
140-32884-2	B23-12 31.5-33.5 20230712	Step 7	Solid	6010B SEP	76270
140-32884-2	B23-12 31.5-33.5 20230712	Total/NA	Solid	6010B	75970
140-32884-3	B23-12 38.5-39.8 20230712	Step 7	Solid	6010B SEP	76270
140-32884-3	B23-12 38.5-39.8 20230712	Step 7	Solid	6010B SEP	76270
140-32884-3	B23-12 38.5-39.8 20230712	Total/NA	Solid	6010B	75970
140-32884-3	B23-12 38.5-39.8 20230712	Total/NA	Solid	6010B	75970
140-32884-4	B23-12 51.5-53.5 20230712	Step 7	Solid	6010B SEP	76270
140-32884-4	B23-12 51.5-53.5 20230712	Step 7	Solid	6010B SEP	76270
140-32884-4	B23-12 51.5-53.5 20230712	Total/NA	Solid	6010B	75970
140-32884-4	B23-12 51.5-53.5 20230712	Total/NA	Solid	6010B	75970
140-32884-5	B23-2 42-43.6 20230724	Step 7	Solid	6010B SEP	76270
140-32884-5	B23-2 42-43.6 20230724	Step 7	Solid	6010B SEP	76270
140-32884-5	B23-2 42-43.6 20230724	Total/NA	Solid	6010B	75970
140-32884-5	B23-2 42-43.6 20230724	Total/NA	Solid	6010B	75970
140-32884-6	B23-2 59-60.5 20230724	Step 7	Solid	6010B SEP	76270
140-32884-6	B23-2 59-60.5 20230724	Step 7	Solid	6010B SEP	76270
140-32884-6	B23-2 59-60.5 20230724	Total/NA	Solid	6010B	75970
140-32884-6	B23-2 59-60.5 20230724	Total/NA	Solid	6010B	75970

Metals (Continued)

Analysis Batch: 76934 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-75970/8-A	Method Blank	Total/NA	Solid	6010B	75970
MB 140-76270/8-A	Method Blank	Step 7	Solid	6010B SEP	76270
LCS 140-75970/9-A	Lab Control Sample	Total/NA	Solid	6010B	75970
LCS 140-76270/9-A	Lab Control Sample	Step 7	Solid	6010B SEP	76270
LCSD 140-75970/10-A	Lab Control Sample Dup	Total/NA	Solid	6010B	75970
LCSD 140-76270/10-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	76270
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 7	Solid	6010B SEP	76270
140-32884-2 DU	B23-12 31.5-33.5 20230712	Step 7	Solid	6010B SEP	76270
140-32884-2 DU	B23-12 31.5-33.5 20230712	Total/NA	Solid	6010B	75970
140-32884-2 DU	B23-12 31.5-33.5 20230712	Total/NA	Solid	6010B	75970

Analysis Batch: 76993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Sum of Steps 1-7	Solid	6010B SEP	
140-32884-2	B23-12 31.5-33.5 20230712	Sum of Steps 1-7	Solid	6010B SEP	
140-32884-3	B23-12 38.5-39.8 20230712	Sum of Steps 1-7	Solid	6010B SEP	
140-32884-4	B23-12 51.5-53.5 20230712	Sum of Steps 1-7	Solid	6010B SEP	
140-32884-5	B23-2 42-43.6 20230724	Sum of Steps 1-7	Solid	6010B SEP	
140-32884-6	B23-2 59-60.5 20230724	Sum of Steps 1-7	Solid	6010B SEP	

General Chemistry

Analysis Batch: 76093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-32884-1	B23-1 43.5-45 20230711	Total/NA	Solid	Moisture	
140-32884-2	B23-12 31.5-33.5 20230712	Total/NA	Solid	Moisture	
140-32884-3	B23-12 38.5-39.8 20230712	Total/NA	Solid	Moisture	
140-32884-4	B23-12 51.5-53.5 20230712	Total/NA	Solid	Moisture	
140-32884-5	B23-2 42-43.6 20230724	Total/NA	Solid	Moisture	
140-32884-6	B23-2 59-60.5 20230724	Total/NA	Solid	Moisture	
140-32884-1 DU	B23-1 43.5-45 20230711	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: B23-1 43.5-45 20230711

Lab Sample ID: 140-32884-1
Date Collected: 07/11/23 14:45
Matrix: Solid
Date Received: 07/28/23 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			76993	08/25/23 14:43	KNC	EET KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			76093	08/02/23 16:04	TMB	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: B23-1 43.5-45 20230711

Lab Sample ID: 140-32884-1
Date Collected: 07/11/23 14:45
Matrix: Solid
Date Received: 07/28/23 13:45
Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 13:23	KNC	EET KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		2			76934	08/24/23 15:16	KNC	EET KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 11:07	KNC	EET KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 12:11	KNC	EET KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:16	KNC	EET KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:21	KNC	EET KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:24	KNC	EET KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:29	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 12:31	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		2			76934	08/24/23 14:27	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: B23-12 31.5-33.5 20230712

Lab Sample ID: 140-32884-2
Date Collected: 07/12/23 14:15
Matrix: Solid
Date Received: 07/28/23 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			76993	08/25/23 14:43	KNC	EET KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			76093	08/02/23 16:04	TMB	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: B23-12 31.5-33.5 20230712

Lab Sample ID: 140-32884-2
Date Collected: 07/12/23 14:15
Matrix: Solid
Date Received: 07/28/23 13:45
Percent Solids: 77.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 13:28	KNC	EET KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 11:12	KNC	EET KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 12:16	KNC	EET KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:21	KNC	EET KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:26	KNC	EET KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:29	KNC	EET KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:34	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 12:37	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		2			76934	08/24/23 14:32	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: B23-12 38.5-39.8 20230712
Date Collected: 07/12/23 14:30
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			76993	08/25/23 14:43	KNC	EET KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			76093	08/02/23 16:04	TMB	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: B23-12 38.5-39.8 20230712
Date Collected: 07/12/23 14:30
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-3
Matrix: Solid
Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 13:53	KNC	EET KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		2			76934	08/24/23 15:31	KNC	EET KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 11:21	KNC	EET KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 12:26	KNC	EET KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:31	KNC	EET KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:50	KNC	EET KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:39	KNC	EET KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:44	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 12:57	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		2			76934	08/24/23 14:41	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: B23-12 51.5-53.5 20230712

Lab Sample ID: 140-32884-4
Date Collected: 07/12/23 14:45
Matrix: Solid
Date Received: 07/28/23 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			76993	08/25/23 14:43	KNC	EET KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			76093	08/02/23 16:04	TMB	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: B23-12 51.5-53.5 20230712

Lab Sample ID: 140-32884-4
Date Collected: 07/12/23 14:45
Matrix: Solid
Date Received: 07/28/23 13:45
Percent Solids: 84.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 13:59	KNC	EET KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		2			76934	08/24/23 15:36	KNC	EET KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 11:26	KNC	EET KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 12:31	KNC	EET KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:51	KNC	EET KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:55	KNC	EET KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:44	KNC	EET KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:49	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 13:02	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		2			76934	08/24/23 14:46	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: B23-2 42-43.6 20230724

Lab Sample ID: 140-32884-5
Date Collected: 07/24/23 09:30
Matrix: Solid
Date Received: 07/28/23 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			76993	08/25/23 14:43	KNC	EET KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			76093	08/02/23 16:04	TMB	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: B23-2 42-43.6 20230724

Lab Sample ID: 140-32884-5
Date Collected: 07/24/23 09:30
Matrix: Solid
Date Received: 07/28/23 13:45
Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 14:05	KNC	EET KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		2			76934	08/24/23 15:41	KNC	EET KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 11:31	KNC	EET KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 12:51	KNC	EET KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:56	KNC	EET KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 15:00	KNC	EET KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:49	KNC	EET KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 16:08	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 13:08	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		2			76934	08/24/23 14:51	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: B23-2 59-60.5 20230724
Date Collected: 07/24/23 11:00
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			76993	08/25/23 14:43	KNC	EET KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			76093	08/02/23 16:04	TMB	EET KNX
	Instrument ID: NOEQUIP									

Client Sample ID: B23-2 59-60.5 20230724
Date Collected: 07/24/23 11:00
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-6
Matrix: Solid
Percent Solids: 85.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 14:10	KNC	EET KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		2			76934	08/24/23 15:46	KNC	EET KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 11:51	KNC	EET KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 12:57	KNC	EET KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 14:01	KNC	EET KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 15:05	KNC	EET KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 15:09	KNC	EET KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 16:13	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 13:13	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		2			76934	08/24/23 14:56	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-75970/8-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 12:17	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-75971/8-B ^4
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 10:52	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-76044/8-B ^3
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 11:56	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-76084/8-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:02	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-76125/8-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:06	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: Method Blank
Lab Sample ID: MB 140-76168/8-B ^5

Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:08	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-76252/8-A

Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:14	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-76270/8-A

Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 12:02	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-75970/9-A

Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 12:22	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-75971/9-B ^5

Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		5			76517	08/15/23 10:57	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-76044/9-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		5			76517	08/15/23 12:01	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-76084/9-B
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:07	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-76125/9-B
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:11	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-76168/9-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:13	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-76252/9-A
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:19	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-76270/9-A
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 12:07	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-75970/10-A
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 12:27	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-75971/10-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		5			76517	08/15/23 11:02	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-76044/10-B ^5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		5			76517	08/15/23 12:06	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCSD 140-76084/10-B
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:11	KNC	EET KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-76125/10-B
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:16	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-76168/10-B ^5
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:18	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-76252/10-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:24	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 140-76270/10-A
Date Collected: N/A
Matrix: Solid
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 12:12	KNC	EET KNX
	Instrument ID: DUO									

Client Sample ID: B23-1 43.5-45 20230711
Lab Sample ID: 140-32884-1 DU
Date Collected: 07/11/23 14:45
Matrix: Solid
Date Received: 07/28/23 13:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			76093	08/02/23 16:04	TMB	EET KNX
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Client Sample ID: B23-12 31.5-33.5 20230712
Date Collected: 07/12/23 14:15
Date Received: 07/28/23 13:45

Lab Sample ID: 140-32884-2 DU
Matrix: Solid
Percent Solids: 77.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		1			76934	08/24/23 13:34	KNC	EET KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	75970	08/09/23 08:00	JDM	EET KNX
Total/NA	Analysis	6010B		2			76934	08/24/23 15:26	KNC	EET KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	75971	08/01/23 07:45	JDM	EET KNX
Step 1	Prep	3010A			5 mL	50 mL	76022	08/02/23 08:00	JDM	EET KNX
Step 1	Analysis	6010B SEP		4			76517	08/15/23 11:16	KNC	EET KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	76044	08/02/23 08:00	JDM	EET KNX
Step 2	Prep	3010A			5 mL	50 mL	76085	08/03/23 08:00	JDM	EET KNX
Step 2	Analysis	6010B SEP		3			76517	08/15/23 12:21	KNC	EET KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	76084	08/03/23 08:00	JDM	EET KNX
Step 3	Prep	3010A			5 mL	50 mL	76118	08/04/23 08:00	JDM	EET KNX
Step 3	Analysis	6010B SEP		1			76517	08/15/23 13:26	KNC	EET KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	76125	08/04/23 08:00	JDM	EET KNX
Step 4	Prep	3010A			5 mL	50 mL	76167	08/07/23 08:00	JDM	EET KNX
Step 4	Analysis	6010B SEP		1			76517	08/15/23 14:31	KNC	EET KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	76168	08/07/23 08:00	JDM	EET KNX
Step 5	Prep	3010A			5 mL	50 mL	76267	08/09/23 08:00	JDM	EET KNX
Step 5	Analysis	6010B SEP		5			76738	08/21/23 14:34	KNC	EET KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	76252	08/08/23 11:30	JDM	EET KNX
Step 6	Analysis	6010B SEP		1			76738	08/21/23 15:39	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		1			76934	08/24/23 12:52	KNC	EET KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	76270	08/09/23 08:00	JDM	EET KNX
Step 7	Analysis	6010B SEP		2			76934	08/24/23 14:37	KNC	EET KNX
	Instrument ID: DUO									

Laboratory References:
EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Laboratory: Eurofins Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-25
ANAB	Dept. of Energy	L2311.01	02-13-25
ANAB	ISO/IEC 17025	L2311	02-13-25
Arkansas DEQ	State	88-0688	06-16-24
Colorado	State	TN00009	02-29-24
Connecticut	State	PH-0223	09-30-23
Florida	NELAP	E87177	06-30-24
Georgia (DW)	State	906	07-27-25
Hawaii	State	NA	07-27-24
Kansas	NELAP	E-10349	10-31-23
Kentucky (DW)	State	90101	12-31-23
Louisiana (All)	NELAP	83979	06-30-24
Louisiana (DW)	State	LA019	12-31-23
Maryland	State	277	03-31-24
Michigan	State	9933	07-27-25
Nevada	State	TN00009	07-31-24
New Hampshire	NELAP	2999	01-17-24
New Jersey	NELAP	TN001	07-01-24
New York	NELAP	10781	03-31-24
North Carolina (DW)	State	21705	07-31-24
North Carolina (WW/SW)	State	64	12-31-23
Oklahoma	State	9415	08-31-23
Oregon	NELAP	TNI0189	01-01-24
Pennsylvania	NELAP	68-00576	12-01-23
Tennessee	State	02014	07-27-25
Texas	NELAP	T104704380-22-17	08-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	525-22-279-18762	10-06-25
Utah	NELAP	TN00009	07-31-24
Virginia	NELAP	460176	09-14-23
Washington	State	C593	01-19-24
West Virginia (DW)	State	9955C	12-31-23
West Virginia DEP	State	345	04-30-24
Wisconsin	State	998044300	08-31-24

Method Summary

Client: Geosyntec Consultants Inc
Project/Site: Vistra / Miami Fort - SEP

Job ID: 140-32884-1

Method	Method Description	Protocol	Laboratory
6010B	SEP Metals (ICP) - Total	SW846	EET KNX
6010B SEP	SEP Metals (ICP)	SW846	EET KNX
Moisture	Percent Moisture	EPA	EET KNX
3010A	Preparation, Total Metals	SW846	EET KNX
Acid/Sulfide	Sequential Extraction Procedure, Acid/Sulfide Fraction	TAL-KNOX	EET KNX
Carbonate	Sequential Extraction Procedure, Carbonate Fraction	TAL-KNOX	EET KNX
Exchangeable	Sequential Extraction Procedure, Exchangeable Fraction	TAL-KNOX	EET KNX
Metal Hydroxide	Sequential Extraction Procedure, Metal Hydroxide Fraction	TAL-KNOX	EET KNX
Non-Crystalline	Sequential Extraction Procedure, Non-crystalline Materials	TAL-KNOX	EET KNX
Organic-Bound	Sequential Extraction Procedure, Organic Bound Fraction	TAL-KNOX	EET KNX
Residual	Sequential Extraction Procedure, Residual Fraction	TAL-KNOX	EET KNX
Total	Preparation, Total Material	TAL-KNOX	EET KNX

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-KNOX = TestAmerica Laboratories, Knoxville, Facility Standard Operating Procedure.

Laboratory References:

EET KNX = Eurofins Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921-5947
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Allison Kreinberg	Site Contact: NA	Date:	COC No:
Geosyntec Consultants, Inc.	Tel/Fax:	Lab Contact: Ryan Henry	Carrier:	1 of 1 COCs
941 Chatham Lane, Suite 103	Analysis Turnaround Time			Sampler:
Columbus, OH 43221	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(614) 468-0421 Phone	TAT if different from Below ____			Walk-in Client:
	☑ 2 weeks			Lab Sampling:
Project Name: Vistra	☐ 1 week			
Site: Miami Fort	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	6010B SEP (As, Fe, Mn)	6010B SEP (Co, Fe, Mn)	Sample Specific Notes:
B23-1 43.5-45 20230711	7/11/2023	1445	G	Solid	1	N	N	X		
B23-12 31.5-33.5 20230712	7/12/2023	1415	G	Solid	1	N	N	X		
B23-12 38.5-39.8 20230712	7/12/2023	1430	G	Solid	1	N	N	X		
B23-12 51.5-53.5 20230712	7/12/2023	1445	G	Solid	1	N	N	X		
B23-2 42-43.6 20230724	7/24/2023	930	G	Solid	1	N	N		X	
B23-2 59-60.5 20230724	7/24/2023	1100	G	Solid	1	N	N		X	

NO CUSTODY SEALS 32.3°c
RECEIVED AMBIENT AT 32°c / CT ~~32.5°c~~ 32.3°c 7-28-23
1 cooler/box FedEx #7816 7784 4596
DKD 7-28-23

140-32884 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☑ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:____ Corr'd:____ Therm ID No.:____

	Company	Date/Time		Company	Date/Time
Relinquished by: Brianna O'Neil-Hankle	Geosyntec	7/26/23 1800	Received by:	FTKWX	7-28-23 13:45
Relinquished by: Brianna O'Neil-Hankle	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.21, dated 4/4/2019

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ Containers, Broken
2. Were ambient air containers received intact?			✓	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : SC73 Correction factor: +0.3°C		✓		☑ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt
5. Were all of the sample containers received intact?	✓			☐ Containers, Broken
6. Were samples received in appropriate containers?	✓			☐ Containers, Improper; Client Contacted; Proceed/Cancel
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received
8. Were all of the samples listed on the COC received?	✓			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received
9. Is the date/time of sample collection noted?	✓			☐ COC; No Date/Time; Client Contacted
10. Was the sampler identified on the COC?		✓		☑ Sampler Not Listed on COC
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC
13. Is the matrix of the samples noted?	✓			☐ COC Incorrect/Incomplete
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ COC Incorrect/Incomplete
15. Were samples received within holding time?	✓			☐ Holding Time - Receipt
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative
17. Were VOA samples received without headspace?			✓	☐ Headspace (VOA only)
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ Residual Chlorine
19. For 1613B water samples is pH<9?			✓	☐ If no, notify lab to adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

4

10

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 480/6199 PM Instructions:

Sample Receiving Associate: Date: 7-28-23

QA026R32.doc, 062719

Geosyntec consultants

ATTACHMENT 5

X-Ray Diffraction Laboratory Analytical Report
(2021 and 2023 Field Efforts)

Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for:	*Environmental Services*
Project Number/ LIMS No.	*Custom XRD/MI4527-MAR21*
Sample Receipt:	*March 22, 2021*
Sample Analysis:	*March 29, 2021*
Reporting Date:	*Revised April 1, 2021*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 35 kV, 40 mA Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

1) Method Summary
2) Quantitative XRD Results
3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geo.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: http://palcan.scc.ca/SpecsSearch/GLSearchForm.do.

Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

DISCLAIMER: This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	SB-2 36-37' MAR4527-01 (wt %)	SB-2 42-43' MAR4527-02 (wt %)	SB-2 43-44' MAR4527-03 (wt %)	SB-1 64-65' MAR4527-04 (wt %)
Quartz	55.0	70.7	73.6	69.0
Albite	7.8	10.3	12.5	9.9
Microcline	4.1	5.7	4.5	5.5
Chlorite	4.7	1.9	2.3	1.5
Muscovite	17.5	7.1	4.0	3.0
Kaolinite	10.3	3.5	2.4	1.5
Hematite	0.6	0.8	0.7	-
Calcite	-	-	-	7.0
Dolomite	-	-	-	1.9
Ankerite	-	-	-	0.3
Rhodochrosite	-	-	-	0.4
TOTAL	100	100	100	100

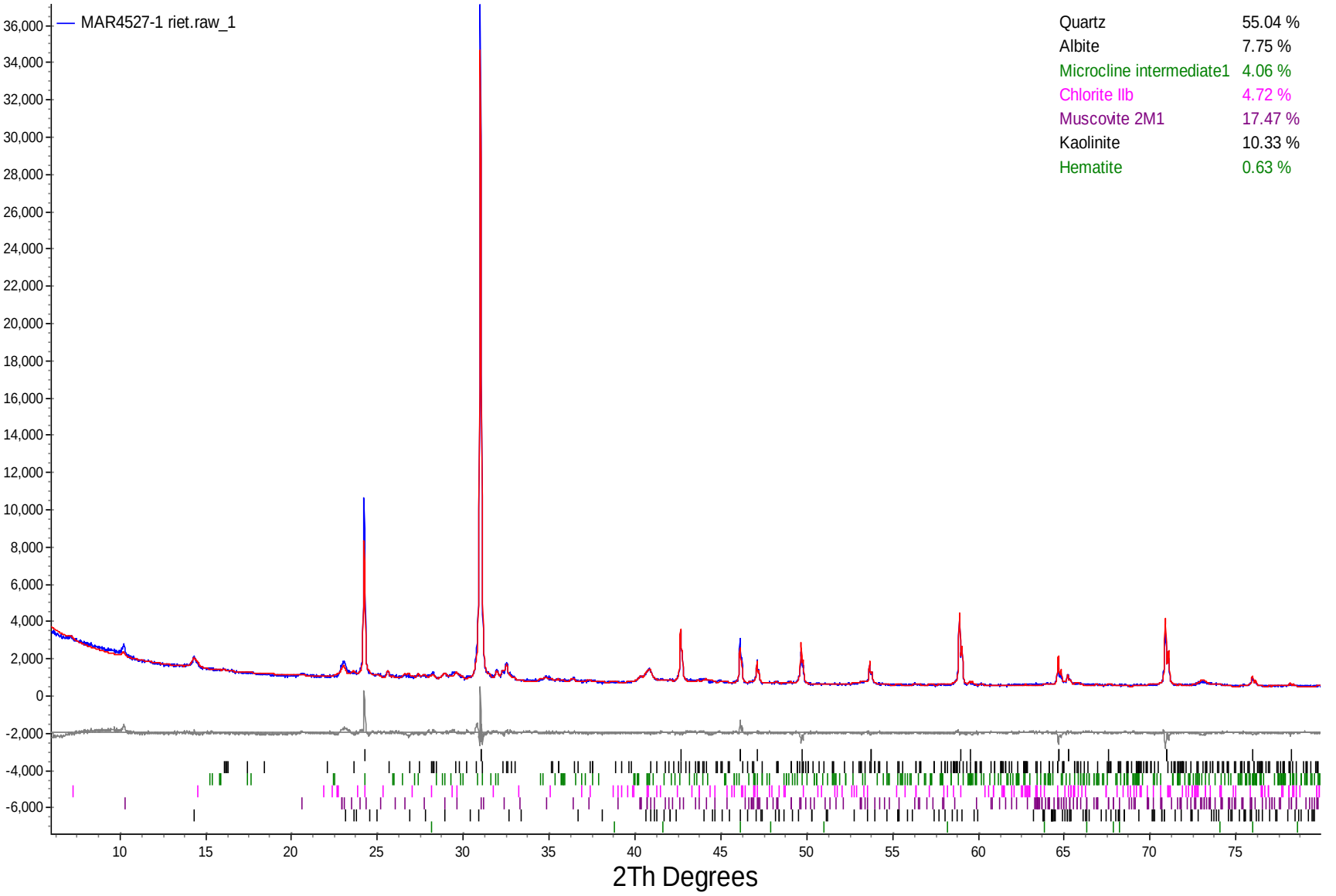
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

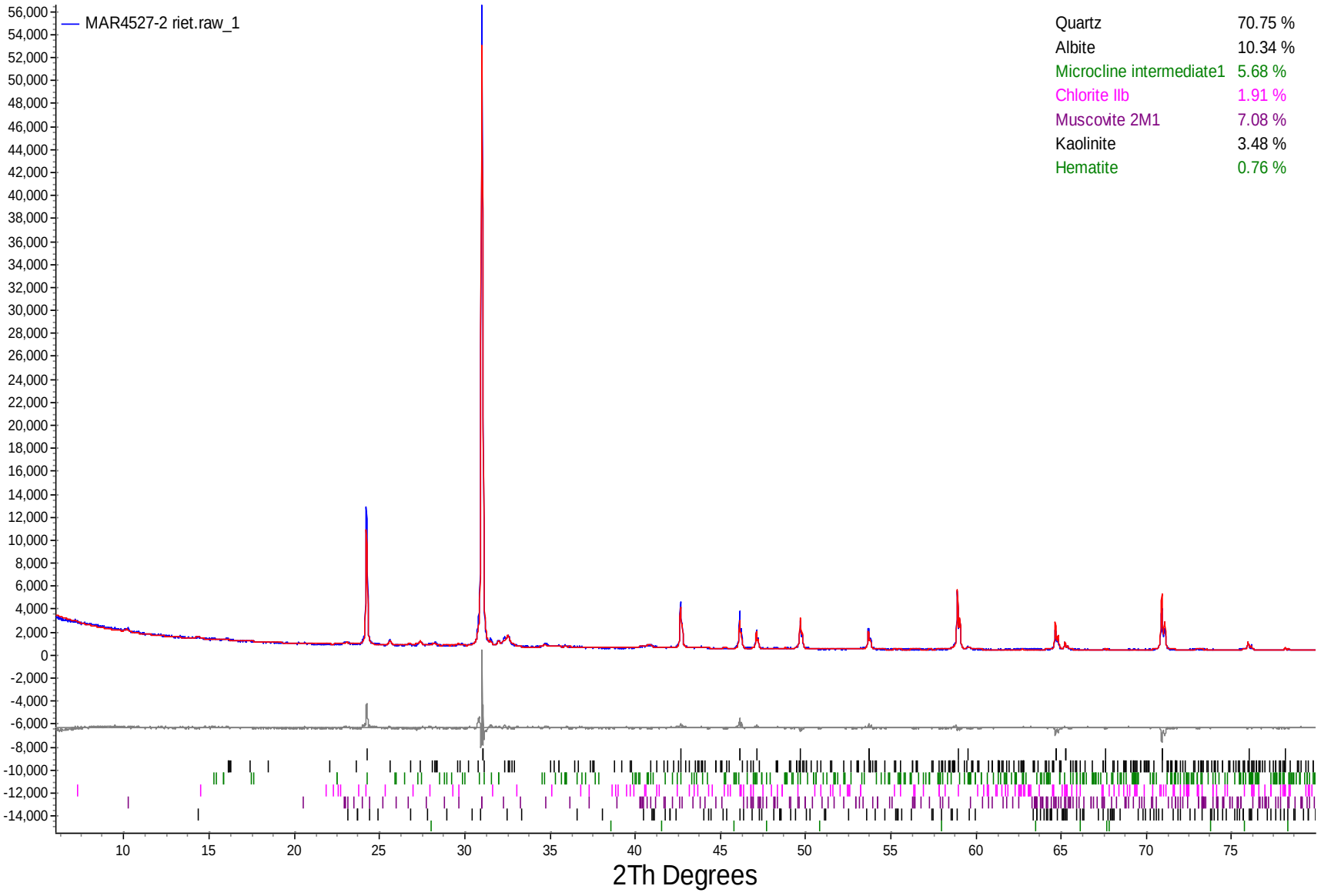
Mineral/Compound	Formula
Quartz	SiO_2
Albite	$NaAlSi_3O_8$
Microcline	$KAlSi_3O_8$
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Kaolinite	$Al_2Si_2O_5(OH)_4$
Hematite	Fe_2O_3
Calcite	$CaCO_3$
Dolomite	$CaMg(CO_3)_2$
Ankerite	$CaFe(CO_3)_2$
Rhodochrosite	$MnCO_3$

SB-2 36-37'



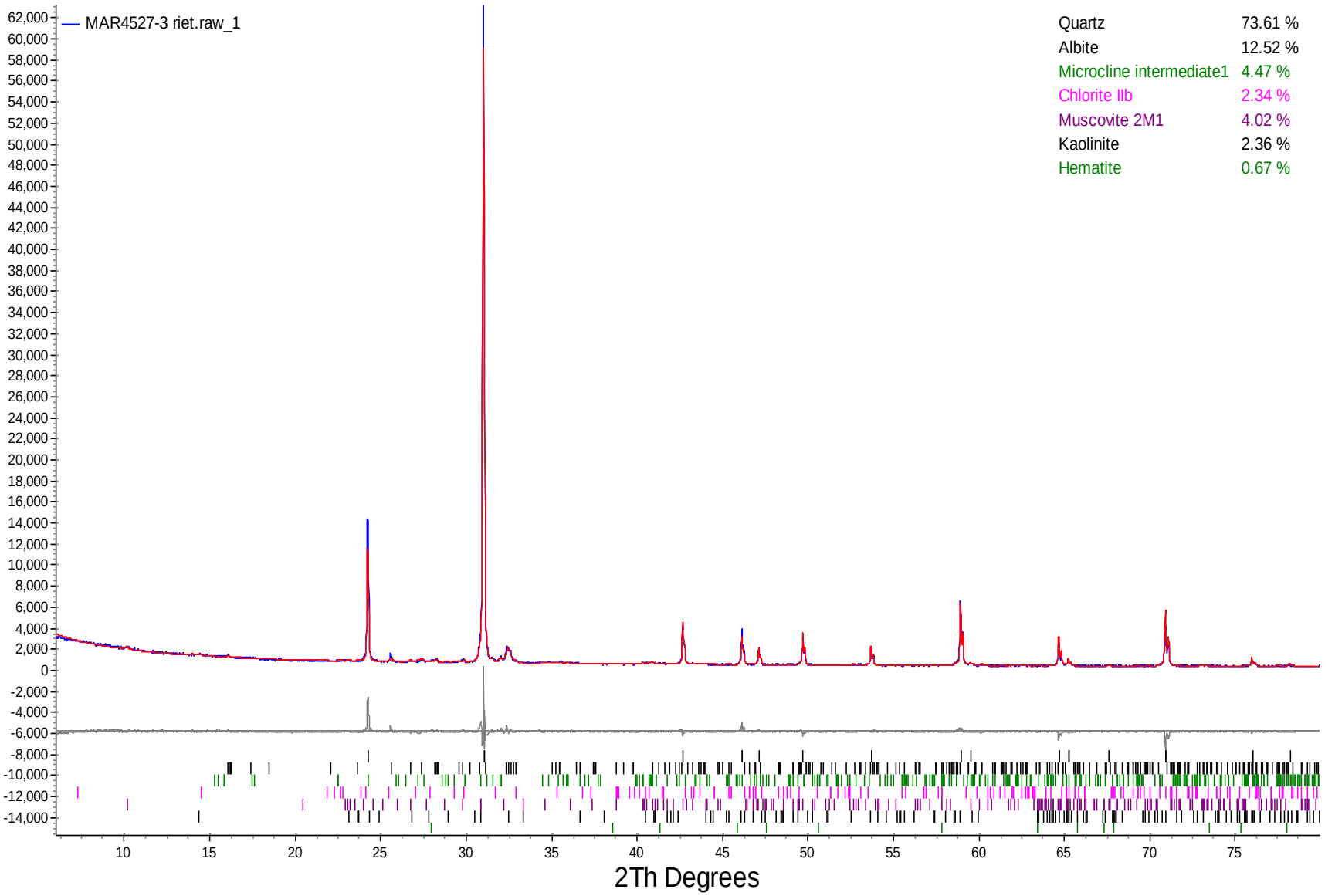
Quartz	55.04 %
Albite	7.75 %
Microcline intermediate1	4.06 %
Chlorite IIb	4.72 %
Muscovite 2M1	17.47 %
Kaolinite	10.33 %
Hematite	0.63 %

SB-2 42-43'



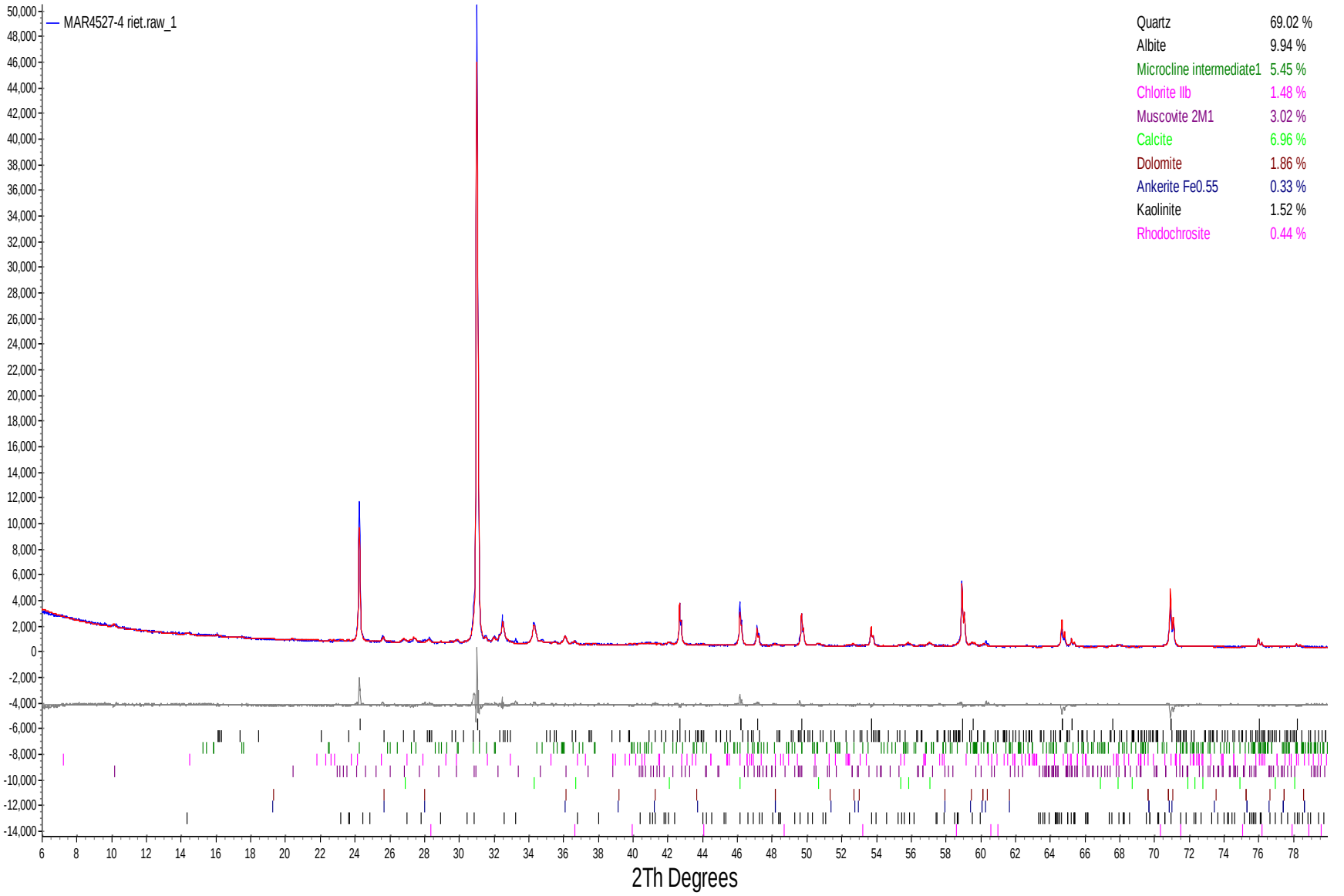
Quartz	70.75 %
Albite	10.34 %
Microcline intermediate1	5.68 %
Chlorite IIb	1.91 %
Muscovite 2M1	7.08 %
Kaolinite	3.48 %
Hematite	0.76 %

SB-2 43-44'



Quartz	73.61 %
Albite	12.52 %
Microcline intermediate1	4.47 %
Chlorite IIb	2.34 %
Muscovite 2M1	4.02 %
Kaolinite	2.36 %
Hematite	0.67 %

SB-1 64-65'



Quartz	69.02 %
Albite	9.94 %
Microcline intermediate1	5.45 %
Chlorite IIb	1.48 %
Muscovite 2M1	3.02 %
Calcite	6.96 %
Dolomite	1.86 %
Ankerite Fe0.55	0.33 %
Kaolinite	1.52 %
Rhodochrosite	0.44 %

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Project : Fort Miami MNA

18-March-2021

SiREM Laboratory
Attn : Michael Healey

130 Stone Road W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 11 March 2021
LR Report: **CA13283-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: MW-4	6: MW-19
Sample Date & Time					09-Mar-21 15:45	09-Mar-21 16:00
Temp Upon Receipt [°C]	---	---	---	---	6.0	6.0
TOC [mg/L]	12-Mar-21	19:40	15-Mar-21	10:29	2	1
Ag (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.00005	< 0.00005
Al (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.001	0.002
As (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.0002	0.0002
Ba (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.0093	0.141
Be (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.000007	< 0.000007
B (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.142	0.082
Bi (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.000047	0.00061
Ca (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	147	155
Cd (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.00015	0.000047
Co (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.00412	0.00303
Cr (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.00008	< 0.00008
Cu (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.0004	0.0005
Fe (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.007	< 0.007
K (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	1.76	2.05
Li (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.0037	0.0062
Mg (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	39.4	42.8
Mn (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	1.11	0.286
Mo (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.0045	0.0031
Na (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	22.8	25.5
Ni (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.0052	0.0044
Pb (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.00001	0.00005
Sb (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.0009	< 0.0009
Se (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.00005	0.00054
Sn (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.00006	< 0.00006
Sr (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.320	0.194

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0002434906

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Project : Fort Miami MNA

LR Report : **CA13283-MAR21**

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: MW-4	6: MW-19
Ti (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.00005	< 0.00005
Tl (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.000027	0.000023
U (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.00058	0.00059
V (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.00002	0.00041
W (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	< 0.00002	0.00004
Y (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.00010	0.00012
Zn (diss) [mg/L]	16-Mar-21	18:20	17-Mar-21	12:46	0.004	0.009

Catharine Arnold

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

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Project : Fort Miami MNA

06-April-2021

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Date Rec. : 11 March 2021
LR Report: **CA14286-MAR21**
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Completed Date	4: Analysis Completed Time	5: SB-2 36-37'	6: SB-2 42-43'	7: SB-2 43-44'	8: SB-1 64-65'
Sample Date & Time					09-Mar-21 14:54	09-Mar-21 15:00	09-Mar-21 15:15	09-Mar-21 15:30
TS LOI [mg/L]	15-Mar-21	20:58	17-Mar-21	09:17	48900	19600	12400	15300
TOC [%]	18-Mar-21	11:44	18-Mar-21	14:21	0.307	0.283	0.361	0.145
Ag [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	< 0.05	< 0.05	< 0.05	< 0.05
Al [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	12000	5200	4100	3800
As [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	3.9	6.9	10	8.2
Ba [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	110	43	86	35
Be [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.88	0.34	0.25	0.21
B [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	3	4	3	3
Bi [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.31	0.20	0.13	0.11
Ca [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	1300	1300	2600	24000
Cd [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.21	0.10	0.10	0.08
Co [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	12	7.0	7.6	7.9
Cr [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	17	8.7	8.0	7.6
Cu [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	16	13	11	9.1
Fe [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	23000	19000	15000	14000
K [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	1900	1100	990	790

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Project : Fort Miami MNA
LR Report : CA14286-MAR21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-2 36-37'	6: SB-2 42-43'	7: SB-2 43-44'	8: SB-1 64-65'
Li [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	14	5	4	4
Mg [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	2300	1100	1400	3700
Mn [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	150	330	800	240
Mo [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.9	1.8	2.3	1.4
Na [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	120	180	260	260
Ni [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	21	16	16	14
Pb [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	12	8.5	7.0	5.8
Sb [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	< 0.7	< 0.7	< 0.7	< 0.7
Sn [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.6	< 0.5	< 0.5	< 0.5
Sr [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	12	9.4	12	39
Ti [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	140	75	120	150
Tl [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.18	0.09	0.11	0.09
U [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.96	0.76	0.58	0.46
V [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	24	14	11	12
W [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	0.06	0.08	0.06	0.06
Y [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	11	7.2	6.4	5.7
Zn [µg/g]	05-Apr-21	14:43	06-Apr-21	11:29	57	38	31	24

Catharine Arnold

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
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Project : Fort Miami MNA

30-March-2021

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Date Rec. : 11 March 2021
LR Report: **CA14287-MAR21**
Reference: P.O# 800003210A

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CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: SB-2 36-37'	6: SB-2 42-43'	7: SB-2 43-44'	8: SB-1 64-65'	9: SB-2 36-37'
Sample Date & Time					09-Mar-21 14:54	09-Mar-21 15:00	09-Mar-21 15:15	09-Mar-21 15:30	
SiO2 [%]	24-Mar-21	11:55	26-Mar-21	09:01	73.8	85.0	86.8	80.2	73.6
Al2O3 [%]	24-Mar-21	11:55	26-Mar-21	09:01	11.5	5.75	4.77	4.58	11.6
Fe2O3 [%]	24-Mar-21	11:55	26-Mar-21	09:01	4.47	3.27	2.69	2.78	4.45
MgO [%]	24-Mar-21	11:55	26-Mar-21	09:01	0.76	0.40	0.44	0.89	0.75
CaO [%]	24-Mar-21	11:55	26-Mar-21	09:01	0.31	0.61	0.86	4.43	0.31
Na2O [%]	24-Mar-21	11:55	26-Mar-21	09:01	0.64	0.81	0.86	0.87	0.64
K2O [%]	24-Mar-21	11:55	26-Mar-21	09:01	2.13	1.29	1.10	1.04	2.14
TiO2 [%]	24-Mar-21	11:55	26-Mar-21	09:01	0.87	0.28	0.25	0.31	0.88
P2O5 [%]	24-Mar-21	11:55	26-Mar-21	09:01	0.14	0.10	0.08	0.06	0.13
MnO [%]	24-Mar-21	11:55	26-Mar-21	09:01	0.03	0.05	0.11	0.05	0.02
Cr2O3 [%]	24-Mar-21	11:55	26-Mar-21	09:01	< 0.01	< 0.01	0.03	< 0.01	0.02
V2O5 [%]	24-Mar-21	11:55	26-Mar-21	09:01	0.01	< 0.01	< 0.01	< 0.01	0.01
LOI [%]	24-Mar-21	11:55	26-Mar-21	09:01	4.76	2.08	1.54	4.63	4.90
Sum [%]	24-Mar-21	11:55	26-Mar-21	09:01	99.5	99.6	99.5	99.8	99.4

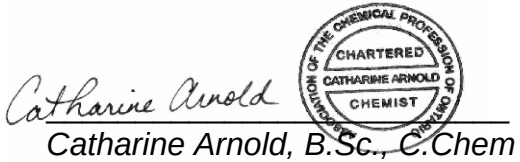
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Project : Fort Miami MNA
LR Report : **CA14287-MAR21**



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ANALYSIS REPORT BBM23-33457

To F400101 SGS CANADA INC
LISA THOMPSON
185 Concession Street
Lakefield K0L 2H0
ON
CANADA

Order Number	PO#	Date Received	26-Oct-2023
Submission Number	CA19054-AUG23 / 6 Soil	Date Analysed	31-Oct-2023 - 01-Nov-2023
Number of Samples	6	Date Completed	10-Nov-2023
		SGS Order Number	BBM23-33457

Methods Summary

Number of Sample	Method Code	Description
6	G_WGH_KG	Weight of samples received
6	G_PHY01V	Loss on ignition (LOI), Furnace, variable wt, variable temp
6	GO_XRF72	Borate Fusion, XRF, Ore Grade

Comments

Preparation of samples was performed at the SGS Lakefield site.
Analysis of samples was performed at the SGS Burnaby site.

Authorised Signatory

John Chiang
Laboratory Operations Manager

SCC Accredited LAB Accrédité CCN

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- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Member of the SGS Group (SGS SA)

Order Number PO#
Submission Number CA19054-AUG23 / 6 Soil
Number of Samples 6

ANALYSIS REPORT BBM23-33457

Element	WTKG	LOI	@Al2O3	@CaO	@Cr2O3	@Fe2O3
Method	G_WGH_KG	G_PHY01V	GO_XRF72	GO_XRF72	GO_XRF72	GO_XRF72
Lower Limit	0.01	-10	0.01	0.01	0.01	0.01
Upper Limit	--	100	100	60	5	100
Unit	kg	%	%	%	%	%
B23-1 43.5-45 20230711	0.02	12.8487	4.65	12.27	<0.01	2.18
B23-12 31.5-33.5 20230712	0.21	7.20928	10.57	0.49	<0.01	3.76
B23-12 38.5-39.8 20230712	0.02	16.3316	5.06	14.05	<0.01	2.52
B23-12 51.5-53.5 20230712	0.02	9.26815	4.76	8.07	<0.01	2.05
B23-2 42-43.6 20230724	0.02	5.04101	10.94	0.42	0.01	4.53
B23-2 59-60.5 20230724	0.02	15.7053	4.79	14.13	0.01	1.97
*Rep B23-12 38.5-39.8 20230712	-	16.2116	-	-	-	-
*Std OREAS 70b	-	6.81864	-	-	-	-
*Rep B23-12 38.5-39.8 20230712	-	-	5.12	14.16	0.01	2.50
*Std OREAS 70b	-	-	7.11	4.28	0.19	7.97
*Blk BLANK	-	-	<0.01	<0.01	<0.01	<0.01
*Std OREAS 751	-	-	15.89	1.05	<0.01	2.40

Element	@K2O	@MgO	Mn3O4	@Na2O	@P2O5	@SiO2
Method	GO_XRF72	GO_XRF72	GO_XRF72	GO_XRF72	GO_XRF72	GO_XRF72
Lower Limit	0.01	0.01	0.01	0.01	0.01	0.01
Upper Limit	70	100	100	60	55	100
Unit	%	%	%	%	%	%
B23-1 43.5-45 20230711	1.04	2.45	0.09	0.83	0.12	63.47
B23-12 31.5-33.5 20230712	1.87	0.80	0.08	0.69	0.14	74.37
B23-12 38.5-39.8 20230712	1.02	3.70	0.09	0.87	0.11	56.47
B23-12 51.5-53.5 20230712	0.98	2.72	0.05	0.84	0.08	70.46
B23-2 42-43.6 20230724	2.03	0.77	0.06	0.80	0.15	74.59
B23-2 59-60.5 20230724	1.06	4.03	0.09	0.92	0.07	57.03
*Rep B23-12 38.5-39.8 20230712	1.03	3.73	0.09	0.86	0.12	55.86

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

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Member of the SGS Group (SGS SA)

Order Number PO#
Submission Number CA19054-AUG23 / 6 Soil
Number of Samples 6

ANALYSIS REPORT BBM23-33457

Element	@K2O	@MgO	Mn3O4	@Na2O	@P2O5	@SiO2
Method	GO_XRF72	GO_XRF72	GO_XRF72	GO_XRF72	GO_XRF72	GO_XRF72
Lower Limit	0.01	0.01	0.01	0.01	0.01	0.01
Upper Limit	70	100	100	60	55	100
Unit	%	%	%	%	%	%
*Std OREAS 70b	0.69	22.43	0.16	1.04	0.06	48.39
*Blk BLANK	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
*Std OREAS 751	2.89	0.51	0.10	3.39	0.28	71.44

Element	@TiO2	@V2O5	Sum
Method	GO_XRF72	GO_XRF72	GO_XRF72
Lower Limit	0.01	0.01	0.01
Upper Limit	100	10	100
Unit	%	%	%
B23-1 43.5-45 20230711	0.25	<0.01	87.44
B23-12 31.5-33.5 20230712	0.80	0.02	93.79
B23-12 38.5-39.8 20230712	0.28	<0.01	84.29
B23-12 51.5-53.5 20230712	0.33	<0.01	90.43
B23-2 42-43.6 20230724	0.84	0.01	95.23
B23-2 59-60.5 20230724	0.22	<0.01	84.42
*Rep B23-12 38.5-39.8 20230712	0.27	<0.01	83.85
*Std OREAS 70b	0.30	<0.01	93.36
*Blk BLANK	<0.01	<0.01	0.02
*Std OREAS 751	0.24	<0.01	98.41

SGS Canada Minerals Burnaby conforms to the requirements of ISO/IEC17025 for specific tests as listed on their scope of accreditation found at https://www.scc.ca/en/search/laboratories/sgs
Tests and Elements marked with an "@" symbol in the report denote ISO/IEC17025 accreditation.

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

SGS Canada Inc. | NAM Minerals Geochemistry 3260 Production Way Burnaby BC. V5A 4W4 CANADA t +1 (604) 638 2349 f +1 (604) 444 5486 www.sgs.com

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Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for:	*Environmental Services*
Project Number/ LIMS No.	*Custom XRD/MI4557-AUG23*
Sample Receipt:	*August 23, 2023*
Sample Analysis:	*August 28, 2023*
Reporting Date:	*September 29, 2023*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 35 kV, 40 mA; Detector: LYNXEYE Regular Scanning: Step: 0.02°, Step time: 0.75s, 2θ range: 6-80°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

1) Method Summary
2) Quantitative XRD Results
3) XRD Pattern(s)

Zhihai (Adrian) Zhang, Ph.D
Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Natural Resources Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada Inc. - Minerals: https://www.scc.ca/en/search/palcan.

Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Natural Resources is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	B23-1 43.5-45 20230711 AUG4557-1 (wt %)	B23-12 31.5-33.5 20230712 AUG4557-2 (wt %)	B23-12 38.5-39.8 20230712 AUG4557-3 (wt %)	B23-12 51.5-53.5 20230712 AUG4557-4 (wt %)	B23-2 42-43.6 20230724 AUG4557-5 (wt %)	B23-2 59-60.5 20230724 AUG4557-6 (wt %)
Quartz	55.4	61.0	44.9	59.2	61.0	47.5
Albite	7.7	7.5	8.4	9.5	7.8	8.4
Microcline	4.0	0.4	4.6	4.2	0.4	3.7
Calcite	16.4	0.5	17.4	7.8	0.4	15.0
Dolomite	7.1	-	15.0	9.2	-	10.8
Ankerite	2.5	-	1.2	1.1	-	5.3
Actinolite	0.9	0.8	0.9	1.6	0.4	1.2
Diopside	0.8	2.1	0.6	1.3	1.6	2.4
Muscovite	3.5	14.8	4.0	3.8	15.0	4.0
Kaolinite	0.4	8.3	0.9	0.6	8.0	0.4
Chlorite	1.2	2.7	2.0	1.7	2.2	0.5
Magnetite	0.2	0.2	0.2	0.1	0.4	0.4
Montmorillonite	-	0.8	-	-	1.0	-
Biotite	-	1.0	-	-	1.7	-
Rhodochrosite	-	-	-	-	-	0.3
TOTAL	100	100	100	100	100	100

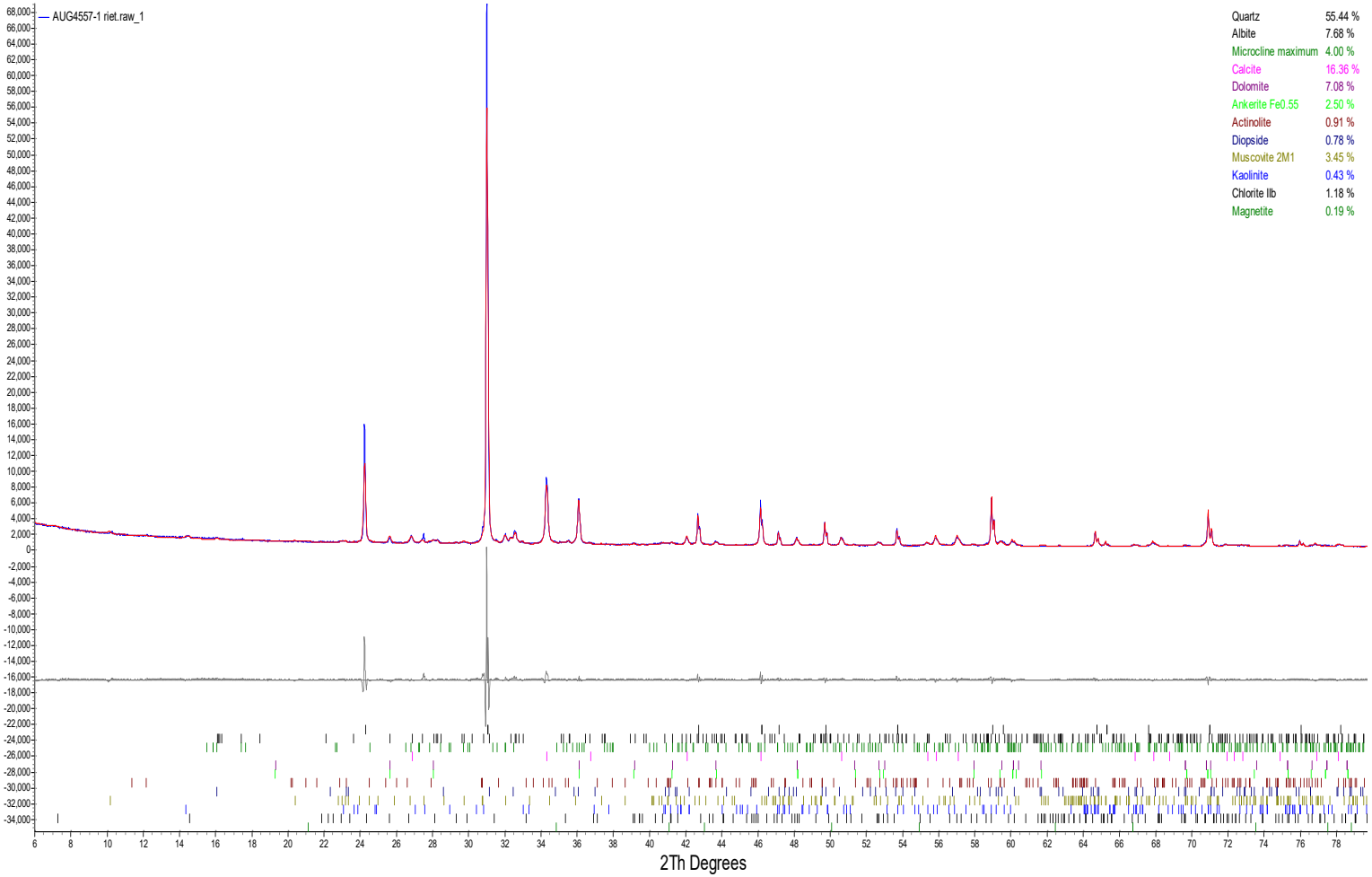
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

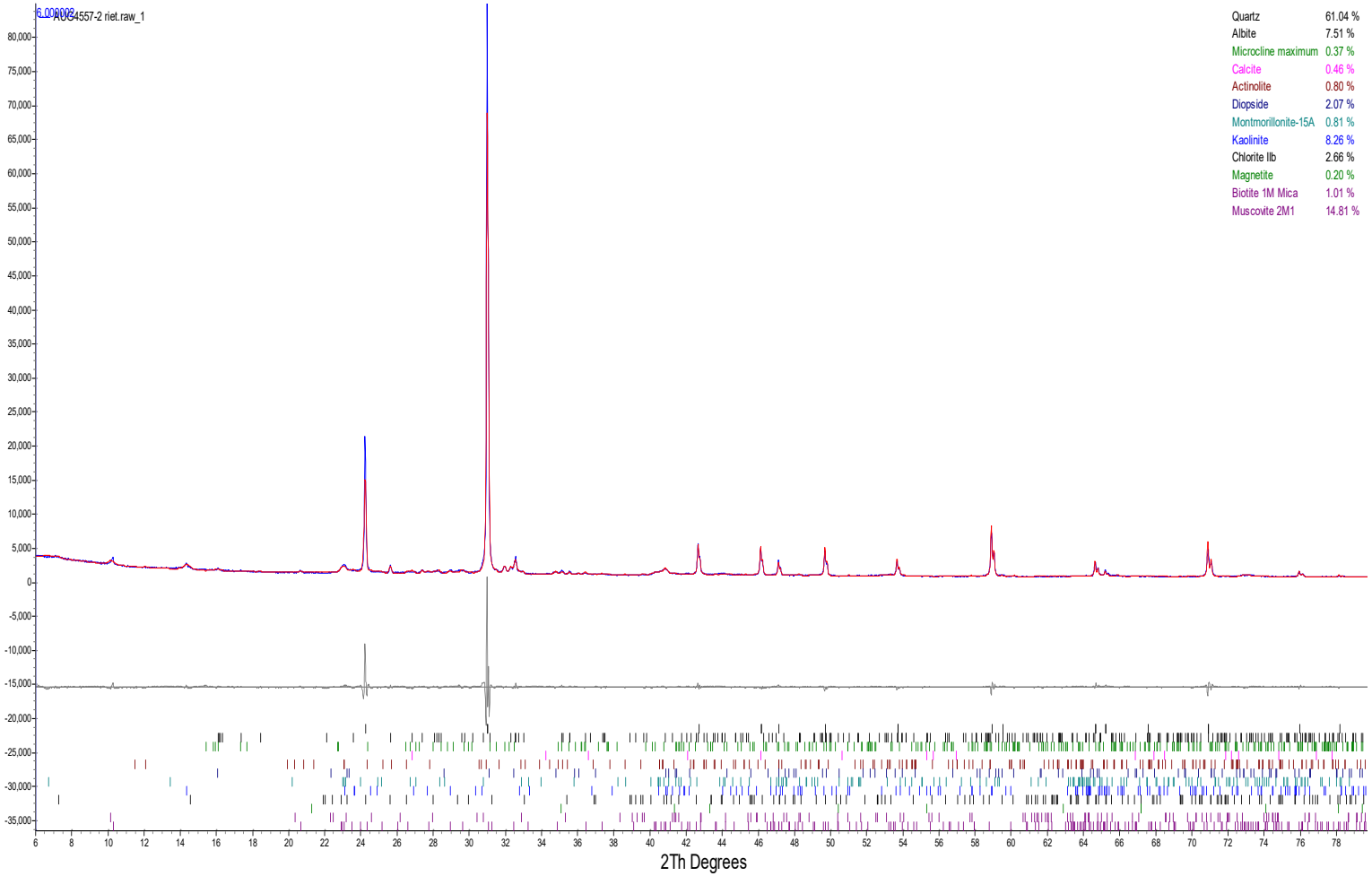
The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO_2
Albite	$NaAlSi_3O_8$
Microcline	$KAlSi_3O_8$
Calcite	$CaCO_3$
Dolomite	$CaMg(CO_3)_2$
Ankerite	$CaFe(CO_3)_2$
Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$
Diopside	$CaMgSi_2O_6$
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Kaolinite	$Al_2Si_2O_5(OH)_4$
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$
Magnetite	Fe_3O_4
Montmorillonite	$(Na,Ca)_{0.3}(Al,Mg)_2Si_4O_{10}(OH)_2 \cdot 10H_2O$
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$
Rhodochrosite	$MnCO_3$

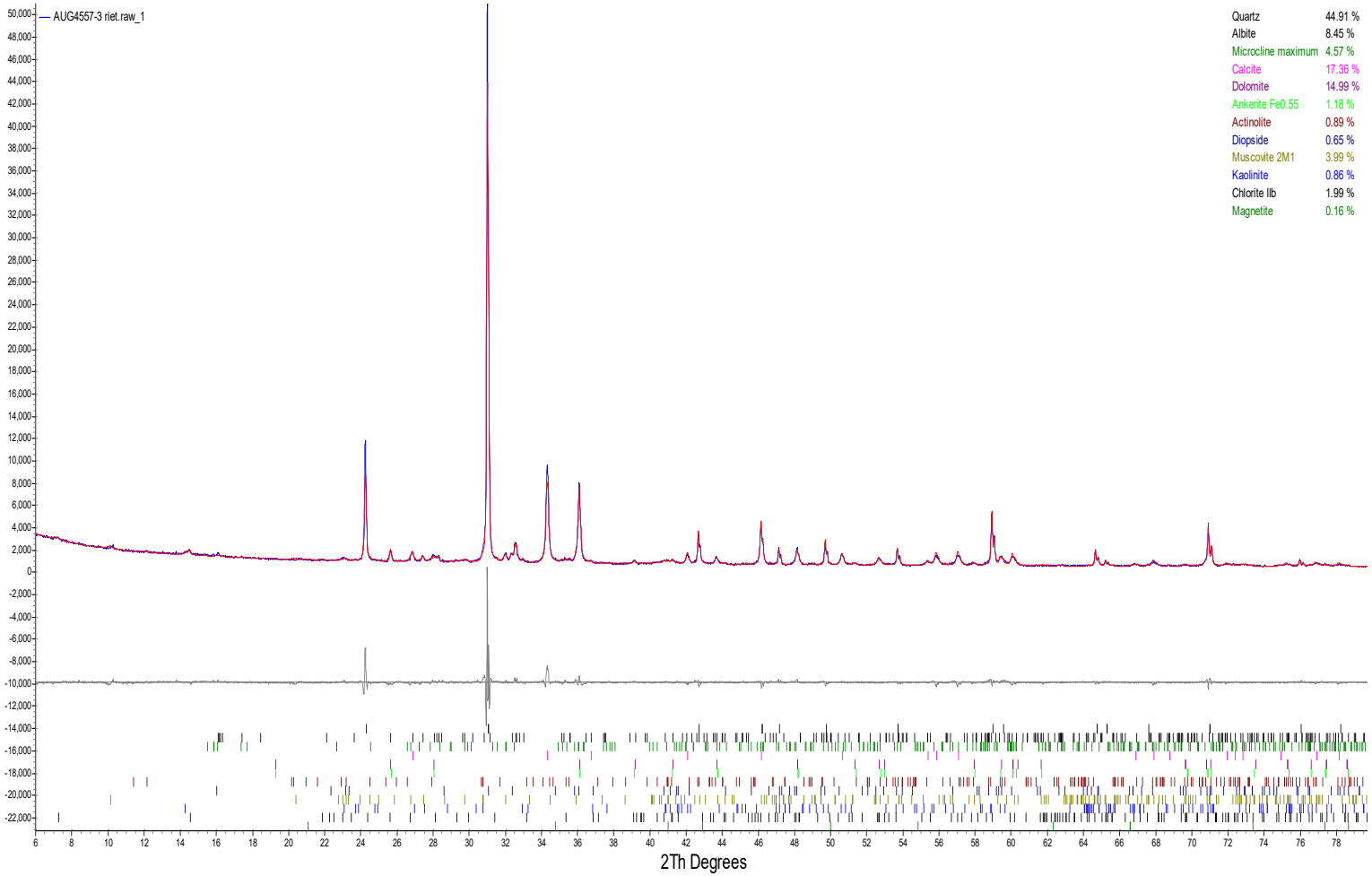
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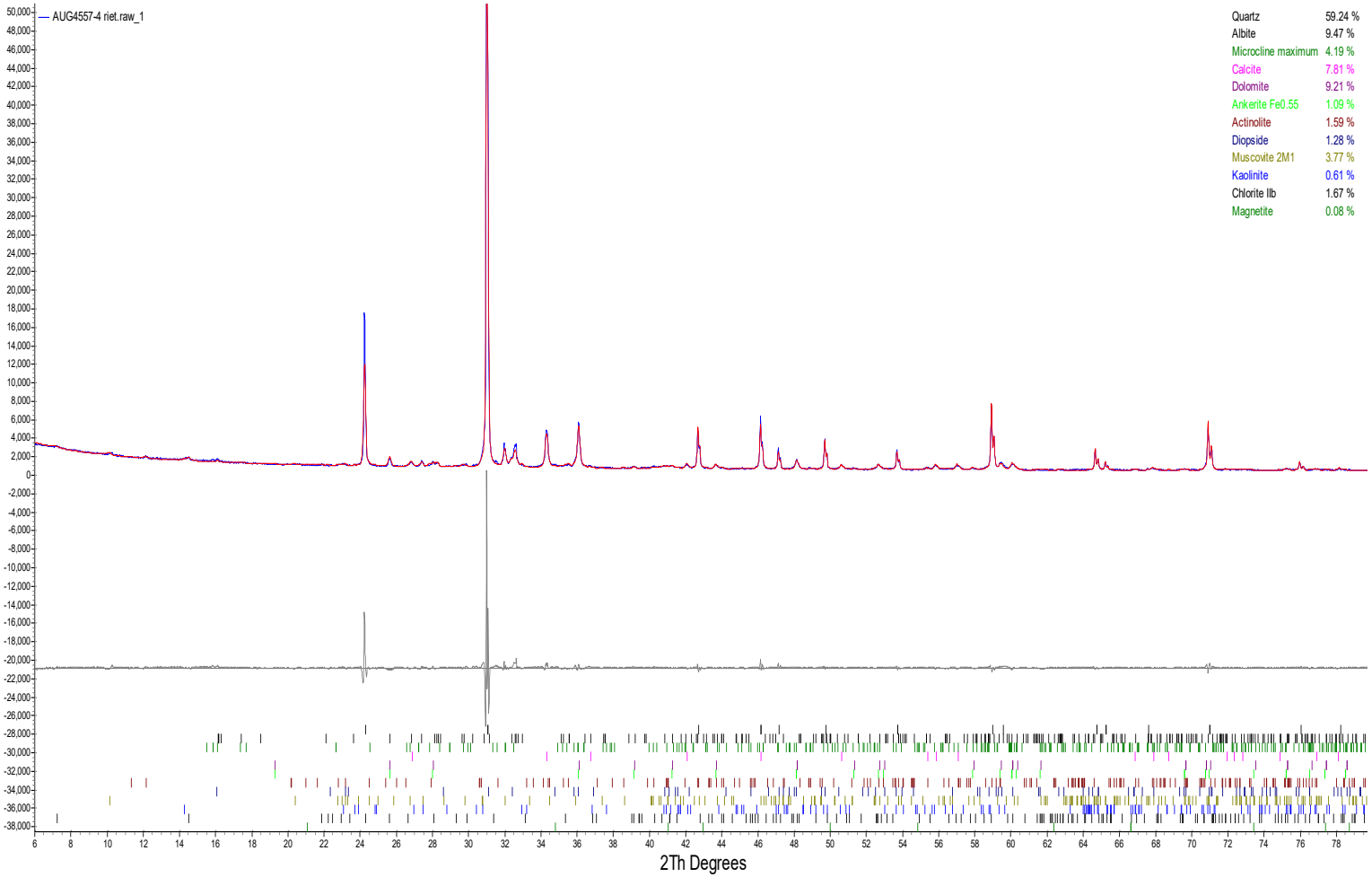
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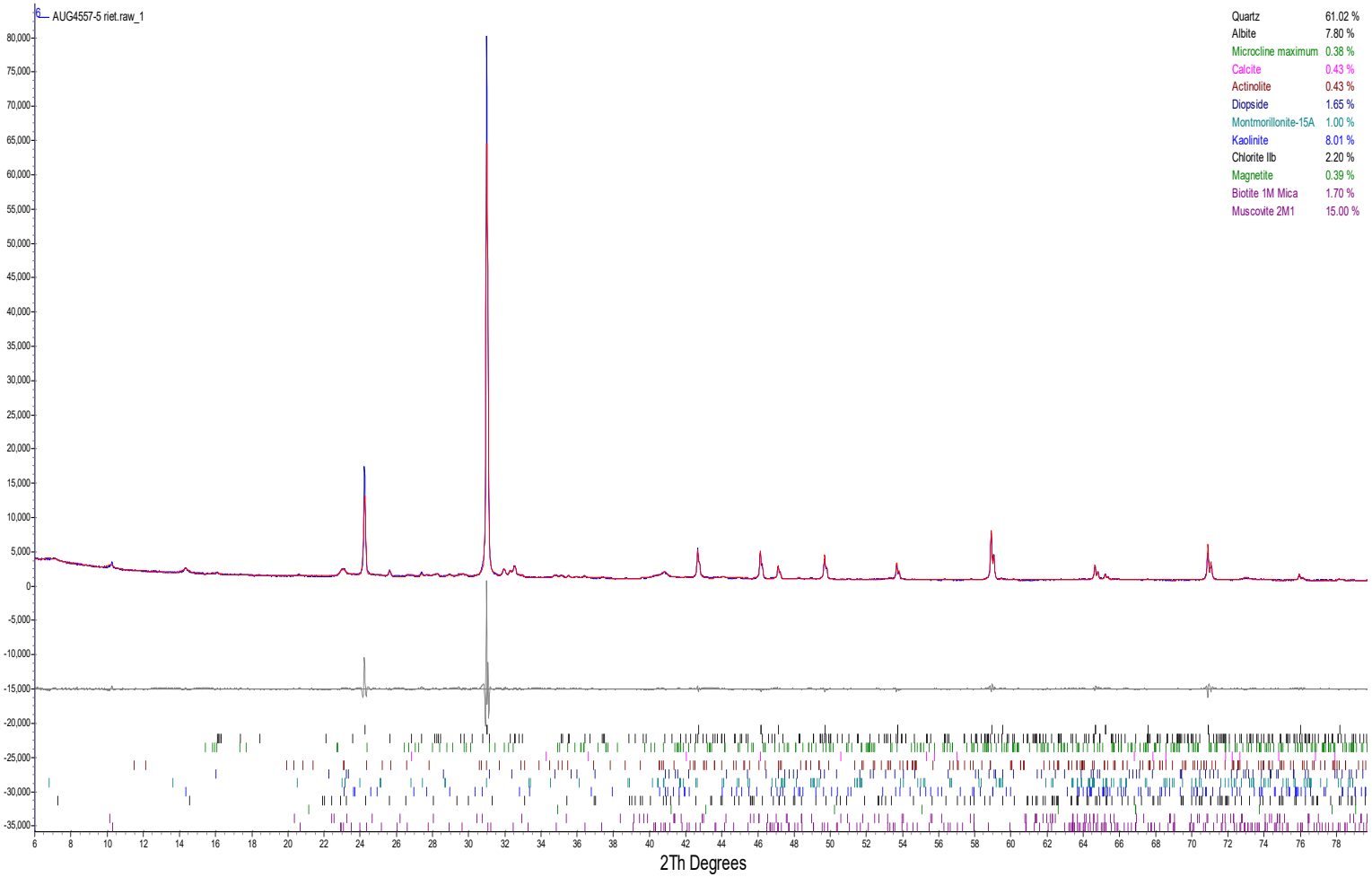
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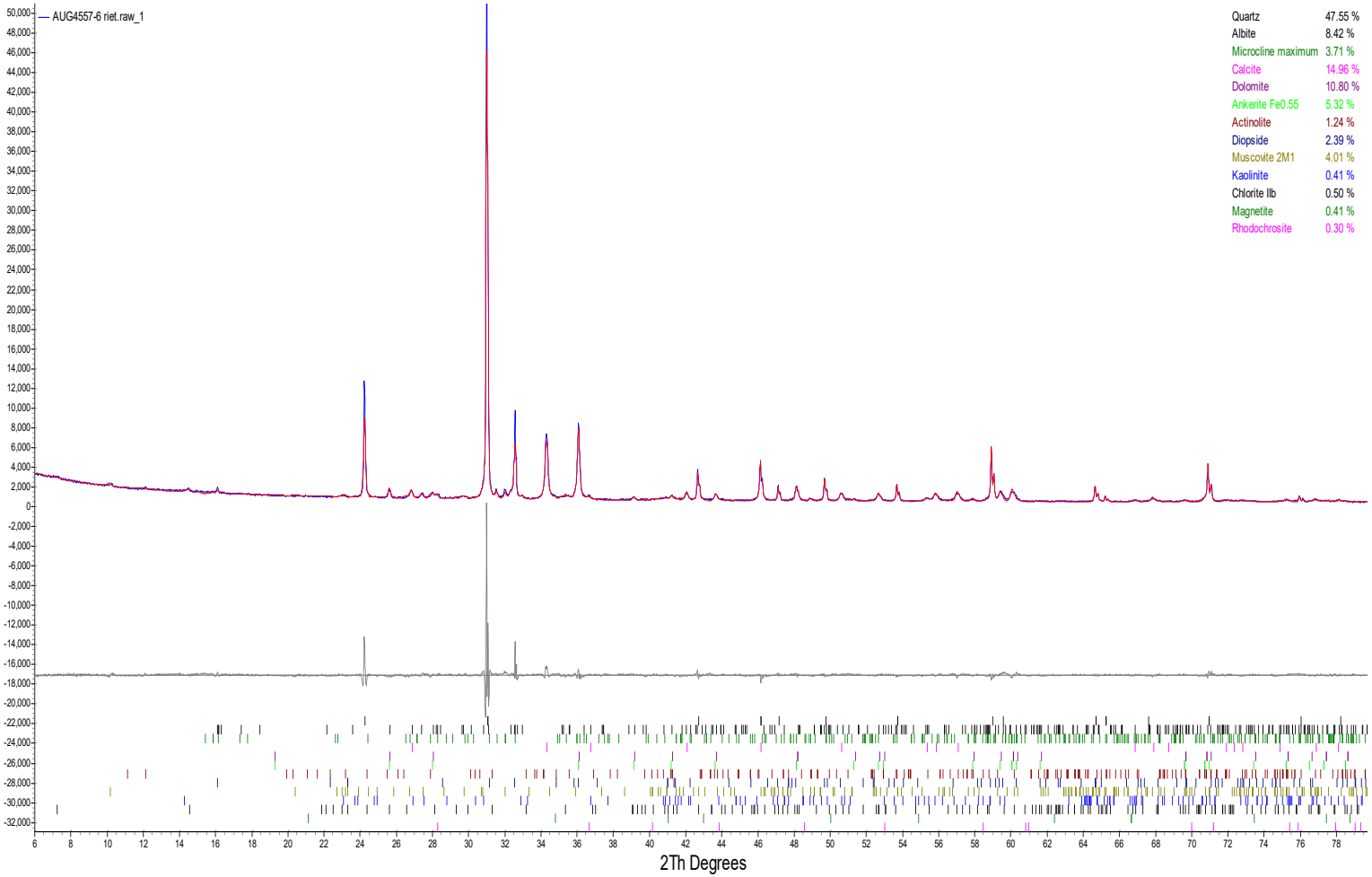
B23-12 51.5-53.5 20230712



B23-2 42-43.6 20230724



B23-2 59-60.5 20230724



SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
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Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#GLP8066

06-October-2023

Geosyntec Consultant
Attn : Allison Kreinberg/Brian Aces

2100 Commonwealth Boulevard, Suit 100
Ann Arbor, Michigan
48108, USA

Phone: 734-794-1545
Fax:

Date Rec. : 14 August 2023
LR Report: **CA19053-AUG23**
Reference: Miami Fort - PO#GLP8066

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: B23-1 43.5-45 20230711	6: B23-12 31.5-33.5 20230712	7: B23-12 38.5-39.8 20230712	8: B23-12 51.5-53.5 20230712
Sample Date & Time					07/11/2023 14:45	07/12/2023 14:15	07/12/2023 14:30	07/12/2023 14:45
Ag [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	< 0.5	< 0.5	< 0.5	< 0.5
Al [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	24000	57000	28000	25000
As [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	6.7	5.4	6.0	4.2
Ba [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	220	420	250	230
Be [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	0.67	2.0	0.78	0.69
Bi [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	< 0.09	0.17	< 0.09	< 0.09
Ca [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	77000	3500	97000	52000
Cd [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	0.06	0.25	0.10	0.08
Co [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	4.3	12	5.4	5.1
Cr [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	62	59	51	42
Cu [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	8.0	16	7.5	5.9
Fe [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	15000	26000	17000	15000
K [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	8200	15000	8700	8100
Li [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	13	42	17	14
Mg [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	14000	4800	22000	16000
Mn [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	600	550	650	380
Mo [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	3.0	1.8	2.4	2.3
Ni [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	10	25	12	11
Pb [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	7	18	8	7
Sb [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	0.2	0.5	0.2	0.1
Sn [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	< 6	6.6	< 6	< 6
Sr [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	170	74	160	110
Ti [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	1000	2500	1100	1400
Tl [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	0.22	0.56	0.24	0.21
U [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	1.2	3.1	1.4	1.3
V [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	24	65	27	29
Y [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	9.3	20	10	9.7
Zn [µg/g]	04-Oct-23	11:48	05-Oct-23	15:17	24	69	29	25

OnLine LIMS

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Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#GLP8066

LR Report : **CA19053-AUG23**

Analysis	9: B23-2 42-43.6 20230724	10: B23-2 59-60.5 20230724
Sample Date & Time	07/24/2023 9:30	07/24/2023 11:00
Ag [µg/g]	< 0.5	< 0.5
Al [µg/g]	59000	27000
As [µg/g]	9.3	6.2
Ba [µg/g]	440	250
Be [µg/g]	2.0	0.73
Bi [µg/g]	0.17	< 0.09
Ca [µg/g]	3100	100000
Cd [µg/g]	0.19	0.11
Co [µg/g]	12	6.6
Cr [µg/g]	59	76
Cu [µg/g]	17	9.4
Fe [µg/g]	31000	14000
K [µg/g]	17000	8800
Li [µg/g]	39	14
Mg [µg/g]	4600	24000
Mn [µg/g]	390	660
Mo [µg/g]	1.9	4.8
Ni [µg/g]	25	14
Pb [µg/g]	19	8
Sb [µg/g]	< 0.8	< 0.8
Se [µg/g]	0.2	0.1
Sn [µg/g]	6.7	< 6
Sr [µg/g]	81	200
Ti [µg/g]	2700	960
Tl [µg/g]	0.60	0.30
U [µg/g]	2.8	1.5
V [µg/g]	69	25
Y [µg/g]	21	9.6
Zn [µg/g]	68	28

Catharine Arnold

CHARTERED CATHARINE ARNOLD CHEMIST

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

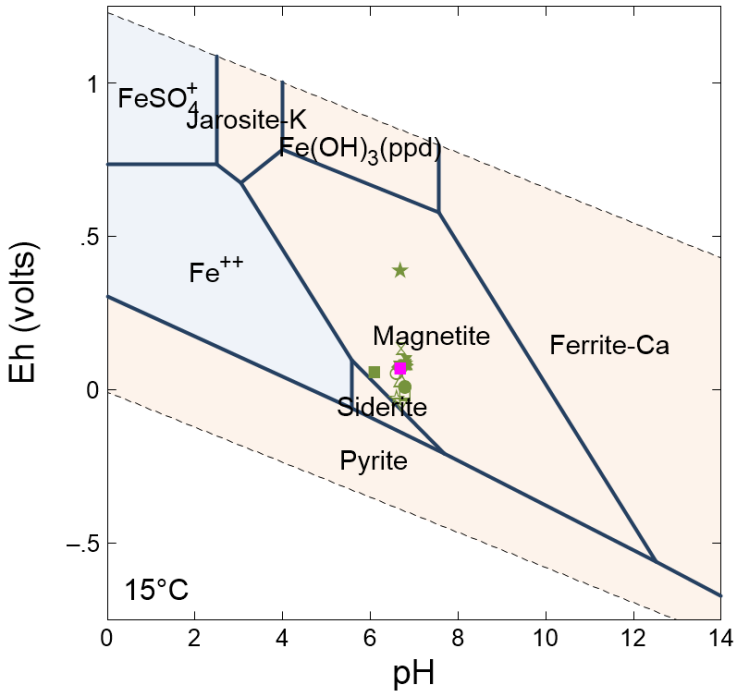
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ATTACHMENT 6
Iron Pourbaix Diagrams



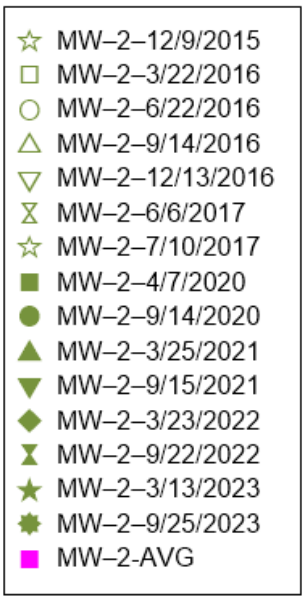
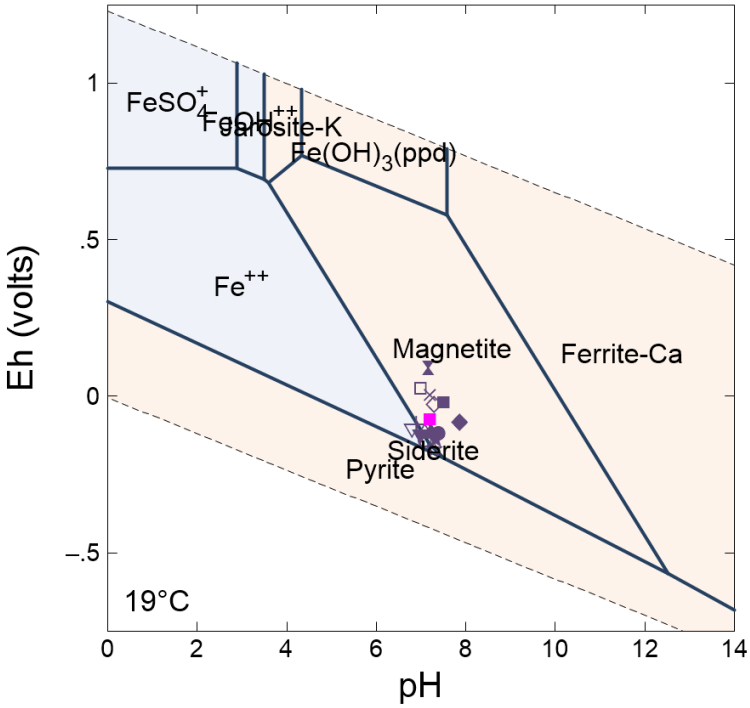


Diagram Fe^{++}, T = 15 °C , P = 1.013 bars, a [main] = $10^{-3.332}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.694}$, a [Cl^-] = $10^{-3.119}$, a [Na^+] = $10^{-3.192}$, a [K^+] = $10^{-4.494}$, a [HCO_3^-] = $10^{-2.273}$, a [SO_4^{--}] = $10^{-3.703}$, a [$As(OH)_4^-$] = $10^{-6.357}$, a [Mn^{++}] = $10^{-5.179}$; Suppressed: Goethite, Hematite, Scorodite



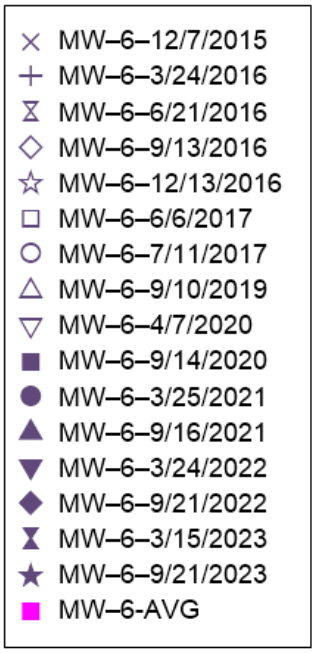


Diagram Fe^{++}, T = 19 °C , P = 1.013 bars, a [main] = $10^{-4.981}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.994}$, a [Cl^-] = $10^{-2.099}$, a [Na^+] = $10^{-2.653}$, a [K^+] = $10^{-3.796}$, a [HCO_3^-] = $10^{-2.302}$, a [SO_4^{--}] = $10^{-3.492}$, a [$As(OH)_4^-$] = $10^{-6.959}$, a [Mn^{++}] = $10^{-4.666}$; Suppressed: Goethite, Hematite, Scorodite

Notes: Groundwater samples from monitoring wells MW-2 and MW-6 which contain analytical results for all major ions are plotted on the Pourbaix diagrams with the average result.

Iron Pourbaix Diagrams
Miami Fort Pond System
North Bend, Ohio

Geosyntec consultants

Columbus, Ohio | March 2024

Figure
X

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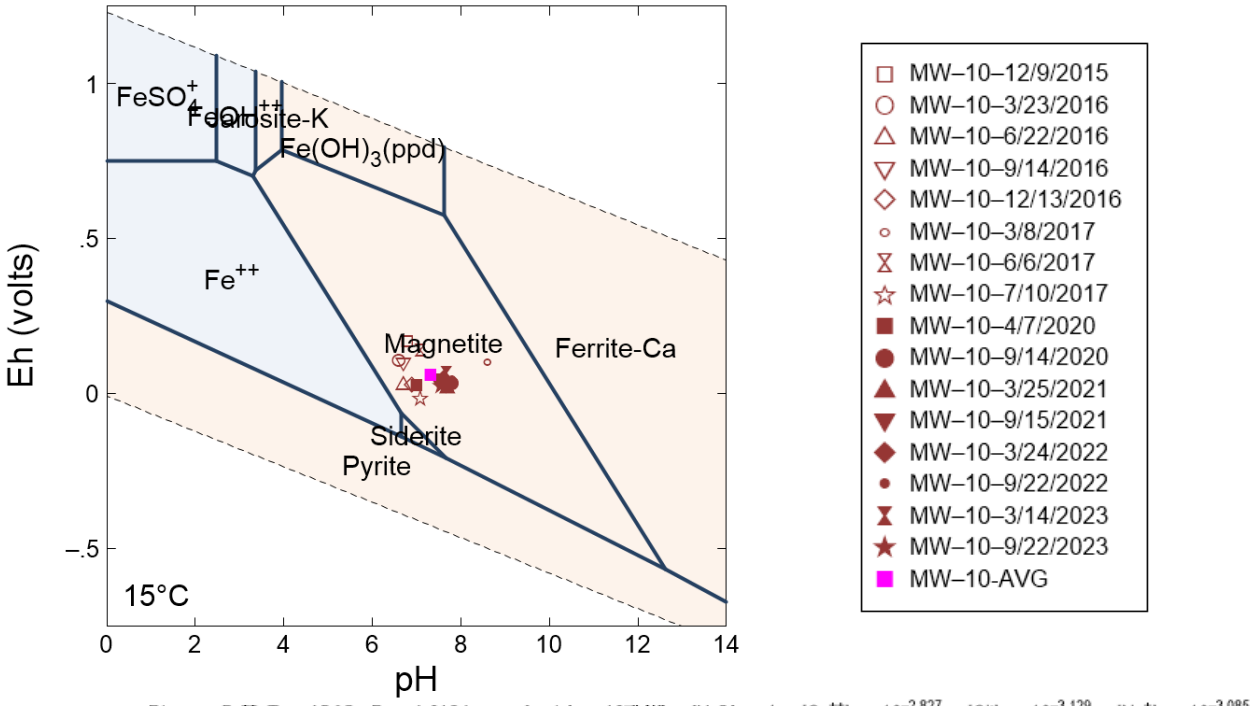


Diagram Fe^{++}, T = 15 °C , P = 1.013 bars, a [main] = $10^{-4.783}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.827}$, a [Cl^-] = $10^{-3.129}$, a [Na^+] = $10^{-3.085}$, a [K^+] = $10^{-4.124}$, a [HCO_3^-] = $10^{-2.31}$, a [SO_4^{--}] = $10^{-3.961}$, a [$As(OH)_4^-$] = $10^{-6.357}$, a [Mn^{++}] = $10^{-5.179}$; Suppressed: Goethite, Hematite, Scorodite

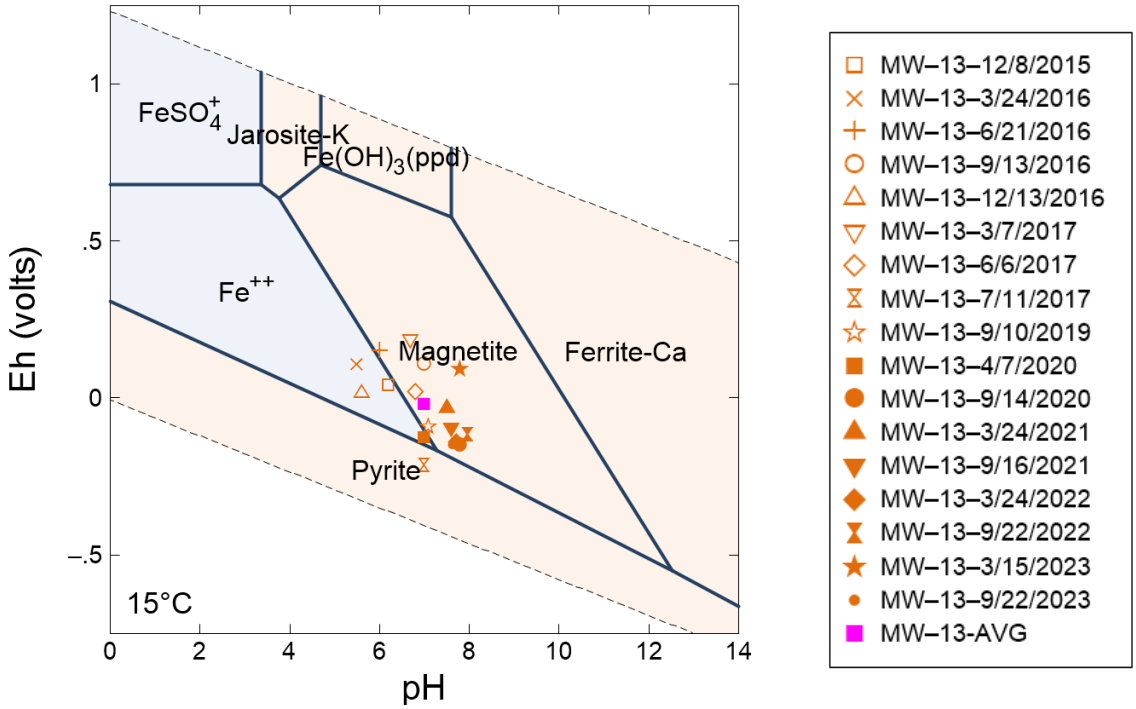


Diagram Fe^{++}, T = 15 °C , P = 1.013 bars, a [main] = $10^{-4.783}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.787}$, a [Cl^-] = $10^{-3.163}$, a [Na^+] = $10^{-2.979}$, a [K^+] = $10^{-4.375}$, a [HCO_3^-] = $10^{-2.973}$, a [SO_4^{--}] = $10^{-2.699}$, a [$As(OH)_4^-$] = $10^{-6.888}$, a [Mn^{++}] = $10^{-6.197}$; Suppressed: Goethite, Hematite, Scorodite

Notes: Groundwater samples from monitoring wells MW-10 and MW-13 which contain analytical results for all major ions are plotted on the Pourbaix diagrams with the average result.

Iron Pourbaix Diagrams
Miami Fort Pond System
North Bend, Ohio

Geosyntec consultants

Figure
X

Columbus, Ohio | March 2024

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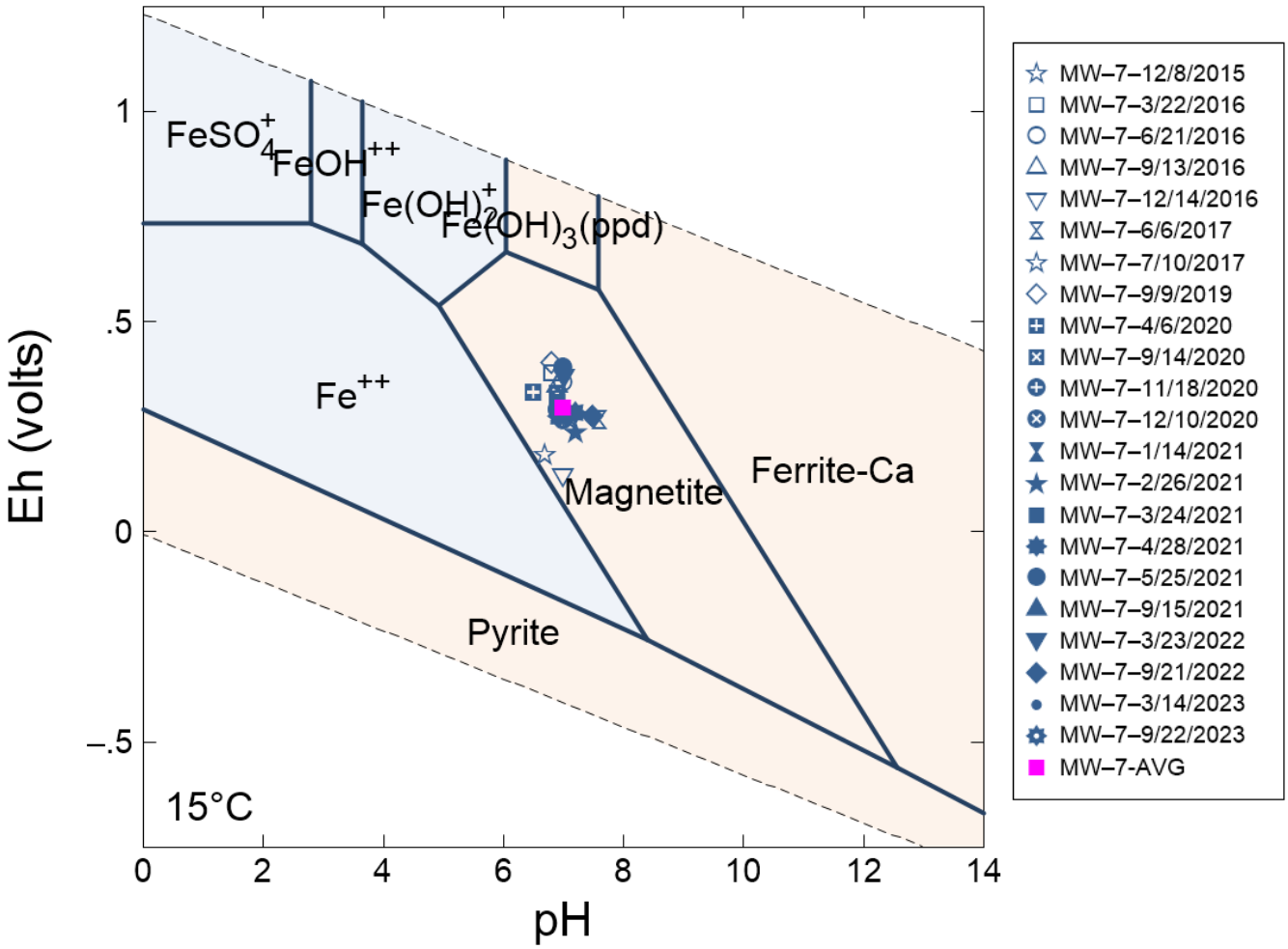


Diagram Fe^{++}, T = 15 °C , P = 1.013 bars, a [main] = $10^{-6.761}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.767}$, a [Cl^-] = $10^{-3.767}$, a [Na^+] = $10^{-3.77}$, a [K^+] = $10^{-4.407}$, a [HCO_3^-] = $10^{-2.376}$, a [SO_4^{--}] = $10^{-3.632}$, a [$As(OH)_4^-$] = $10^{-7.697}$, a [Mn^{++}] = $10^{-6.955}$; Suppressed: Goethite, Hematite, Scorodite

Notes: Groundwater samples from monitoring well MW-7 which contain analytical results for all major ions are plotted on the Pourbaix diagram with the average result.

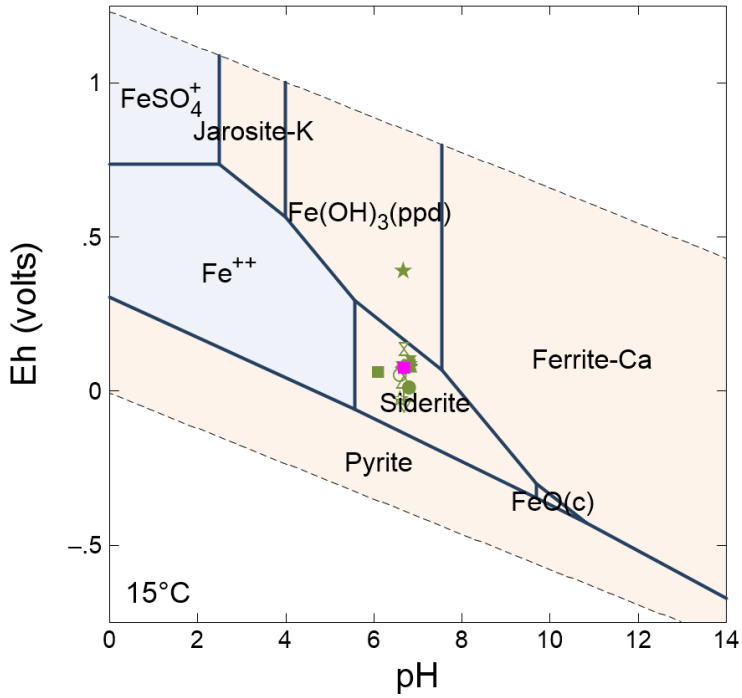
Iron Pourbaix Diagrams
Miami Fort Pond System
North Bend, Ohio

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Columbus, Ohio | March 2024

Figure
X

\\stfoulsmo-01\company\Projects_post_2014\GLP8003_Miami Fort_Vistra MNA Evaluations\2023-08 ASD Update\Report\Figures



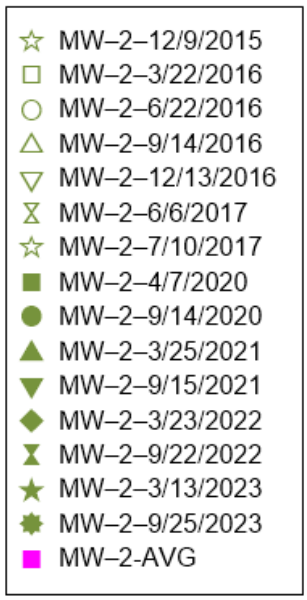
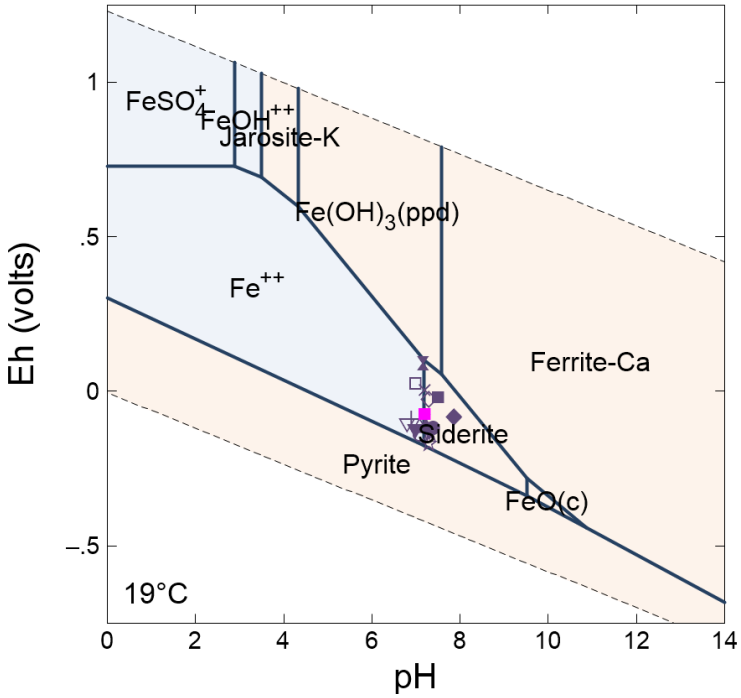


Diagram Fe^{++}, T = 15 °C , P = 1.013 bars, a [main] = $10^{-3.332}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.694}$, a [Cl^-] = $10^{-3.119}$, a [Na^+] = $10^{-3.192}$, a [K^+] = $10^{-4.494}$, a [HCO_3^-] = $10^{-2.273}$, a [SO_4^{--}] = $10^{-3.703}$, a [$As(OH)_4^-$] = $10^{-6.357}$, a [Mn^{++}] = $10^{-5.179}$; Suppressed: Goethite, Hematite, Magnetite, Scorodite



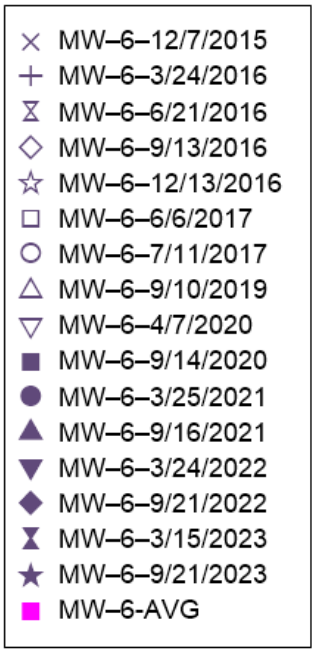


Diagram Fe^{++}, T = 19 °C , P = 1.013 bars, a [main] = $10^{-4.981}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.994}$, a [Cl^-] = $10^{-2.099}$, a [Na^+] = $10^{-2.653}$, a [K^+] = $10^{-3.796}$, a [HCO_3^-] = $10^{-2.302}$, a [SO_4^{--}] = $10^{-3.492}$, a [$As(OH)_4^-$] = $10^{-6.959}$, a [Mn^{++}] = $10^{-4.666}$; Suppressed: Goethite, Hematite, Magnetite, Scorodite

Notes: Groundwater samples from monitoring wells MW-2 and MW-6 which contain analytical results for all major ions are plotted on the Pourbaix diagrams with the average result.

Iron Pourbaix Diagrams (Magnetite Suppressed)
Miami Fort Pond System
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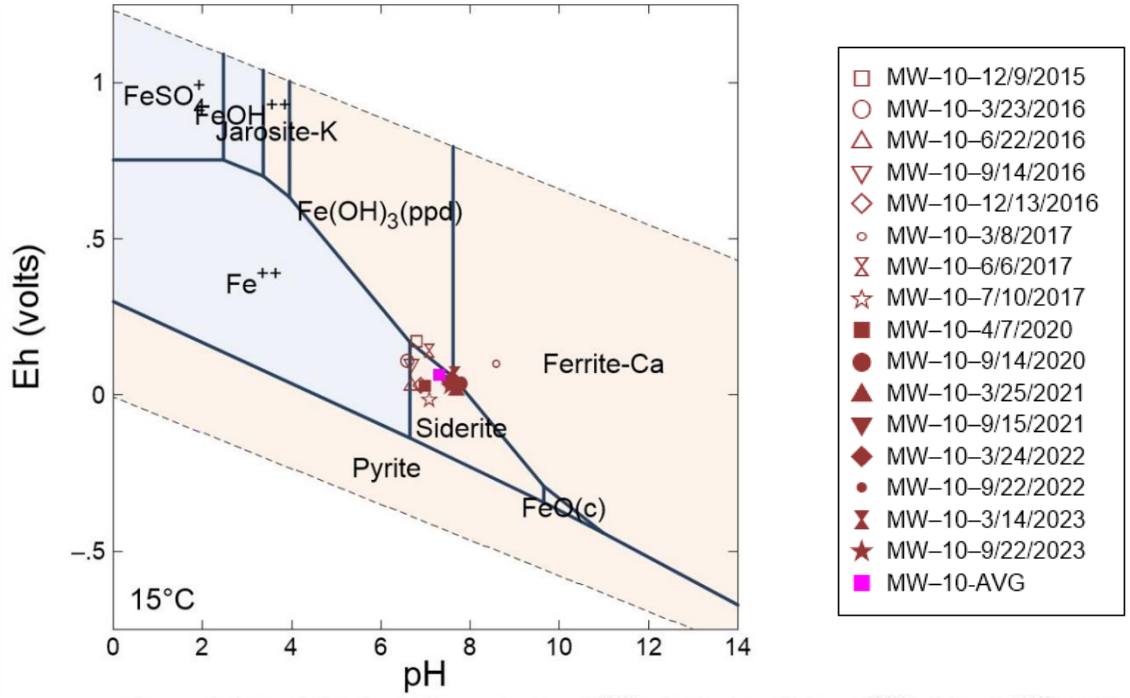


Diagram Fe^{++}, T = 15 °C, P = 1.013 bars, a [main] = $10^{-4.379}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.827}$, a [Cl^-] = $10^{-3.129}$, a [Na^+] = $10^{-3.085}$, a [K^+] = $10^{-4.124}$, a [HCO_3^-] = $10^{-2.31}$, a [SO_4^{--}] = $10^{-3.961}$, a [$As(OH)_4^-$] = $10^{-6.357}$, a [Mn^{++}] = $10^{-5.179}$; Suppressed: Goethite, Hematite, Magnetite, Scorodite

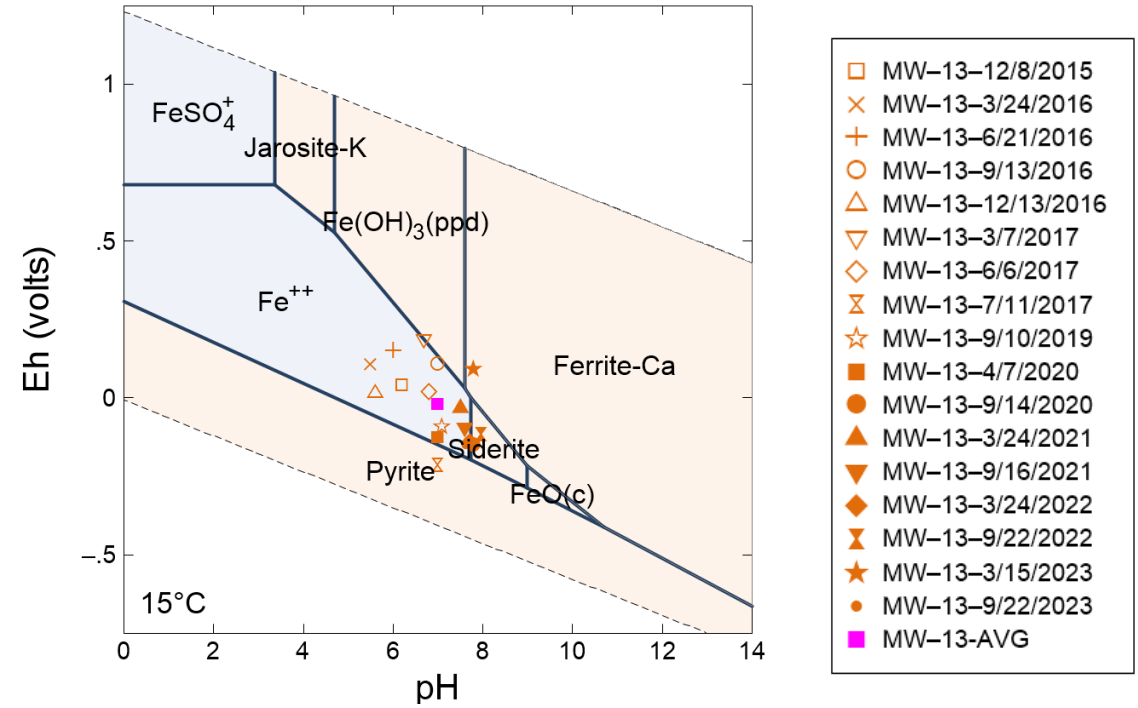


Diagram Fe^{++}, T = 15 °C, P = 1.013 bars, a [main] = $10^{-4.783}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.787}$, a [Cl^-] = $10^{-3.163}$, a [Na^+] = $10^{-2.979}$, a [K^+] = $10^{-4.375}$, a [HCO_3^-] = $10^{-2.973}$, a [SO_4^{--}] = $10^{-2.699}$, a [$As(OH)_4^-$] = $10^{-6.888}$, a [Mn^{++}] = $10^{-6.197}$; Suppressed: Goethite, Hematite, Magnetite, Scorodite

Notes: Groundwater samples from monitoring wells MW-10 and MW-13 which contain analytical results for all major ions are plotted on the Pourbaix diagrams with the average result.

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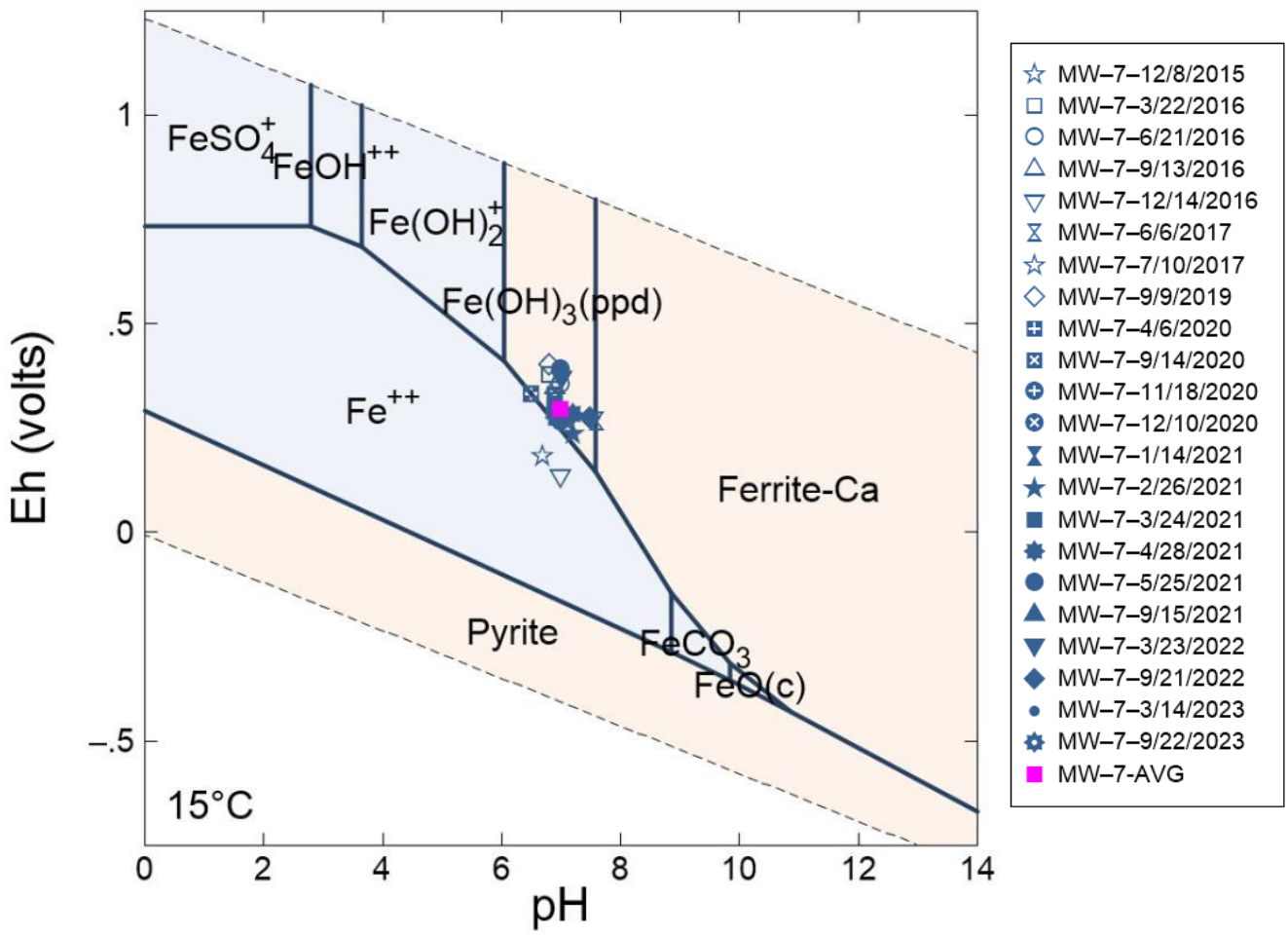


Diagram Fe^{++}, T = 15 °C , P = 1.013 bars, a [main] = $10^{-6.761}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.767}$, a [Cl^-] = $10^{-3.767}$, a [Na^+] = $10^{-3.77}$, a [K^+] = $10^{-4.407}$, a [HCO_3^-] = $10^{-2.376}$, a [SO_4^{--}] = $10^{-3.632}$, a [$As(OH)_4^-$] = $10^{-7.697}$, a [Mn^{++}] = $10^{-6.955}$; Suppressed: Goethite, Hematite, Magnetite, Scorodite

Notes: Groundwater samples from monitoring well MW-7 which contain analytical results for all major ions are plotted on the Pourbaix diagram with the average result.

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ATTACHMENT 7

Arsenic Pourbaix Diagrams

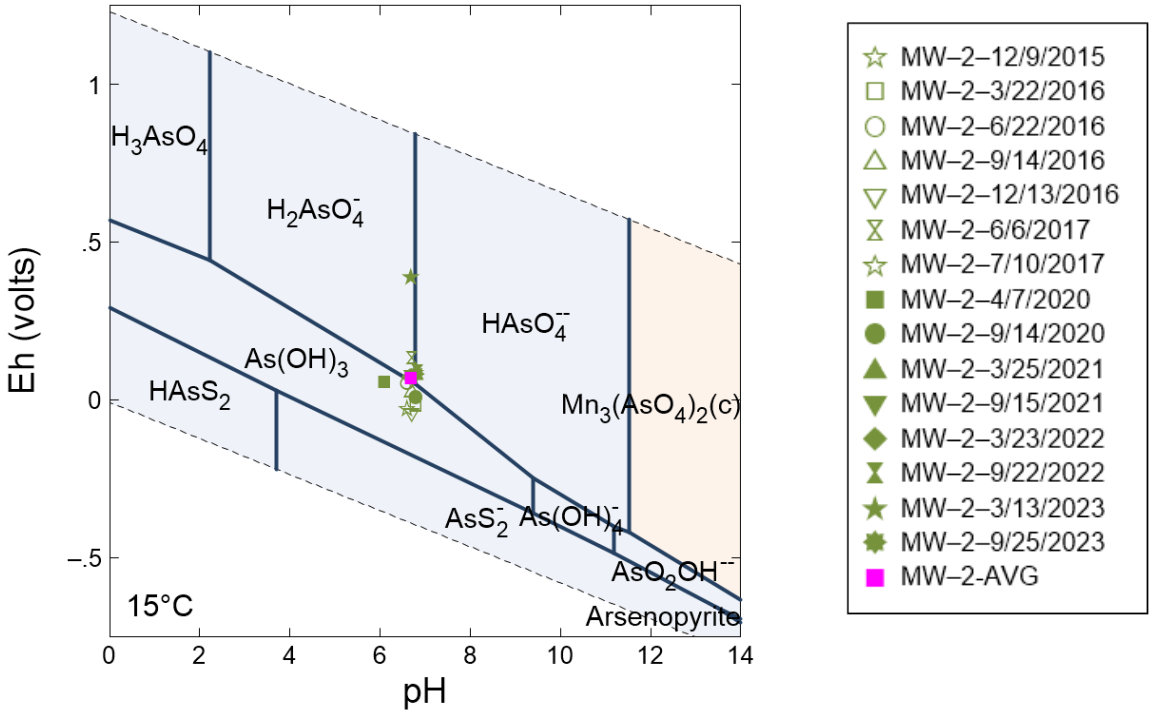


Diagram $As(OH)_4^-$ T = 15 °C, P = 1.013 bars, a [main] = $10^{-6.357}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.694}$, a [Cl^-] = $10^{-3.119}$, a [Na^+] = $10^{-3.192}$, a [K^+] = $10^{-4.494}$, a [HCO_3^-] = $10^{-2.273}$, a [Fe^{++}] = $10^{-3.332}$, a [SO_4^{--}] = $10^{-3.703}$, a [Mn^{++}] = $10^{-5.179}$; Suppressed: Orpiment, Realgar, Scorodite

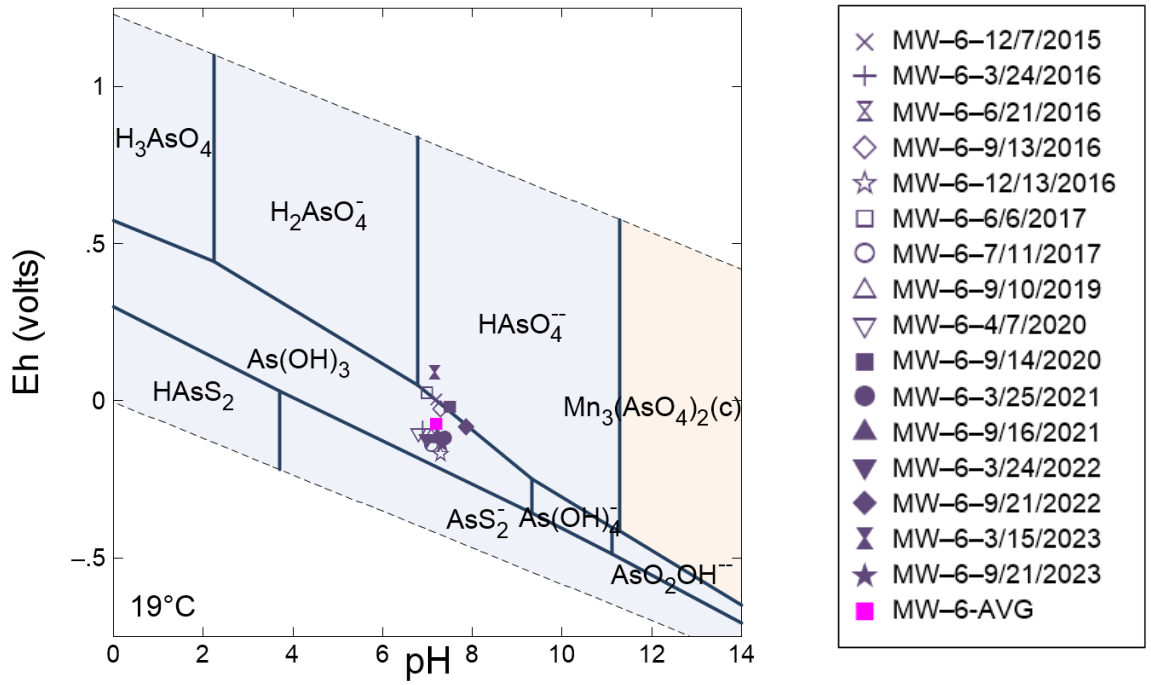


Diagram $As(OH)_4^-$ T = 19 °C, P = 1.013 bars, a [main] = $10^{-6.959}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.994}$, a [Cl^-] = $10^{-2.099}$, a [Na^+] = $10^{-2.653}$, a [K^+] = $10^{-3.796}$, a [HCO_3^-] = $10^{-2.302}$, a [Fe^{++}] = $10^{-4.981}$, a [SO_4^{--}] = $10^{-3.492}$, a [Mn^{++}] = $10^{-4.666}$, Suppressed: Orpiment, Realgar, Scorodite

Notes: Groundwater samples from monitoring wells MW-2 and MW-6 which contain analytical results for all major ions are plotted on the Pourbaix diagrams with the average result.

Arsenic Pourbaix Diagrams
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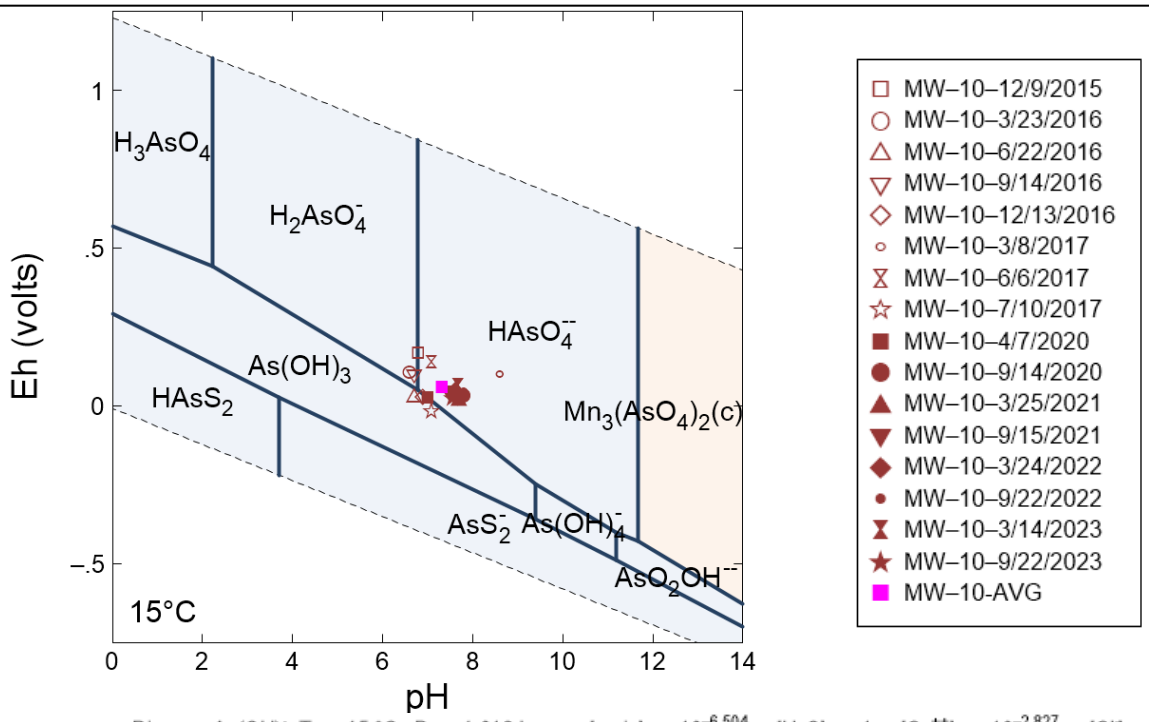


Diagram $As(OH)_4^-$ T = 15 °C, P = 1.013 bars, a [main] = $10^{-6.504}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.827}$, a [Cl] = $10^{-3.129}$, a [Na^+] = $10^{-3.085}$, a [K^+] = $10^{-4.124}$, a [HCO_3^-] = $10^{-2.31}$, a [Fe^{++}] = $10^{-4.379}$, a [SO_4^{--}] = $10^{-3.961}$, a [Mn^{++}] = $10^{-5.186}$,
Suppressed: Orpiment, Realgar, Scorodite

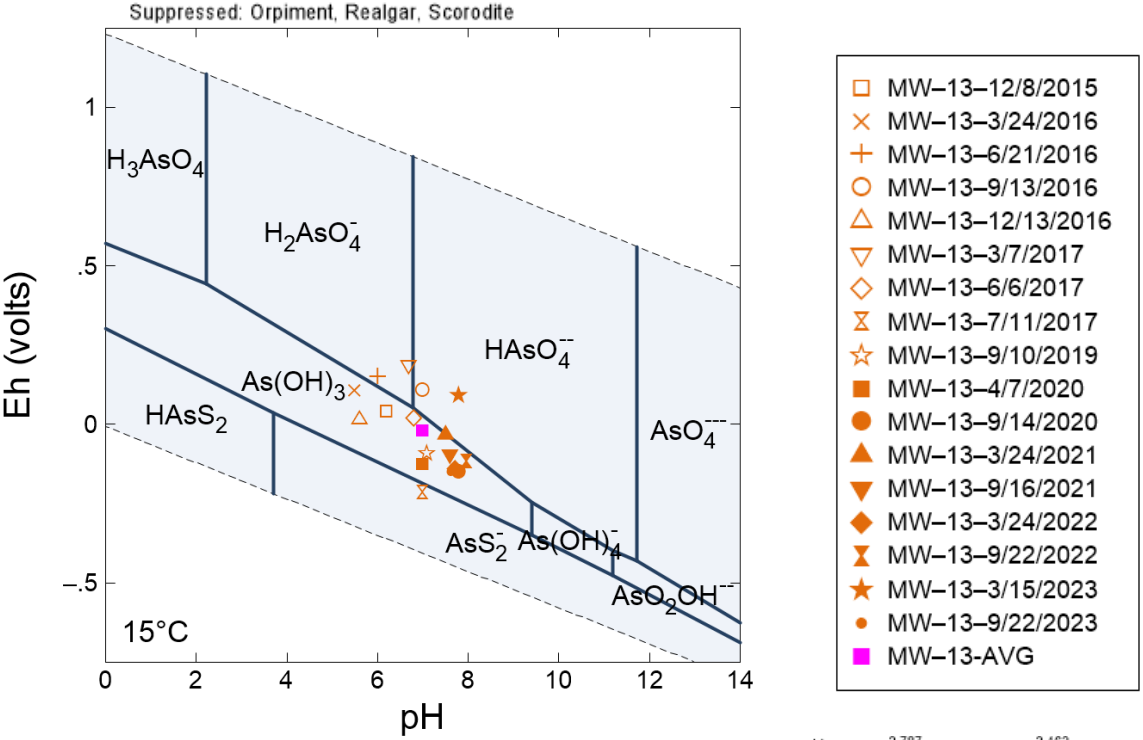


Diagram $As(OH)_4^-$ T = 15 °C, P = 1.013 bars, a [main] = $10^{-6.000}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.787}$, a [Cl] = $10^{-3.163}$, a [Na^+] = $10^{-2.979}$, a [K^+] = $10^{-4.375}$, a [HCO_3^-] = $10^{-2.973}$, a [Fe^{++}] = $10^{-4.783}$, a [SO_4^{--}] = $10^{-2.699}$, a [Mn^{++}] = $10^{-6.197}$, a [Mg^{++}] = $10^{-3.088}$,
Suppressed: Orpiment, Realgar, Scorodite

Notes: Groundwater samples from monitoring wells MW-10 and MW-13 which contain analytical results for all major ions are plotted on the Pourbaix diagrams with the average result.

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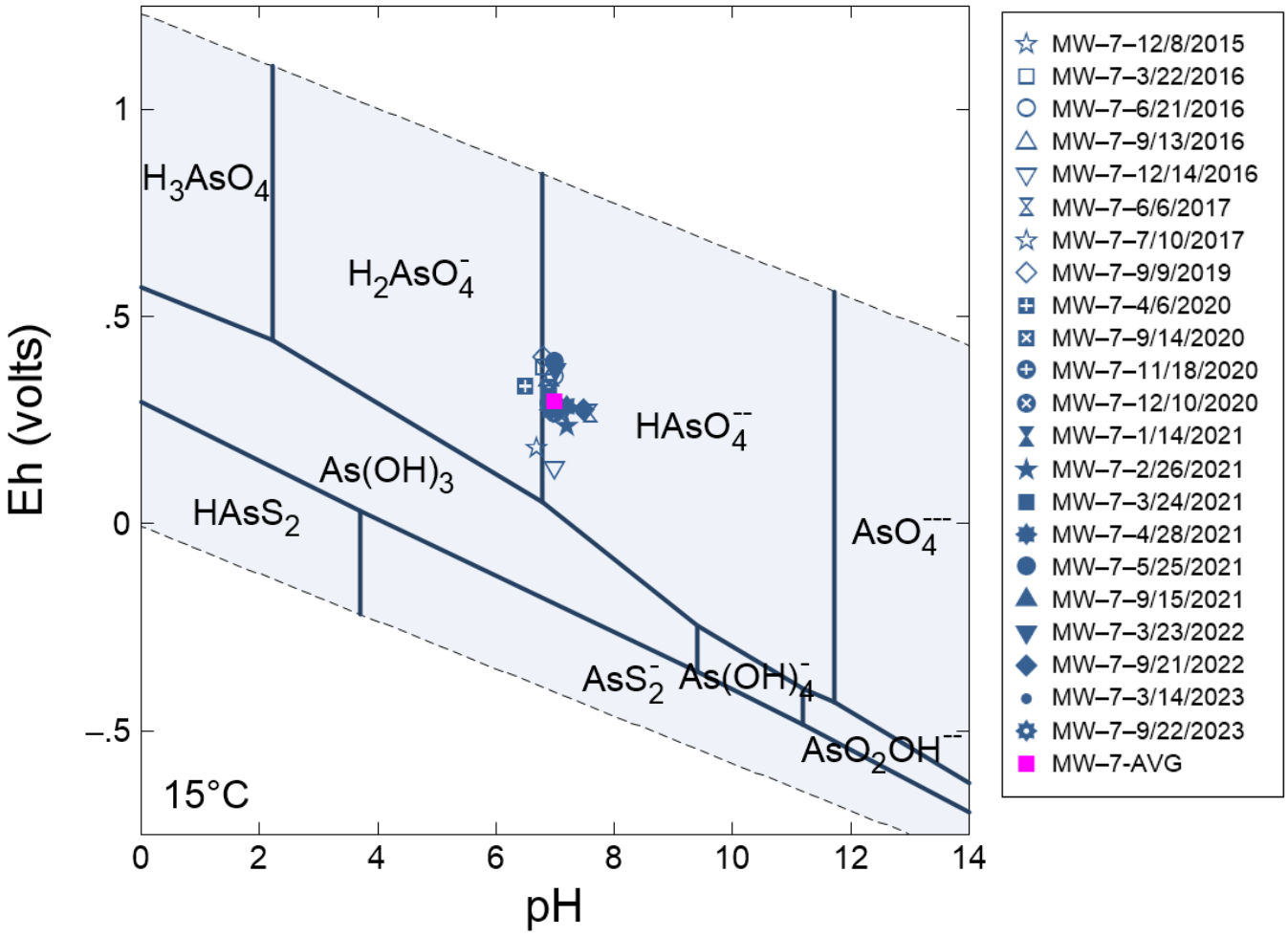


Diagram $As(OH)_4^-$ T = 15 °C, P = 1.013 bars, a [main] = $10^{-7.697}$, a [H_2O] = 1, a [Ca^{++}] = $10^{-2.767}$, a [Cl] = $10^{-3.767}$, a [Na^+] = $10^{-3.77}$, a [K^+] = $10^{-4.407}$, a [HCO_3^-] = $10^{-2.376}$, a [Fe^{++}] = $10^{-6.761}$, a [SO_4^{--}] = $10^{-3.632}$, a [Mn^{++}] = $10^{-6.955}$; Suppressed: Orpiment, Realgar, Scorodite

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Arsenic Pourbaix Diagrams
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