Prepared for
Dynegy Miami Fort, LLC

Date
January 31, 2024

Project No.
1940103649-015

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

LAWRENCEBURG ROAD LANDFILL

MIAMI FORT POWER PLANT

NORTH BEND, OHIO

CCR UNIT 113

RAMBOLL Bright ideas. Sustainable change.

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT LAWRENCEBURG ROAD LANDFILL

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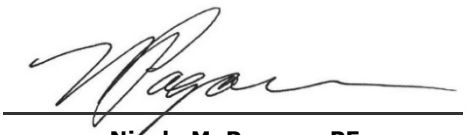

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ACRONYMS AND ABBREVIATIONS

40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternate Source Demonstration
CCR	coal combustion residuals
D12	Quarter 1, 2023 Detection Monitoring sampling event
D12R	Quarter 2, 2023 Detection Monitoring sampling event
D13	Quarter 3, 2023 Detection Monitoring sampling event
D13R	Quarter 4, 2023 Detection Monitoring sampling event
GWPS	groundwater protection standard
LRLF	Lawrenceburg Road Landfill
MFPP	Miami Fort Power Plant
NA	not applicable
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SAP	Sampling and Analysis Plan
SSI	statistically significant increase
TBD	to be determined

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 Lawrenceburg Road Landfill (LRLF) located at the Miami Fort Power Plant (MFPP) near North Bend, Ohio.

Groundwater is being monitored at the LRLF in accordance with the Detection Monitoring Program requirements specified in 40 C.F.R. § 257.94.

No changes were made to the monitoring system in 2023.

The following Statistically Significant Increases (SSIs) of 40 C.F.R. § 257 Appendix III parameter concentrations greater than background concentrations were reported in 2023:

- Calcium at wells MW-9 and MW-12

An Alternative Source Demonstration (ASD) was completed in 2023 for the calcium SSI referenced above. In accordance with the Multi-Site Statistical Analysis Plan, well MW-12 was resampled on July 19, 2023. Following evaluation of analytical data from the resample event, the calcium SSI observed at well MW-12 was not confirmed. An ASD will be evaluated in 2024 for the calcium SSIs determined during the quarter 3, 2023 sampling event (D13). The LRLF remains in the Detection Monitoring Program.

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of Dynegy Miami Fort, LLC, to provide the information required by 40 C.F.R. § 257.90(e) for the LRLF 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 3**).
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 LRLF for calendar year 2023.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

No changes have occurred to the monitoring program status in calendar year 2023 and the LRLF remains in the Detection Monitoring Program in accordance with 40 C.F.R. § 257.94.

3. KEY ACTIONS COMPLETED IN 2023

A summary of the samples collected from background and compliance monitoring wells in 2023 under the Detection Monitoring Program is included in **Table A** on the following page. The groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**. A groundwater monitoring plan (GMP) was developed for the LRLF in 2023; no changes were made to the monitoring system (Ramboll, 2023a).

One groundwater sample was collected from each background and compliance well during each monitoring event. 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 and 2**. All associated laboratory reports and field data sheets are included in **Appendix A**. Analytical data received after December 31, 2023 will be reported in the 2024 Annual Groundwater Monitoring and Corrective Action Report.

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 SSIs of Appendix III parameters greater than background values. SSIs are summarized in **Table A** and highlighted in **Table 2**. Statistical background values are provided in **Table 3**. A flow chart showing the statistical methodology for determination of background values is included as **Appendix B**.

Potential alternative sources were evaluated as outlined in the 40 C.F.R. § 257.94(e)(2). An ASD was completed in 2023 for the SSIs summarized in **Table A**. The date the ASD was completed is also provided in **Table A**. The ASD was certified by a qualified professional engineer and is included in **Appendix C**. Following evaluation of analytical data from the resample event, the calcium SSI was not confirmed. The LRLF remains in the Detection Monitoring Program.

Table A. 2023 Detection Monitoring Program Summary

Event ID	Sampling Dates [1, 2, 3]	Analytical Data Receipt Date [4]	SSI(s) Determination Date	SSI(s)	ASD Completion Date
D12	March 13 - 15, 2023	April 19, 2023	July 18, 2023	Calcium at well MW-12 [5]	September 19, 2023
D12R	July 19, 2023	July 28, 2023	NA	Calcium at well MW-12 not confirmed by resample [5]	NA
D13	September 21 - 25, 2023	October 3, 2023	January 1, 2024	Calcium at wells MW-9 and MW-12	TBD
D13R	December 12 - 13, 2023	December 28, 2023	NA	NA	NA

Notes:

ASD: Alternative Source Demonstration

NA: not applicable

SSI: Statistically Significant Increase

TBD: to be determined in 2024

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

[2] The following background wells were sampled for each event: MW-5 and MW-13

[3] The following compliance wells were sampled for each event: MW-8, MW-9, MW 11, MW-12, MW-14, and MW-15

[4] Analytical data received after December 31, 2023 will be reported in the 2024 Annual Groundwater Monitoring and Corrective Action Report.

[5] If an event includes a resample, an SSI is confirmed only if both the sample and the resample exceed the background value.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the groundwater monitoring program during 2023. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2024

The following key activities are planned for 2024:

- Continuation of the Detection Monitoring Program with semiannual sampling scheduled for the first and third quarters of 2024.
- Complete evaluation of analytical data from the compliance wells using background data to determine whether an SSI of Appendix III parameters detected at concentrations greater than background concentrations has occurred.
- If an SSI is identified, potential alternate sources (*i.e.,* a source other than the CCR unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated.
  - If an alternate source is identified to be the cause of the SSI, a written demonstration will be completed within 90 days of SSI determination and included in the 2024 Annual Groundwater Monitoring and Corrective Action Report.
  - If an alternate source(s) is not identified to be the cause of the SSI, the applicable requirements of 40 C.F.R. §§ 257.94 through 257.98 as may apply in 2024 (*e.g.,* assessment monitoring) will be met, including associated recordkeeping/notifications required by 40 C.F.R. §§ 257.105 through 257.108.

6. REFERENCES

AECOM, 2017, Sampling and Analysis Plan, CCR Rule Groundwater Monitoring, Lawrenceburg Road Landfill, Unit 113, Miami Fort Power Station, Cleveland, Ohio, Job Number 60442412, Revision 0, October 17, 2017.

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, Lawrenceburg Road Landfill, 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.

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
LAWRENCEBURG ROAD LANDFILL
NORTH BEND, OH

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
MW-5	Background	UA	03/13/2023	66.60	463.91
MW-5	Background	UA	09/21/2023	73.31	457.20
MW-5	Background	UA	12/12/2023	72.94	457.57
MW-8	Compliance	UA	03/13/2023	50.39	463.11
MW-8	Compliance	UA	09/21/2023	56.70	456.80
MW-9	Compliance	UA	03/13/2023	18.68	462.95
MW-9	Compliance	UA	09/21/2023	24.86	456.77
MW-9	Compliance	UA	12/12/2023	24.50	457.13
MW-11	Compliance	UA	03/13/2023	58.67	462.80
MW-11	Compliance	UA	09/21/2023	64.76	456.71
MW-12	Compliance	UA	03/13/2023	63.87	463.51
MW-12	Compliance	UA	07/19/2023	69.24	458.14
MW-12	Compliance	UA	09/21/2023	70.64	456.74
MW-12	Compliance	UA	12/12/2023	70.40	456.98
MW-13	Background	UA	03/13/2023	72.11	464.61
MW-13	Background	UA	09/21/2023	79.97	456.75
MW-13	Background	UA	12/12/2023	79.70	457.02
MW-14	Compliance	UA	03/13/2023	57.82	464.31
MW-14	Compliance	UA	09/21/2023	65.48	456.65
MW-15	Compliance	UA	03/13/2023	45.28	463.00
MW-15	Compliance	UA	09/21/2023	51.98	456.30

Notes:
Only wells with groundwater elevations measured are included.
BMP = below measuring point
NAVD88 = North American Vertical Datum of 1988
Monitored Unit Abbreviations:

UA = uppermost aquifer

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TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
LAWRENCEBURG ROAD LANDFILL
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
MW-5	UA	Background	03/14/2023	D12	Boron, total	mg/L	2.86	NA	NA
MW-5	UA	Background	09/21/2023	D13	Boron, total	mg/L	2.60	NA	NA
MW-5	UA	Background	12/12/2023	D13R	Boron, total	mg/L	2.85	NA	NA
MW-5	UA	Background	03/14/2023	D12	Calcium, total	mg/L	113	NA	NA
MW-5	UA	Background	09/21/2023	D13	Calcium, total	mg/L	97.3	NA	NA
MW-5	UA	Background	12/12/2023	D13R	Calcium, total	mg/L	105	NA	NA
MW-5	UA	Background	03/14/2023	D12	Chloride, total	mg/L	10.0	NA	NA
MW-5	UA	Background	09/21/2023	D13	Chloride, total	mg/L	7.05	NA	NA
MW-5	UA	Background	12/12/2023	D13R	Chloride, total	mg/L	7.66	NA	NA
MW-5	UA	Background	03/14/2023	D12	Fluoride, total	mg/L	0.212	NA	NA
MW-5	UA	Background	09/21/2023	D13	Fluoride, total	mg/L	0.161	NA	NA
MW-5	UA	Background	12/12/2023	D13R	Fluoride, total	mg/L	0.192	NA	NA
MW-5	UA	Background	03/14/2023	D12	pH (field)	SU	7.4	NA	NA
MW-5	UA	Background	09/21/2023	D13	pH (field)	SU	7.5	NA	NA
MW-5	UA	Background	12/12/2023	D13R	pH (field)	SU	7.3	NA	NA
MW-5	UA	Background	03/14/2023	D12	Sulfate, total	mg/L	189	NA	NA
MW-5	UA	Background	09/21/2023	D13	Sulfate, total	mg/L	156	NA	NA
MW-5	UA	Background	12/12/2023	D13R	Sulfate, total	mg/L	181	NA	NA
MW-5	UA	Background	03/14/2023	D12	Total Dissolved Solids	mg/L	543	NA	NA
MW-5	UA	Background	09/21/2023	D13	Total Dissolved Solids	mg/L	463	NA	NA
MW-5	UA	Background	12/12/2023	D13R	Total Dissolved Solids	mg/L	494 J	NA	NA
MW-13	UA	Background	03/14/2023	D12	Boron, total	mg/L	0.0575	NA	NA
MW-13	UA	Background	09/21/2023	D13	Boron, total	mg/L	0.0463 J	NA	NA
MW-13	UA	Background	12/12/2023	D13R	Boron, total	mg/L	0.0626	NA	NA
MW-13	UA	Background	03/14/2023	D12	Calcium, total	mg/L	122	NA	NA
MW-13	UA	Background	09/21/2023	D13	Calcium, total	mg/L	150	NA	NA
MW-13	UA	Background	12/12/2023	D13R	Calcium, total	mg/L	148	NA	NA
MW-13	UA	Background	03/14/2023	D12	Chloride, total	mg/L	154	NA	NA
MW-13	UA	Background	09/21/2023	D13	Chloride, total	mg/L	232	NA	NA
MW-13	UA	Background	12/12/2023	D13R	Chloride, total	mg/L	261	NA	NA
MW-13	UA	Background	03/14/2023	D12	Fluoride, total	mg/L	0.183	NA	NA
MW-13	UA	Background	09/21/2023	D13	Fluoride, total	mg/L	0.0788 J	NA	NA
MW-13	UA	Background	12/12/2023	D13R	Fluoride, total	mg/L	0.169	NA	NA
MW-13	UA	Background	03/14/2023	D12	pH (field)	SU	7.1	NA	NA
MW-13	UA	Background	09/21/2023	D13	pH (field)	SU	7.1	NA	NA
MW-13	UA	Background	12/12/2023	D13R	pH (field)	SU	7.0	NA	NA
MW-13	UA	Background	03/14/2023	D12	Sulfate, total	mg/L	31.2	NA	NA
MW-13	UA	Background	09/21/2023	D13	Sulfate, total	mg/L	40.6	NA	NA
MW-13	UA	Background	12/12/2023	D13R	Sulfate, total	mg/L	39.8	NA	NA
MW-13	UA	Background	03/14/2023	D12	Total Dissolved Solids	mg/L	681	NA	NA
MW-13	UA	Background	09/21/2023	D13	Total Dissolved Solids	mg/L	738	NA	NA
MW-13	UA	Background	12/12/2023	D13R	Total Dissolved Solids	mg/L	792 J	NA	NA
MW-8	UA	Compliance	03/14/2023	D12	Boron, total	mg/L	0.0861	3.41	No Exceedance
MW-8	UA	Compliance	09/22/2023	D13	Boron, total	mg/L	0.0801 J	3.41	No Exceedance
MW-8	UA	Compliance	03/14/2023	D12	Calcium, total	mg/L	111	142	No Exceedance
MW-8	UA	Compliance	09/22/2023	D13	Calcium, total	mg/L	113	142	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
LAWRENCEBURG ROAD LANDFILL
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
MW-8	UA	Compliance	03/14/2023	D12	Chloride, total	mg/L	12.2	287	No Exceedance
MW-8	UA	Compliance	09/22/2023	D13	Chloride, total	mg/L	9.11	287	No Exceedance
MW-8	UA	Compliance	03/14/2023	D12	Fluoride, total	mg/L	0.064 U	0.272	No Exceedance
MW-8	UA	Compliance	09/22/2023	D13	Fluoride, total	mg/L	0.064 U	0.272	No Exceedance
MW-8	UA	Compliance	03/14/2023	D12	pH (field)	SU	7.2	6.5/7.5	No Exceedance
MW-8	UA	Compliance	09/22/2023	D13	pH (field)	SU	7.2	6.5/7.5	No Exceedance
MW-8	UA	Compliance	03/14/2023	D12	Sulfate, total	mg/L	21.5	188	No Exceedance
MW-8	UA	Compliance	09/22/2023	D13	Sulfate, total	mg/L	21.7	188	No Exceedance
MW-8	UA	Compliance	03/14/2023	D12	Total Dissolved Solids	mg/L	439	995	No Exceedance
MW-8	UA	Compliance	09/22/2023	D13	Total Dissolved Solids	mg/L	447	995	No Exceedance
MW-9	UA	Compliance	03/14/2023	D12	Boron, total	mg/L	0.216	3.41	No Exceedance
MW-9	UA	Compliance	09/22/2023	D13	Boron, total	mg/L	0.220	3.41	No Exceedance
MW-9	UA	Compliance	12/13/2023	D13R	Boron, total	mg/L	0.659	3.41	No Exceedance
MW-9	UA	Compliance	03/14/2023	D12	Calcium, total	mg/L	129	142	No Exceedance
MW-9	UA	Compliance	09/22/2023	D13	Calcium, total	mg/L	145	142	Determined
MW-9	UA	Compliance	12/13/2023	D13R	Calcium, total	mg/L	161	142	Determined
MW-9	UA	Compliance	03/14/2023	D12	Chloride, total	mg/L	66.9	287	No Exceedance
MW-9	UA	Compliance	09/22/2023	D13	Chloride, total	mg/L	40.6	287	No Exceedance
MW-9	UA	Compliance	12/13/2023	D13R	Chloride, total	mg/L	39.7	287	No Exceedance
MW-9	UA	Compliance	03/14/2023	D12	Fluoride, total	mg/L	0.0799 J	0.272	No Exceedance
MW-9	UA	Compliance	09/22/2023	D13	Fluoride, total	mg/L	0.064 U	0.272	No Exceedance
MW-9	UA	Compliance	12/13/2023	D13R	Fluoride, total	mg/L	0.0885 J	0.272	No Exceedance
MW-9	UA	Compliance	03/14/2023	D12	pH (field)	SU	7.1	6.5/7.5	No Exceedance
MW-9	UA	Compliance	09/22/2023	D13	pH (field)	SU	5.7	6.5/7.5	Determined
MW-9	UA	Compliance	12/13/2023	D13R	pH (field)	SU	7.2	6.5/7.5	No Exceedance
MW-9	UA	Compliance	03/14/2023	D12	Sulfate, total	mg/L	60.6	188	No Exceedance
MW-9	UA	Compliance	09/22/2023	D13	Sulfate, total	mg/L	146	188	No Exceedance
MW-9	UA	Compliance	12/13/2023	D13R	Sulfate, total	mg/L	180	188	No Exceedance
MW-9	UA	Compliance	03/14/2023	D12	Total Dissolved Solids	mg/L	560	995	No Exceedance
MW-9	UA	Compliance	09/22/2023	D13	Total Dissolved Solids	mg/L	657	995	No Exceedance
MW-9	UA	Compliance	12/13/2023	D13R	Total Dissolved Solids	mg/L	684	995	No Exceedance
MW-11	UA	Compliance	03/13/2023	D12	Boron, total	mg/L	0.0658	3.41	No Exceedance
MW-11	UA	Compliance	09/21/2023	D13	Boron, total	mg/L	0.0673 J	3.41	No Exceedance
MW-11	UA	Compliance	03/13/2023	D12	Calcium, total	mg/L	117	142	No Exceedance
MW-11	UA	Compliance	09/21/2023	D13	Calcium, total	mg/L	129	142	No Exceedance
MW-11	UA	Compliance	03/13/2023	D12	Chloride, total	mg/L	21.6	287	No Exceedance
MW-11	UA	Compliance	09/21/2023	D13	Chloride, total	mg/L	19.4	287	No Exceedance
MW-11	UA	Compliance	03/13/2023	D12	Fluoride, total	mg/L	0.104 J	0.272	No Exceedance
MW-11	UA	Compliance	09/21/2023	D13	Fluoride, total	mg/L	0.0791 J	0.272	No Exceedance
MW-11	UA	Compliance	03/13/2023	D12	pH (field)	SU	7.0	6.5/7.5	No Exceedance
MW-11	UA	Compliance	09/21/2023	D13	pH (field)	SU	7.1	6.5/7.5	No Exceedance
MW-11	UA	Compliance	03/13/2023	D12	Sulfate, total	mg/L	38.8	188	No Exceedance
MW-11	UA	Compliance	09/21/2023	D13	Sulfate, total	mg/L	53.0	188	No Exceedance
MW-11	UA	Compliance	03/13/2023	D12	Total Dissolved Solids	mg/L	461	995	No Exceedance
MW-11	UA	Compliance	09/21/2023	D13	Total Dissolved Solids	mg/L	506	995	No Exceedance
MW-12	UA	Compliance	03/13/2023	D12	Boron, total	mg/L	0.0799	3.41	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
LAWRENCEBURG ROAD LANDFILL
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
MW-12	UA	Compliance	09/21/2023	D13	Boron, total	mg/L	0.0856 J	3.41	No Exceedance
MW-12	UA	Compliance	03/13/2023	D12	Calcium, total	mg/L	144	142	Determined
MW-12	UA	Compliance	07/19/2023	D12R	Calcium, total	mg/L	141	142	No Exceedance
MW-12	UA	Compliance	09/21/2023	D13	Calcium, total	mg/L	146	142	Determined
MW-12	UA	Compliance	12/13/2023	D13R	Calcium, total	mg/L	143	142	Determined
MW-12	UA	Compliance	03/13/2023	D12	Chloride, total	mg/L	9.80	287	No Exceedance
MW-12	UA	Compliance	09/21/2023	D13	Chloride, total	mg/L	22.9	287	No Exceedance
MW-12	UA	Compliance	12/13/2023	D13R	Chloride, total	mg/L	22.6	287	No Exceedance
MW-12	UA	Compliance	03/13/2023	D12	Fluoride, total	mg/L	0.127 J	0.272	No Exceedance
MW-12	UA	Compliance	09/21/2023	D13	Fluoride, total	mg/L	0.0699 J	0.272	No Exceedance
MW-12	UA	Compliance	03/13/2023	D12	pH (field)	SU	6.8	6.5/7.5	No Exceedance
MW-12	UA	Compliance	07/19/2023	D12R	pH (field)	SU	6.8	6.5/7.5	No Exceedance
MW-12	UA	Compliance	09/21/2023	D13	pH (field)	SU	7.0	6.5/7.5	No Exceedance
MW-12	UA	Compliance	12/13/2023	D13R	pH (field)	SU	6.9	6.5/7.5	No Exceedance
MW-12	UA	Compliance	03/13/2023	D12	Sulfate, total	mg/L	41.8	188	No Exceedance
MW-12	UA	Compliance	09/21/2023	D13	Sulfate, total	mg/L	67.4	188	No Exceedance
MW-12	UA	Compliance	12/13/2023	D13R	Sulfate, total	mg/L	63.5 J-	188	No Exceedance
MW-12	UA	Compliance	03/13/2023	D12	Total Dissolved Solids	mg/L	509	995	No Exceedance
MW-12	UA	Compliance	09/21/2023	D13	Total Dissolved Solids	mg/L	546	995	No Exceedance
MW-12	UA	Compliance	12/13/2023	D13R	Total Dissolved Solids	mg/L	530	995	No Exceedance
MW-14	UA	Compliance	03/13/2023	D12	Boron, total	mg/L	0.105	3.41	No Exceedance
MW-14	UA	Compliance	09/21/2023	D13	Boron, total	mg/L	0.0897 J	3.41	No Exceedance
MW-14	UA	Compliance	03/13/2023	D12	Calcium, total	mg/L	121	142	No Exceedance
MW-14	UA	Compliance	09/21/2023	D13	Calcium, total	mg/L	117	142	No Exceedance
MW-14	UA	Compliance	03/13/2023	D12	Chloride, total	mg/L	49.0	287	No Exceedance
MW-14	UA	Compliance	09/21/2023	D13	Chloride, total	mg/L	50.7	287	No Exceedance
MW-14	UA	Compliance	03/13/2023	D12	Fluoride, total	mg/L	0.173	0.272	No Exceedance
MW-14	UA	Compliance	09/21/2023	D13	Fluoride, total	mg/L	0.0834 J	0.272	No Exceedance
MW-14	UA	Compliance	03/13/2023	D12	pH (field)	SU	7.0	6.5/7.5	No Exceedance
MW-14	UA	Compliance	09/21/2023	D13	pH (field)	SU	7.1	6.5/7.5	No Exceedance
MW-14	UA	Compliance	03/13/2023	D12	Sulfate, total	mg/L	44.3	188	No Exceedance
MW-14	UA	Compliance	09/21/2023	D13	Sulfate, total	mg/L	40.4	188	No Exceedance
MW-14	UA	Compliance	03/13/2023	D12	Total Dissolved Solids	mg/L	512	995	No Exceedance
MW-14	UA	Compliance	09/21/2023	D13	Total Dissolved Solids	mg/L	506	995	No Exceedance
MW-15	UA	Compliance	03/13/2023	D12	Boron, total	mg/L	0.0583	3.41	No Exceedance
MW-15	UA	Compliance	09/21/2023	D13	Boron, total	mg/L	0.0523 J	3.41	No Exceedance
MW-15	UA	Compliance	03/13/2023	D12	Calcium, total	mg/L	111	142	No Exceedance
MW-15	UA	Compliance	09/21/2023	D13	Calcium, total	mg/L	98.9	142	No Exceedance
MW-15	UA	Compliance	03/13/2023	D12	Chloride, total	mg/L	24.5	287	No Exceedance
MW-15	UA	Compliance	09/21/2023	D13	Chloride, total	mg/L	32.2	287	No Exceedance
MW-15	UA	Compliance	03/13/2023	D12	Fluoride, total	mg/L	0.163	0.272	No Exceedance
MW-15	UA	Compliance	09/21/2023	D13	Fluoride, total	mg/L	0.0862 J	0.272	No Exceedance
MW-15	UA	Compliance	03/13/2023	D12	pH (field)	SU	7.1	6.5/7.5	No Exceedance
MW-15	UA	Compliance	09/21/2023	D13	pH (field)	SU	7.3	6.5/7.5	No Exceedance
MW-15	UA	Compliance	03/13/2023	D12	Sulfate, total	mg/L	42.5	188	No Exceedance
MW-15	UA	Compliance	09/21/2023	D13	Sulfate, total	mg/L	40.1	188	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
LAWRENCEBURG ROAD LANDFILL
NORTH BEND, OH

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Background	SSI Type
MW-15	UA	Compliance	03/13/2023	D12	Total Dissolved Solids	mg/L	427	995	No Exceedance
MW-15	UA	Compliance	09/21/2023	D13	Total Dissolved Solids	mg/L	398	995	No Exceedance

Notes:
HSU = hydrostratigraphic unit:

UA = Uppermost Aquifer

ID = identification
mg/L = milligrams per liter
NA = not applicable
R = resample
Statistically Significant Increase (SSI) Type:

No Exceedance: No exceedance of the background.

Determined: An exceedance was determined without comparison to a resample.

SU = Standard Units
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 low.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.

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TABLE 3
STATISTICAL BACKGROUND VALUES
2023 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
MIAMI FORT POWER PLANT
LAWRENCEBURG ROAD LANDFILL
NORTH BEND, OH

Parameter	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Background Value (LPL/UPL)
Boron (mg/L)	11/15/2017 - 03/24/2022	20	30	Parametric UPL	3.41
Calcium (mg/L)	11/15/2017 - 03/24/2022	20	0	Parametric UPL	142
Chloride (mg/L)	11/15/2017 - 03/24/2022	20	0	Non-Parametric UPL	287
Fluoride (mg/L)	11/15/2017 - 03/24/2022	20	50	Non-Parametric UPL	0.272
pH (field) (SU)	11/15/2017 - 03/24/2022	21	0	Parametric LPL/UPL	6.5/7.5
Sulfate (mg/L)	11/15/2017 - 03/24/2022	20	10	Non-Parametric UPL	188
Total Dissolved Solids (mg/L)	11/15/2017 - 03/24/2022	20	0	Parametric UPL	995

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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FIGURES

BACKGROUND WELL

COMPLIANCE WELL

REGULATED UNIT (SUBJECT UNIT)

0 150 300
Feet

MONITORING WELL LOCATION MAP

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
LAWRENCEBURG ROAD LANDFILL
MIAMI FORT POWER PLANT
NORTH BEND, OHIO

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

REGULATED UNIT (SUBJECT UNIT)

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 13, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
LAWRENCEBURG ROAD LANDFILL
MIAMI FORT POWER PLANT
NORTH BEND, OHIO

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2023\Miami_Fort\LRL_113\MF LRL 113 Pot Surface 20230313.mxd

PROJECT: 169000XXXX | DATED: 5/30/2023 | DESIGNER: EGREAVES

COMPLIANCE MONITORING WELL

BACKGROUND MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (0.5-FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

REGULATED UNIT (SUBJECT UNIT)

NOTES:
1. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

0 150 300
Feet

POTENTIOMETRIC SURFACE MAP SEPTEMBER 21, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
LAWRENCEBURG ROAD LANDFILL
MIAMI FORT POWER PLANT
NORTH BEND, OHIO

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

APPENDIX A
LABORATORY REPORTS AND FIELD DATA SHEETS

Pace Analytical®

ANALYTICAL REPORT

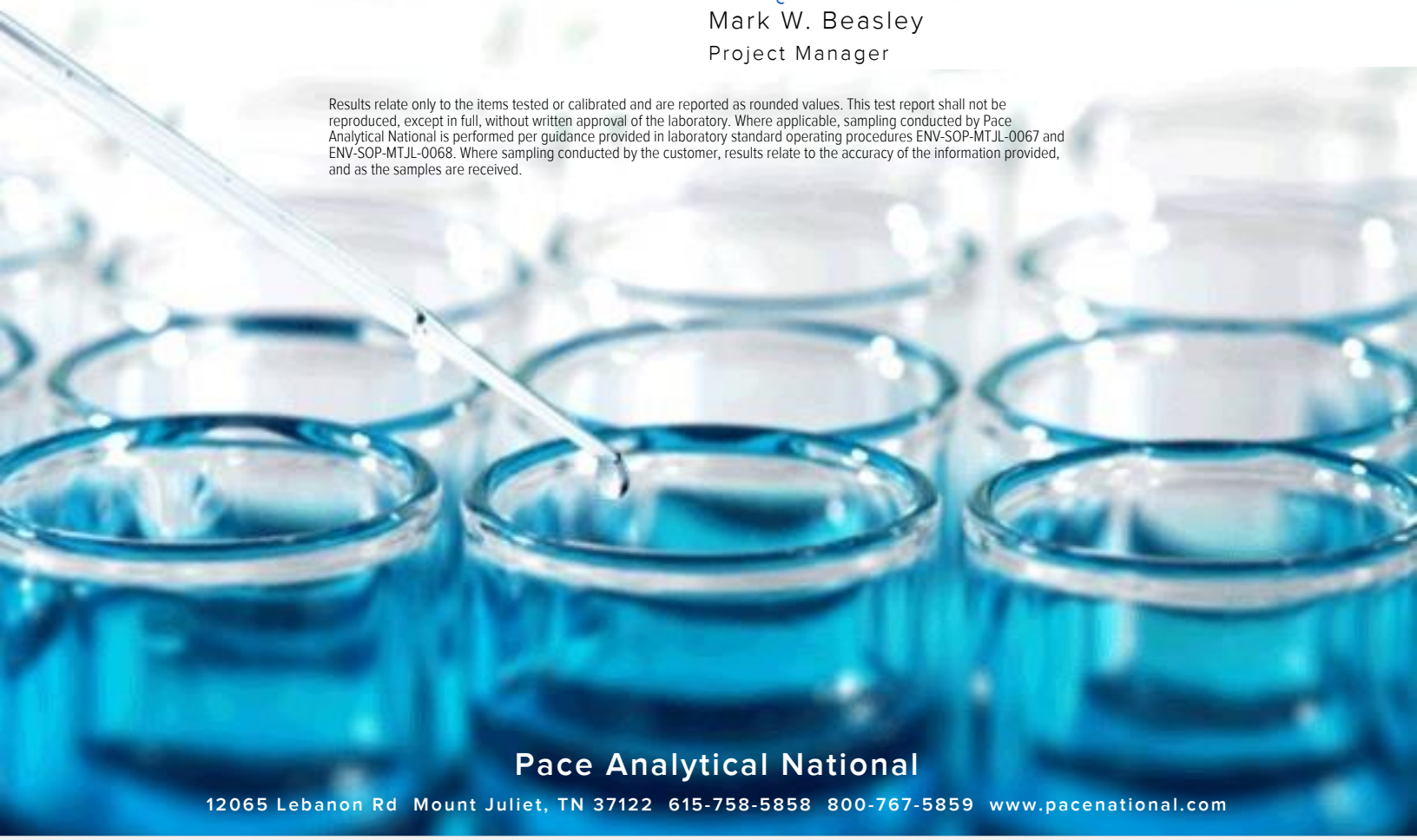
March 23, 2023

S&ME - Nashville, TN

Sample Delivery Group:	L1595468
Samples Received:	03/16/2023
Project Number:	7217-17-003D
Description:	Miami Fort Station - North Bend, OH
Site:	LAWRENCEBURG RD. LF (UNIT 113)
Report To:	Vince Epps 862 East Crescentville Road Cincinnati, OH 45246

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



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

TABLE OF CONTENTS

SAMPLE SUMMARY

MW-05 L1595468-01 GW

Collected by: Carter Harlan | Collected date/time: 03/14/23 10:45 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026252	1	03/20/23 09:17	03/21/23 07:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 09:42	03/22/23 09:42	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027218	1	03/21/23 23:24	03/21/23 23:24	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:33	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	20	03/17/23 13:32	03/21/23 10:39	SJM	Mt. Juliet, TN

MW-08 L1595468-02 GW

Collected by: Carter Harlan | Collected date/time: 03/14/23 12:55 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026252	1	03/20/23 09:17	03/21/23 07:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 09:47	03/22/23 09:47	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027218	1	03/21/23 23:56	03/21/23 23:56	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:36	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/21/23 10:50	SJM	Mt. Juliet, TN

MW-09 L1595468-03 GW

Collected by: Carter Harlan | Collected date/time: 03/14/23 13:45 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026252	1	03/20/23 09:17	03/21/23 07:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 09:51	03/22/23 09:51	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027218	1	03/22/23 00:12	03/22/23 00:12	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:39	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	5	03/17/23 13:32	03/21/23 10:53	SJM	Mt. Juliet, TN

MW-11 L1595468-04 GW

Collected by: Carter Harlan | Collected date/time: 03/13/23 15:25 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026084	1	03/19/23 15:20	03/19/23 16:15	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 09:56	03/22/23 09:56	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027218	1	03/22/23 01:16	03/22/23 01:16	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 14:57	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/21/23 10:16	SJM	Mt. Juliet, TN

MW-12 L1595468-05 GW

Collected by: Carter Harlan | Collected date/time: 03/13/23 16:20 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026084	1	03/19/23 15:20	03/19/23 16:15	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 10:00	03/22/23 10:00	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027218	1	03/22/23 01:32	03/22/23 01:32	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:43	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/21/23 10:56	SJM	Mt. Juliet, TN

SAMPLE SUMMARY

MW-13 L1595468-06 GW

Collected by: Carter Harlan | Collected date/time: 03/14/23 11:40 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026252	1	03/20/23 09:17	03/21/23 07:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 10:04	03/22/23 10:04	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027218	1	03/22/23 01:48	03/22/23 01:48	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:46	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/21/23 10:59	SJM	Mt. Juliet, TN

MW-14 L1595468-07 GW

Collected by: Carter Harlan | Collected date/time: 03/13/23 14:10 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026084	1	03/19/23 15:20	03/19/23 16:15	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 10:19	03/22/23 10:19	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027218	1	03/22/23 02:04	03/22/23 02:04	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:49	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/21/23 11:03	SJM	Mt. Juliet, TN

MW-15 L1595468-08 GW

Collected by: Carter Harlan | Collected date/time: 03/13/23 13:25 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026084	1	03/19/23 15:20	03/19/23 16:15	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 10:23	03/22/23 10:23	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027388	1	03/22/23 00:58	03/22/23 00:58	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:53	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/21/23 11:06	SJM	Mt. Juliet, TN

L1_LEACHATE L1595468-09 GW

Collected by: Carter Harlan | Collected date/time: 03/14/23 10:50 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026252	1	03/20/23 09:17	03/21/23 07:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 10:28	03/22/23 10:28	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027388	1	03/22/23 01:51	03/22/23 01:51	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027388	10	03/22/23 02:05	03/22/23 02:05	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 15:56	LD	Mt. Juliet, TN

DUP-1 L1595468-10 GW

Collected by: Carter Harlan | Collected date/time: 03/13/23 00:00 | Received date/time: 03/16/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2026084	1	03/19/23 15:20	03/19/23 16:15	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2027125	1	03/22/23 10:34	03/22/23 10:34	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2027388	1	03/22/23 02:18	03/22/23 02:18	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/20/23 16:13	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2024820	1	03/17/23 13:32	03/21/23 11:09	SJM	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	543000		10000	1	03/21/2023 07:10	WG2026252

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	242000		8450	20000	1	03/22/2023 09:42	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 09:42	WG2027125

Sample Narrative:

L1595468-01 WG2027125: 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	10000		379	1000	1	03/21/2023 23:24	WG2027218
Fluoride	212		64.0	150	1	03/21/2023 23:24	WG2027218
Sulfate	189000		594	5000	1	03/21/2023 23:24	WG2027218

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	2860		193	600	20	03/21/2023 10:39	WG2024820
Calcium	113000		93.6	1000	1	03/20/2023 15:33	WG2024820
Magnesium	37600		73.5	1000	1	03/20/2023 15:33	WG2024820
Potassium	2430		108	2000	1	03/20/2023 15:33	WG2024820
Sodium	15800		376	2000	1	03/20/2023 15:33	WG2024820

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	439000		10000	1	03/21/2023 07:10	WG2026252

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	404000		8450	20000	1	03/22/2023 09:47	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 09:47	WG2027125

Sample Narrative:

L1595468-02 WG2027125: 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	12200		379	1000	1	03/21/2023 23:56	WG2027218
Fluoride	U		64.0	150	1	03/21/2023 23:56	WG2027218
Sulfate	21500		594	5000	1	03/21/2023 23:56	WG2027218

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	86.1		9.63	30.0	1	03/21/2023 10:50	WG2024820
Calcium	111000		93.6	1000	1	03/20/2023 15:36	WG2024820
Magnesium	35900		73.5	1000	1	03/20/2023 15:36	WG2024820
Potassium	2770		108	2000	1	03/20/2023 15:36	WG2024820
Sodium	10800		376	2000	1	03/20/2023 15:36	WG2024820

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	560000		13300	1	03/21/2023 07:10	WG2026252

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	358000		8450	20000	1	03/22/2023 09:51	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 09:51	WG2027125

Sample Narrative:

L1595468-03 WG2027125: 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	66900		379	1000	1	03/22/2023 00:12	WG2027218
Fluoride	79.9	J	64.0	150	1	03/22/2023 00:12	WG2027218
Sulfate	60600		594	5000	1	03/22/2023 00:12	WG2027218

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	216		48.2	150	5	03/21/2023 10:53	WG2024820
Calcium	129000		93.6	1000	1	03/20/2023 15:39	WG2024820
Magnesium	29200		73.5	1000	1	03/20/2023 15:39	WG2024820
Potassium	4250		108	2000	1	03/20/2023 15:39	WG2024820
Sodium	44500		376	2000	1	03/20/2023 15:39	WG2024820

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	461000		10000	1	03/19/2023 16:15	WG2026084

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	386000		8450	20000	1	03/22/2023 09:56	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 09:56	WG2027125

Sample Narrative:

L1595468-04 WG2027125: 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	21600		379	1000	1	03/22/2023 01:16	WG2027218
Fluoride	104	J	64.0	150	1	03/22/2023 01:16	WG2027218
Sulfate	38800		594	5000	1	03/22/2023 01:16	WG2027218

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	65.8		9.63	30.0	1	03/21/2023 10:16	WG2024820
Calcium	117000		93.6	1000	1	03/21/2023 10:16	WG2024820
Magnesium	33700	V	73.5	1000	1	03/20/2023 14:57	WG2024820
Potassium	3040		108	2000	1	03/20/2023 14:57	WG2024820
Sodium	9640		376	2000	1	03/20/2023 14:57	WG2024820

MW-12 SAMPLE RESULTS - 05

Client Sample ID: MW-12 L1595468-05

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	509000		10000	1	03/19/2023 16:15	WG2026084

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	466000		8450	20000	1	03/22/2023 10:00	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 10:00	WG2027125

Sample Narrative:

L1595468-05 WG2027125: 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	9800		379	1000	1	03/22/2023 01:32	WG2027218
Fluoride	127	J	64.0	150	1	03/22/2023 01:32	WG2027218
Sulfate	41800		594	5000	1	03/22/2023 01:32	WG2027218

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	79.9		9.63	30.0	1	03/21/2023 10:56	WG2024820
Calcium	144000		93.6	1000	1	03/20/2023 15:43	WG2024820
Magnesium	37800		73.5	1000	1	03/20/2023 15:43	WG2024820
Potassium	2430		108	2000	1	03/20/2023 15:43	WG2024820
Sodium	6610		376	2000	1	03/20/2023 15:43	WG2024820

SAMPLE RESULTS - 06

MW-13 L1595468-06

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	681000		13300	1	03/21/2023 07:10	WG2026252

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	403000		8450	20000	1	03/22/2023 10:04	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 10:04	WG2027125

Sample Narrative:

L1595468-06 WG2027125: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	154000		379	1000	1	03/22/2023 01:48	WG2027218
Fluoride	183		64.0	150	1	03/22/2023 01:48	WG2027218
Sulfate	31200		594	5000	1	03/22/2023 01:48	WG2027218

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	57.5		9.63	30.0	1	03/21/2023 10:59	WG2024820
Calcium	122000		93.6	1000	1	03/20/2023 15:46	WG2024820
Magnesium	38000		73.5	1000	1	03/20/2023 15:46	WG2024820
Potassium	2860		108	2000	1	03/20/2023 15:46	WG2024820
Sodium	97000		376	2000	1	03/20/2023 15:46	WG2024820

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	512000		10000	1	03/19/2023 16:15	WG2026084

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	393000		8450	20000	1	03/22/2023 10:19	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 10:19	WG2027125

Sample Narrative:

L1595468-07 WG2027125: 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	49000		379	1000	1	03/22/2023 02:04	WG2027218
Fluoride	173		64.0	150	1	03/22/2023 02:04	WG2027218
Sulfate	44300		594	5000	1	03/22/2023 02:04	WG2027218

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	105		9.63	30.0	1	03/21/2023 11:03	WG2024820
Calcium	121000		93.6	1000	1	03/20/2023 15:49	WG2024820
Magnesium	30700		73.5	1000	1	03/20/2023 15:49	WG2024820
Potassium	3140		108	2000	1	03/20/2023 15:49	WG2024820
Sodium	42800		376	2000	1	03/20/2023 15:49	WG2024820

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	427000		10000	1	03/19/2023 16:15	WG2026084

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	334000		8450	20000	1	03/22/2023 10:23	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 10:23	WG2027125

Sample Narrative:

L1595468-08 WG2027125: 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	24500		379	1000	1	03/22/2023 00:58	WG2027388
Fluoride	163		64.0	150	1	03/22/2023 00:58	WG2027388
Sulfate	42500		594	5000	1	03/22/2023 00:58	WG2027388

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	58.3		9.63	30.0	1	03/21/2023 11:06	WG2024820
Calcium	111000		93.6	1000	1	03/20/2023 15:53	WG2024820
Magnesium	26100		73.5	1000	1	03/20/2023 15:53	WG2024820
Potassium	2220		108	2000	1	03/20/2023 15:53	WG2024820
Sodium	14300		376	2000	1	03/20/2023 15:53	WG2024820

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1530000		20000	1	03/21/2023 07:10	WG2026252

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	132000		8450	20000	1	03/22/2023 10:28	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 10:28	WG2027125

Sample Narrative:

L1595468-09 WG2027125: 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	5350		379	1000	1	03/22/2023 01:51	WG2027388
Sulfate	1030000		5940	50000	10	03/22/2023 02:05	WG2027388

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Calcium	409000		93.6	1000	1	03/20/2023 15:56	WG2024820
Magnesium	18900		73.5	1000	1	03/20/2023 15:56	WG2024820
Potassium	22900		108	2000	1	03/20/2023 15:56	WG2024820
Sodium	15800		376	2000	1	03/20/2023 15:56	WG2024820

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	469000		10000	1	03/19/2023 16:15	WG2026084

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	388000		8450	20000	1	03/22/2023 10:34	WG2027125
Alkalinity,Carbonate	U		8450	20000	1	03/22/2023 10:34	WG2027125

Sample Narrative:

L1595468-10 WG2027125: 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	21000		379	1000	1	03/22/2023 02:18	WG2027388
Fluoride	135	J	64.0	150	1	03/22/2023 02:18	WG2027388
Sulfate	41000		594	5000	1	03/22/2023 02:18	WG2027388

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	69.8		9.63	30.0	1	03/21/2023 11:09	WG2024820
Calcium	118000		93.6	1000	1	03/20/2023 16:13	WG2024820
Magnesium	36100		73.5	1000	1	03/20/2023 16:13	WG2024820
Potassium	3040		108	2000	1	03/20/2023 16:13	WG2024820
Sodium	10100		376	2000	1	03/20/2023 16:13	WG2024820

L1595468-04,05,07,08,10

Method Blank (MB)

(MB) R3903778-1 03/19/23 16:15

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

L1594455-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1594455-01 03/19/23 16:15 • (DUP) R3903778-3 03/19/23 16:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	2030000	2120000	1	4.10		5

L1595400-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1595400-05 03/19/23 16:15 • (DUP) R3903778-4 03/19/23 16:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	620000	641000	1	3.38		5

Laboratory Control Sample (LCS)

(LCS) R3903778-2 03/19/23 16:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8230000	93.5	77.3-123	

L1595359-01,02,03,06,09

Method Blank (MB)

(MB) R3904189-1 03/21/23 07:10

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

L1595359-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1595359-01 03/21/23 07:10 • (DUP) R3904189-3 03/21/23 07:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1640000	1730000	1	5.20	J3	5

L1595446-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1595446-01 03/21/23 07:10 • (DUP) R3904189-4 03/21/23 07:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	342000	347000	1	1.45		5

Laboratory Control Sample (LCS)

(LCS) R3904189-2 03/21/23 07:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8640000	98.2	77.3-123	

Method Blank (MB)

(MB) R3904125-2 03/22/23 09:21

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

L1595481-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1595481-03 03/22/23 10:38 • (DUP) R3904125-3 03/22/23 10:42

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	446000	449000	1	0.859		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1596272-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1596272-01 03/22/23 11:19 • (DUP) R3904125-4 03/22/23 11:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	749000	757000	1	0.970		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) R3904510-1 03/21/23 09:58

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

L1595136-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1595136-01 03/21/23 16:46 • (DUP) R3904510-3 03/21/23 17:02

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	4130	4140	1	0.133		15
Fluoride	72.4	73.6	1	1.64	J	15
Sulfate	9170	9140	1	0.279		15

L1595468-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1595468-07 03/22/23 02:04 • (DUP) R3904510-6 03/22/23 02:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	49000	49100	1	0.325		15
Fluoride	173	176	1	1.43		15
Sulfate	44300	44500	1	0.482		15

Laboratory Control Sample (LCS)

(LCS) R3904510-2 03/21/23 10:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	40100	100	80.0-120	
Fluoride	8000	8260	103	80.0-120	
Sulfate	40000	40500	101	80.0-120	

L1595136-01,02,03,04,05,06,07

L1595136-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1595136-01 03/21/23 16:46 • (MS) R3904510-4 03/21/23 17:18 • (MSD) R3904510-5 03/21/23 17:34

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	50000	4130	53800	54000	99.4	99.8	1	80.0-120			0.343	15
Fluoride	5000	72.4	5250	5280	104	104	1	80.0-120			0.535	15
Sulfate	50000	9170	58900	59000	99.4	99.6	1	80.0-120			0.163	15

L1595468-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1595468-07 03/22/23 02:04 • (MS) R3904510-7 03/22/23 02:41

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	49000	97000	96.0	1	80.0-120	
Fluoride	5000	173	5350	103	1	80.0-120	
Sulfate	50000	44300	95400	102	1	80.0-120	

Method Blank (MB)

(MB) R3904181-1 03/22/23 00:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	525	J	379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1595468-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1595468-08 03/22/23 00:58 • (DUP) R3904181-3 03/22/23 01:11

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	24500	24500	1	0.290		15
Fluoride	163	162	1	0.493		15
Sulfate	42500	42400	1	0.181		15

L1595611-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1595611-02 03/22/23 05:39 • (DUP) R3904181-6 03/22/23 05:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2760	2740	1	0.764		15
Sulfate	21100	21100	1	0.0540		15

Laboratory Control Sample (LCS)

(LCS) R3904181-2 03/22/23 00:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39200	98.1	80.0-120	
Fluoride	8000	8070	101	80.0-120	
Sulfate	40000	39900	99.8	80.0-120	

L1595468-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1595468-08 03/22/23 00:58 • (MS) R3904181-4 03/22/23 01:24 • (MSD) R3904181-5 03/22/23 01:38

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 %
Chloride	50000	24500	73700	73000	98.3	96.8	1	80.0-120			1.02	15
Fluoride	5000	163	5150	5090	99.8	98.6	1	80.0-120			1.18	15

L1595468-08,09,10

L1595468-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1595468-08 03/22/23 00:58 • (MS) R3904181-4 03/22/23 01:24 • (MSD) R3904181-5 03/22/23 01:38

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 %
Sulfate	50000	42500	92100	91000	99.3	97.1	1	80.0-120			1.20	15

L1595611-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1595611-02 03/22/23 05:39 • (MS) R3904181-7 03/22/23 06:06

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	2760	52000	98.6	1	80.0-120	
Sulfate	50000	21100	72100	102	1	80.0-120	

Method Blank (MB)

(MB) R3903178-1 03/20/23 14:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Calcium	U		93.6	1000
Magnesium	U		73.5	1000
Potassium	U		108	2000
Sodium	U		376	2000

Method Blank (MB)

(MB) R3903484-1 03/21/23 10:10

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) R3903178-2 03/20/23 14:52

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	5000	5210	104	80.0-120	
Magnesium	5000	5260	105	80.0-120	
Potassium	5000	5060	101	80.0-120	
Sodium	5000	5340	107	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3903484-6 03/21/23 11:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	50.0	57.0	114	80.0-120	

L1595468-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1595468-04 03/20/23 14:57 • (MS) R3903178-4 03/20/23 15:03 • (MSD) R3903178-5 03/20/23 15:07

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 %
Calcium	5000	118000	124000	125000	109	140	1	75.0-125		V	1.26	20
Magnesium	5000	33700	39700	40100	120	129	1	75.0-125		V	1.16	20
Potassium	5000	3040	8130	8120	102	102	1	75.0-125			0.0809	20
Sodium	5000	9640	15400	15100	114	110	1	75.0-125			1.50	20

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2023
MIAMI FORT POWER PLANT, LAWRENCEBURG ROAD LANDFILL
MES-257-113

L1595468-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1595468-04 03/21/23 10:16 • (MS) R3903484-4 03/21/23 10:23 • (MSD) R3903484-5 03/21/23 10:26

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	65.8	119	118	106	104	1	75.0-125			0.878	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.
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
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.
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.

Company Name/Address:
S&ME - Nashville, TN
862 East Crescentville Road
Cincinnati, OH 45246

Billing Information:
Accounts Payable
658 Grassmere Park Dr, Ste 100
Nashville, TN 37211

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 4

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
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 # L595468
D186

Report to: **Vince Epps**

Email To: **vepps@smeinc.com;vgallagher@smeinc.com**

Project Description: **Miami Fort Station - North Bend, OH**

City/State Collected:

Please Circle: PT MT CT ET

Phone: **513-771-8471**

Client Project # **7217-17-003D**

Lab Project # **LITENGNTN-MIAMI**

Collected by (print): Carter Hurlan

Site/Facility ID # **LAWRENCEBURG RD. LF (UNIT**

P.O. #

Collected by (signature): Carter Hurlan

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 #

Acctnum: **LITENGNTN**
Template: **T164916**
Prelogin: **P981529**
PM: **134 - Mark W. Beasley**
PB: BW 3/3

Shipped Via: **Courier**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALKBI/CA, Cl, F, SO4 125mlHDPE-NoPres	ALKBI/CA, Cl, SO4 125mlHDPE-NoPres	B, Ca, K, Mg, Na 250mlHDPE-HNO3	Ca, K, Mg, Na 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-05		GW	N/A	3/14/23	1045	4	X		X		X		-01
MW-08		GW	N/A	3/14/23	1255	4	X		X		X		-02
MW-09		GW	N/A	3/14/23	1345	4	X		X		X		-03
MW-11		GW	N/A	3/13/23	1525	4	X		X		X		-04
MW-12		GW	N/A	3/13/23	1020	4	X		X		X		-05
MW-13		GW	N/A	3/14/23	1140	4	X		X		X		-06
MW-14		GW	N/A	3/13/23	1410	4	X		X		X		-07
MW-15		GW	N/A	3/13/23	1325	4	X		X		X		-08
L1 - Leachate		GW	N/A	3/14/23	1050	4		X		X	X		-09
Dup-1		GW	N/A	3/13/23	[redacted]	4	X		X		X		-10

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

Remarks:*Log rad to same SDG as different dash #'s as EX 10 day TAT*****

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 Hurlan	3/15/23	1430	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: 40

Date: 3-16-23 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

L1595468

Tracking Numbers	Temperature
6357 9917 5132	1.5°c to 1.5°c
6357 9917 5187	2.5°c to 2.5°c

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	March 14, 2023
Source Well:	MW-05	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	March 14, 2023
Sampled By:	Jamie Bailey	Sample Time:	10:45
Weather:	Overcast	Air Temp:	29F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				67.15	ft-TOC
Total Well Depth:				81.40	ft-TOC
Height of Water Column:				14.25	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.3	Gal
3 * Well Volume	6.98	Gal
5 * Well Volume	11.63	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	10:10	End Time:	10:45	
(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:	1.8		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
	10:10	0.0	---	---	---	---	---	---	---	---	Start Purging
	10:15	0.3	200	67.15	13.2	7.3	0.013	7.0	141	0.94	Clear
	10:20	0.5	200	67.15	13.4	7.4	0.014	7.4	146	0.77	Clear
	10:25	0.8	200	67.15	13.0	7.4	0.014	5.4	147	0.55	Clear
	10:30	1.1	200	67.15	12.7	7.4	0.014	5.4	146	0.32	Clear
	10:35	1.3	200	67.15	12.9	7.4	0.014	5.5	148	0.36	Clear
	10:40	1.6	200	67.15	13.1	7.4	0.014	5.6	148	0.45	Clear
	10:45	1.8	200	67.15	13.0	7.4	0.015	5.5	148	0.29	Clear
Final:	10:45	1.8	200	67.15	13.0	7.4	0.015	5.5	148	0.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 10:45 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:	March 14, 2023
Source Well:	MW-08	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	March 14, 2023
Sampled By:	Jamie Bailey	Sample Time:	12:55
Weather:	Overcast	Air Temp:	66F32F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				49.50	ft-TOC
Total Well Depth:				70.00	ft-TOC
Height of Water Column:				20.50	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.3	Gal
3 * Well Volume	10.04	Gal
5 * Well Volume	16.73	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	12:20	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:	1.8		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
	12:20	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:25	0.3	200	50.84	11.1	7.1	0.785	4.2	186	0.65	Clear
	12:30	0.5	200	50.84	11.3	7.0	0.779	3.4	188	0.63	Clear
	12:35	0.8	200	50.84	11.5	7.1	0.775	4.5	188	1.31	Clear
	12:40	1.1	200	50.84	11.7	7.1	0.768	5.9	185	0.99	Clear
	12:45	1.3	200	50.84	11.9	7.1	0.767	6.2	185	1.10	Clear
	12:50	1.6	200	50.84	11.8	7.1	0.770	6.4	184	0.64	Clear
	12:55	1.8	200	50.84	11.7	7.2	0.764	6.6	184	0.52	Clear
Final:	12:55	1.8	200	50.84	11.7	7.2	0.764	6.6	184	0.5	End of Purging

Sample Method: Bladder Pump Sample Start Time: 12:55 Sample End Time: 13:00

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:	March 14, 2023
Source Well:	MW-09	Purge Time:	10 Minutes
Locked?:	Yes	Sample Date:	March 14, 2023
Sampled By:	Jamie Bailey	Sample Time:	13:45
Weather:	Overcast	Air Temp:	32F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				19.32	ft-TOC
Total Well Depth:				40.00	ft-TOC
Height of Water Column:				20.68	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.4	Gal
3 * Well Volume	10.12	Gal
5 * Well Volume	16.87	Gal

Well Purging Information

Purge Method:	Peristaltic Pump		Start Time:	13:30	End Time:	13:40	
(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:	1.3		Gallons				
Final Volume Purge Rate:	500		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	0.7	500	19.32	12.0	7.2	0.939	4.0	178	1.13	Clear
	13:40	1.3	500	19.32	11.2	7.1	0.939	3.2	186	1.70	Clear
Final:	13:40	1.3	500	19.32	11.2	7.1	0.939	3.2	186	1.7	End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 13:45 Sample End Time: 13:50

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: Used Peristaltic Pump to purge and sample well.

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 13, 2023
Source Well:	MW-11	Purge Time:	20 Minutes
Locked?:	Yes	Sample Date:	March 13, 2023
Sampled By:	Jamie Bailey	Sample Time:	15:20
Weather:	Overcast	Air Temp:	33F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				58.28	ft-TOC
Total Well Depth:				77.00	ft-TOC
Height of Water Column:				18.72	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	3.1	Gal
3 * Well Volume	9.16	Gal
5 * Well Volume	15.27	Gal

Well Purging Information

Purge Method:	Bladder Pump	Start Time:	15:00	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:	1.1	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
	15:00	0.0	---	---	---	---	---	---	---	---	Start Purging
	15:05	0.3	200	58.28	12.2	7.0	0.815	4.8	186	1.33	Clear
	15:10	0.5	200	58.28	12.2	7.0	0.815	4.6	184	1.17	Clear
	15:15	0.8	200	58.28	12.3	7.0	0.815	4.5	180	0.58	Clear
	15:20	1.1	200	58.28	12.3	7.0	0.816	4.4	178	0.74	Clear
									.		
Final:	15:20	1.1	200	58.28	12.3	7.0	0.816	4.4	178	0.7	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:20 Sample End Time: 15:25

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: DUP-1 Collected

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 13, 2023
Source Well:	MW-12	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 13, 2023
Sampled By:	Jamie Bailey	Sample Time:	16:20
Weather:	Overcast	Air Temp:	31F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	64.23	ft-TOC
			Total Well Depth:	80.20	ft-TOC
			Height of Water Column:	15.97	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.6	Gal
3 * Well Volume	7.82	Gal
5 * Well Volume	13.03	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	15:50	End Time:	16:15
(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
	15:50	0.0	---	---	---	---	---	---	---	---	Start Purging
	15:55	0.3	200	63.87	11.1	6.9	0.929	5.3	175	1.50	Clear
	16:00	0.5	200	63.87	12.1	6.8	0.895	2.4	179	3.88	Clear
	16:05	0.8	200	63.87	12.3	6.8	0.896	2.1	174	3.12	Clear
	16:10	1.1	200	63.87	12.0	6.8	0.894	2.0	172	2.61	Clear
	16:15	1.3	200	63.87	12.1	6.8	0.895	2.0	171	3.27	Clear
Final:	16:15	1.3	200	63.87	12.1	6.8	0.895	2.0	171	3.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:20 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 14, 2023
Source Well:	MW-13	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 14, 2023
Sampled By:	Jamie Bailey	Sample Time:	11:40
Weather:	Overcast	Air Temp:	68F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				72.58	ft-TOC
Total Well Depth:				87.07	ft-TOC
Height of Water Column:				14.49	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.4	Gal
3 * Well Volume	7.09	Gal
5 * Well Volume	11.82	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	11:10	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:	1.3		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
	11:10	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:15	0.3	200	72.58	10.4	7.1	1.360	6.5	194	3.45	Clear
	11:20	0.5	200	72.58	11.0	7.1	1.267	5.8	193	0.77	Clear
	11:25	0.8	200	72.58	11.2	7.1	1.249	5.6	192	0.59	Clear
	11:30	1.1	200	72.58	11.4	7.1	1.237	5.7	189	0.21	Clear
	11:35	1.3	200	72.58	11.3	7.1	1.232	5.7	188	0.40	Clear
Final:	11:35	1.3	200	72.58	11.3	7.1	1.232	5.7	188	0.4	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:40 Sample End Time: 11:45

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:	March 13, 2023
Source Well:	MW-14	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 13, 2023
Sampled By:	Jamie Bailey	Sample Time:	14:10
Weather:	Overcast	Air Temp:	31F

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				57.82	ft-TOC
Total Well Depth:				85.16	ft-TOC
Height of Water Column:				27.34	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	4.5	Gal
3 * Well Volume	13.38	Gal
5 * Well Volume	22.31	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	13:45	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:		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
	13:45	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:50	0.3	200	57.82	12.5	7.0	0.940	4.9	166	0.99	Clear
	13:55	0.5	200	57.82	12.5	7.0	0.929	4.3	167	1.43	Clear
	14:00	0.8	200	57.82	12.4	7.0	0.925	4.3	167	1.32	Clear
	14:05	1.1	200	57.82	12.3	7.0	0.924	4.3	164	1.02	Clear
	14:10	1.3	200	57.82	12.2	7.0	0.923	4.3	163	0.96	Clear
Final:	14:10	1.3	200	57.82	12.2	7.0	0.923	4.3	163	1.0	End of Purging

Sample Method: Bladder Pump Sample Start Time: 14:10 Sample End Time: 14:15

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:	March 13, 2023
Source Well:	MW-15	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	March 13, 2023
Sampled By:	Jamie Bailey	Sample Time:	13:20
Weather:	Overcast	Air Temp:	31F

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	45.28	ft-TOC
			Total Well Depth:	78.66	ft-TOC
			Height of Water Column:	33.38	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	5.4	Gal
3 * Well Volume	16.34	Gal
5 * Well Volume	27.24	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	12:55	End Time:	13:20
(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			
	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
	12:55	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:00	0.3	200	45.28	12.1	7.1	0.733	5.3	174	0.95	Clear
	13:05	0.5	200	45.28	12.2	7.1	0.742	5.2	175	1.08	Clear
	13:10	0.8	200	45.28	12.2	7.1	0.742	5.1	173	0.93	Clear
	13:15	1.1	200	45.27	12.7	7.1	0.745	5.0	172	2.00	Clear
	13:20	1.3	200	45.27	12.7	7.1	0.743	5.0	170	0.64	Clear
Final:	13:20	1.3	200	45.27	12.7	7.1	0.743	5.0	170	0.6	End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:20 Sample End Time: 14:15

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:	March 14, 2023
Source Well:	Source Landfill	Purge Time:	0 Minutes
Locked?:	Yes	Sample Date:	March 14, 2023
Sampled By:	Jamie Bailey	Sample Time:	10:50
Weather:	Overcast	Air Temp:	31F

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:	10:50	End Time:	10:50	
(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:				Gallons				
Final Volume Purge Rate:				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
	10:50	0.0	---	---	---	---	---	---	---	---	
	10:50				15.3	6.9	2.997	5.2	-35		
Final:	10:50				15.3	6.9	2.997	5.2	-35		End of Purging

Sample Method: Bailer Sample Start Time: 10:50 Sample End Time: 11:00

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**
Lawrenceburg Rd Landfill - Unit 113			
MW-05	3/13/2023	11:20	66.60
MW-08	3/13/2023	11:50	50.39
MW-09	3/13/2023	11:55	18.68
MW-11	3/13/2023	12:05	58.67
MW-12	3/13/2023	12:10	63.87
MW-13	3/13/2023	11:25	72.11
MW-14	3/13/2023	10:45	57.82
MW-15	3/13/2023	10:40	45.28

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 1, 2023
MIAMI FORT POWER PLANT, LAWRENCEBURG ROAD LANDFILL
MFS-257-113

Well I.D.	Date	Time	Depth	Temp	pH	Spec. Cond.	Dissolved Oxygen	ORP*	Turbidity
MW-05	3/14/2023	10:45	66.60	13	7.37	0.0147	5.53	148	0.29
MW-08	3/14/2023	12:55	50.39	11.7	7.15	0.764	6.55	184.1	0.52
MW-09	3/14/2023	13:45	18.68	11.2	7.1	0.939	3.2	185.9	1.7
MW-11	3/13/2023	15:20	58.67	12.3	6.95	0.816	4.38	178.3	0.74
MW-12	3/13/2023	16:20	63.87	12.1	6.77	0.895	1.95	171	3.27
MW-13	3/14/2023	11:40	72.11	11.3	7.07	1.232	5.65	188.3	0.4
MW-14	3/13/2023	14:10	57.82	12.2	6.97	0.923	4.34	163	0.96
MW-15	3/13/2023	13:20	45.28	12.7	7.09	0.743	4.95	170.3	0.64

Pace Analytical®

ANALYTICAL REPORT

July 28, 2023

S&ME - Nashville, TN

Sample Delivery Group:	L1638465
Samples Received:	07/20/2023
Project Number:	712717003A
Description:	Dynegy - Miami Fort Station, Lawrenceburg Road Landfill
Report To:	Vince Epps
	862 East Crescentville Road
	Cincinnati, OH 45246

Entire Report Reviewed By: Erica McNeese

Erica McNeese
Project Manager

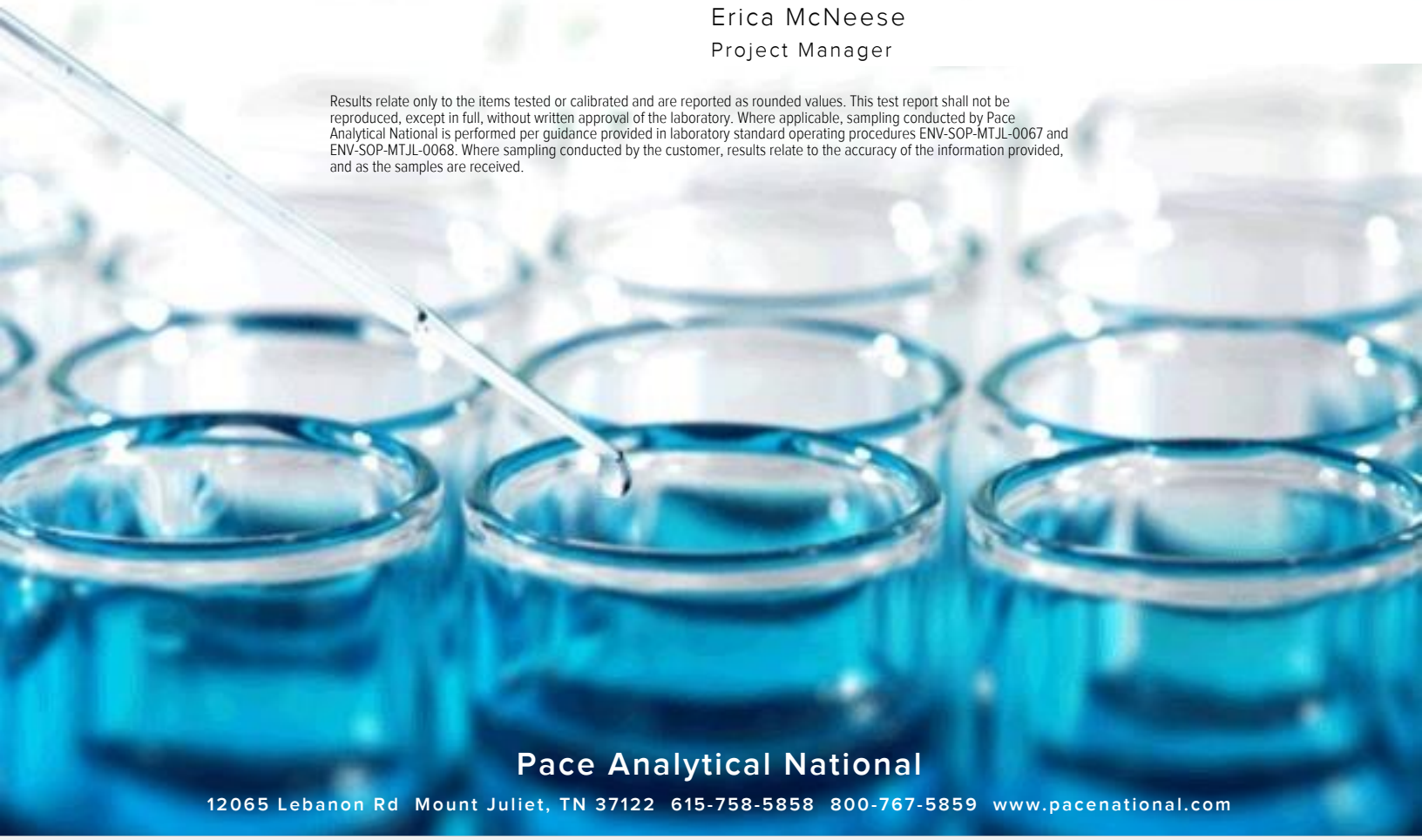


TABLE OF CONTENTS

SAMPLE SUMMARY

MW-12 L1638465-01 GW

Collected by	Collected date/time	Received date/time
Jamie Bailey	07/19/23 11:55	07/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2101534	1	07/26/23 17:12	07/27/23 14:49	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.

Erica McNeese
Project Manager

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium	141		1.00	1	07/27/2023 14:49	WG2101534

L1638465-01

Method Blank (MB)

(MB) R3953621-1 07/27/23 13:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U		0.0936	1.00

Laboratory Control Sample (LCS)

(LCS) R3953621-2 07/27/23 14:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	5.00	4.90	98.1	80.0-120	

L1637917-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1637917-02 07/27/23 14:05 • (MS) R3953621-4 07/27/23 14:11 • (MSD) R3953621-5 07/27/23 14:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	5.00	29.3	33.8	33.6	89.7	86.6	1	75.0-125			0.458	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.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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.

S&ME - Nashville, TN
862 East Crescentville Road
Cincinnati, OH 45246

Billing Information:
Accounts Payable
658 Grassmere Park Dr, Ste 100
Nashville, TN 37211

Pres Chk: L2

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE
MT JULIET, TN
12065 Lebanon Rd. Mount Juliet, TN 37122
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

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

Project Description: Dynegy - Miami Fort Station, Lawrenceburg Road Lan
City/State Collected: North Bend Ohio
Please Circle: PT MT CT (ET)

Phone: 513-591-8375
Client Project #: 712717003A
Lab Project #: LITENGNTN-DYN MFS LF

Collected by (print): Jamie Bailey
Site/Facility ID #:
P.O. #:

Collected by (signature): [signature]
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
X 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

SDG # ~~[struck]~~ N 7/24/23
C235
L1638465

Acctnum: LITENGNTN
Template: T231878
Prelogin: P1011904
PM: 134 - Mark W. Beasley
PB: [initials] 7/14/23
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CADG 250mlHDPE HNO3	Remarks	Sample # (lab only)
MW-12		GW	—	7/19/23	1155	2	X		-01
		GW							

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

Remarks: 24 HR TAT

pH ______ Temp ______
Flow ______ Other ______

Samples returned via: __ UPS X FedEx __ Courier ________
Tracking # 6841 8342 4371

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)	Trip Blank Received: Yes / No(X) HCL / MeoH TBR
Jamie Bailey [signature]	7/19/23	1300	FedEx	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: GBAG °C 2.2+0=2.2 Bottles Received: 2
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Grace Barrun [signature]	Date: 7.20.23 Time: 0915

If preservation required by Login: Date/Time
pH: ... TRC: ... CRS ...
Hold:
Condition: NCF / (OK)

L1637169 *LITENGNTN* Relog

R5

Please relog L1637169-01 for total CAG.

Thank you,
Brittnie

From: Vincent J Epps <vepps@smeinc.com>
Sent: Monday, July 24, 2023 10:14 AM
To: Brittnie Boyd <Brittnie.Boyd@pacelabs.com>
Subject: Sample Re-analysis

Hi Brittnie.

Looks like Mark is out of the office so I was wondering if you could help me with this. The attached results are reported as dissolved, but they were supposed to be reported as total. Could you have this sample reanalyzed (or reported) as totals please?

I need this as soon as you can get it to me.

Thank you!

\\\
Vince Epps, PG
Environmental Operations Manager

[Logo Description automatically generated with medium confidence]<http://www.smeinc.com/>
S&ME
862 East Crescentville Road
Cincinnati, OH 45246 map<https://www.google.com/maps/dir/862+E+Crescentville+Rd,+West+Chester+Township,+OH+45246/@39.3015714,-84.4558355,17z>
M: 513.591.8375 // O: 513.771.8471
www.smeinc.com<http://www.smeinc.com/>
LinkedIn<https://www.linkedin.com/company/s&me-inc-/> // Twitter<https://twitter.com/sme_engineering> // Facebook<https://www.facebook.com/sme.engineering/>

[cid:image002.png@01D9BE1F.F6D2E420]

Time estimate: oh **Time spent:** oh

Members

BB Brittnie Boyd (responsible)

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003A	Purge Date:	July 19, 2023
Source Well:	MW-12	Purge Time:	45 Minutes
Locked?:	Yes	Sample Date:	July 19, 2023
Sampled By:	Jamie Bailey	Sample Time:	11:55
Weather:	Overcast; 80F	Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				69.51	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:	11:05	End Time:	11:50	
(If Used)	Bladder Pump Control Settings:	On (sec):	4		Off (sec):	10	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:			0.7		Gallons	YSI ProQuattro			
Final Volume Purge Rate:			60		mL/min	HACH Turbidity Meter			
Well Purged Dry?:			No		(Yes/No)	Sampled @1155			

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	0.1	60	69.52	16.5	7.2	0.006	10.0	148	5.58	
	11:15	0.2	60	69.52	14.8	6.7	0.998	3.1	150	5.96	
	11:20	0.2	60	69.52	16.9	6.8	1.001	3.8	144	5.79	
	11:25	0.3	60	69.52	17.5	6.8	0.997	2.4	140	3.68	
	11:30	0.4	60	69.52	17.6	6.8	0.997	2.3	138	4.26	
	11:35	0.5	60	69.52	17.5	6.8	0.996	2.0	135	3.94	
	11:40	0.6	60	69.52	17.6	6.8	0.995	2.0	129	2.60	
	11:45	0.6	60	69.52	17.5	6.8	0.993	1.9	126	2.94	
	11:50	0.7	60	69.52	17.5	6.8	0.992	1.8	124	2.36	
Final:	11:50	0.7	60	69.52	17.5	6.8	0.992	1.8	124	2.4	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:50 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

Pace Analytical®

ANALYTICAL REPORT

October 03, 2023

S&ME - Nashville, TN

Sample Delivery Group:	L1659207
Samples Received:	09/23/2023
Project Number:	7217-17-003D
Description:	Miami Fort Station - North Bend, OH
Site:	MFS UNIT 113 (LANDFILL)
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.

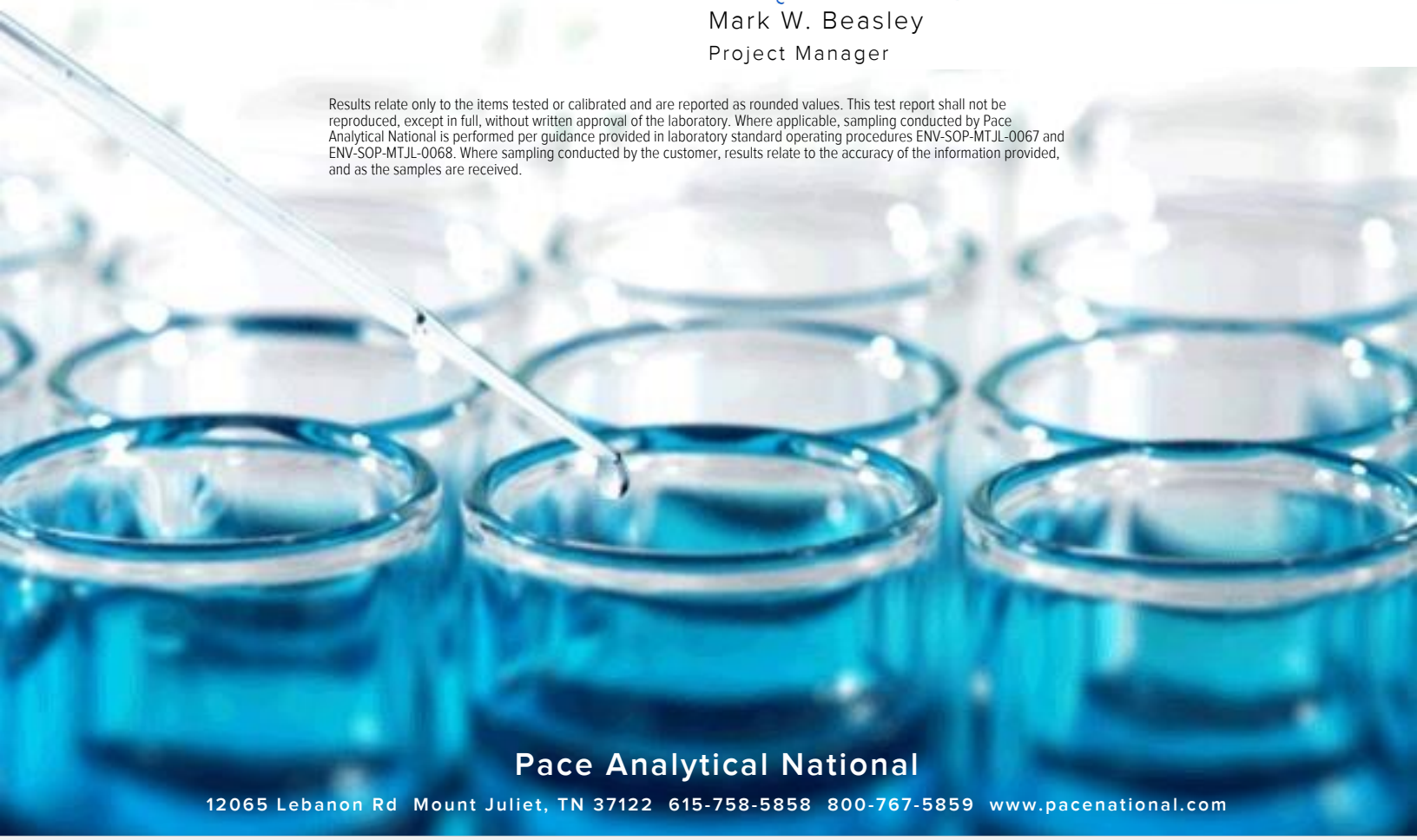


TABLE OF CONTENTS

SAMPLE SUMMARY

MW-05 L1659207-01 GW

Collected by: Jamie Bailey | Collected date/time: 09/21/23 12:30 | Received date/time: 09/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139032	1	09/25/23 16:12	09/26/23 12:13	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 05:00	10/01/23 05:00	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 22:43	ZSA	Mt. Juliet, TN

MW-08 L1659207-02 GW

Collected by: Jamie Bailey | Collected date/time: 09/22/23 10:30 | Received date/time: 09/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139060	1	09/25/23 16:44	09/26/23 11:11	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 05:26	10/01/23 05:26	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 22:46	ZSA	Mt. Juliet, TN

MW-09 L1659207-03 GW

Collected by: Jamie Bailey | Collected date/time: 09/22/23 09:25 | Received date/time: 09/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139060	1	09/25/23 16:44	09/26/23 11:11	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 06:04	10/01/23 06:04	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 22:49	ZSA	Mt. Juliet, TN

MW-11 L1659207-04 GW

Collected by: Jamie Bailey | Collected date/time: 09/21/23 16:00 | Received date/time: 09/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139028	1	09/25/23 16:09	09/26/23 17:26	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 06:55	10/01/23 06:55	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 22:52	ZSA	Mt. Juliet, TN

MW-12 L1659207-05 GW

Collected by: Jamie Bailey | Collected date/time: 09/21/23 16:50 | Received date/time: 09/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139032	1	09/25/23 16:12	09/26/23 12:13	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 07:21	10/01/23 07:21	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 22:55	ZSA	Mt. Juliet, TN

MW-13 L1659207-06 GW

Collected by: Jamie Bailey | Collected date/time: 09/21/23 13:30 | Received date/time: 09/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139032	1	09/25/23 16:12	09/26/23 12:13	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 07:46	10/01/23 07:46	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	10	10/01/23 07:59	10/01/23 07:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 22:58	ZSA	Mt. Juliet, TN

SAMPLE SUMMARY

MW-14 L1659207-07 GW

			Collected by	Collected date/time	Received date/time	
			Jamie Bailey	09/21/23 14:35	09/23/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139028	1	09/25/23 16:09	09/26/23 17:26	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 08:12	10/01/23 08:12	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 23:01	ZSA	Mt. Juliet, TN

MW-15 L1659207-08 GW

			Collected by	Collected date/time	Received date/time	
			Jamie Bailey	09/21/23 15:10	09/23/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139024	1	09/25/23 16:04	09/26/23 14:51	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 08:24	10/01/23 08:24	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 23:10	ZSA	Mt. Juliet, TN

DUP-1 L1659207-09 GW

			Collected by	Collected date/time	Received date/time	
			Jamie Bailey	09/21/23 00:00	09/23/23 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2139024	1	09/25/23 16:04	09/26/23 14:51	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2142541	1	10/01/23 08:37	10/01/23 08:37	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2139087	1	09/30/23 15:07	09/30/23 23:12	ZSA	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

Collected date/time: 09/21/23 12:30 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	463000		10000	1	09/26/2023 12:13	WG2139032

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	7050		379	1000	1	10/01/2023 05:00	WG2142541
Fluoride	161		64.0	150	1	10/01/2023 05:00	WG2142541
Sulfate	156000		594	5000	1	10/01/2023 05:00	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	2600		20.0	200	1	09/30/2023 22:43	WG2139087
Calcium	97300		79.3	1000	1	09/30/2023 22:43	WG2139087

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

Collected date/time: 09/22/23 10:30 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	447000		10000	1	09/26/2023 11:11	WG2139060

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	9110		379	1000	1	10/01/2023 05:26	WG2142541
Fluoride	U	P1	64.0	150	1	10/01/2023 05:26	WG2142541
Sulfate	21700		594	5000	1	10/01/2023 05:26	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	80.1	J	20.0	200	1	09/30/2023 22:46	WG2139087
Calcium	113000		79.3	1000	1	09/30/2023 22:46	WG2139087

Collected date/time: 09/22/23 09:25 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	657000		13300	1	09/26/2023 11:11	WG2139060

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	40600		379	1000	1	10/01/2023 06:04	WG2142541
Fluoride	U		64.0	150	1	10/01/2023 06:04	WG2142541
Sulfate	146000		594	5000	1	10/01/2023 06:04	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	220		20.0	200	1	09/30/2023 22:49	WG2139087
Calcium	145000		79.3	1000	1	09/30/2023 22:49	WG2139087

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

Collected date/time: 09/21/23 16:00 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	506000		10000	1	09/26/2023 17:26	WG2139028

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	19400		379	1000	1	10/01/2023 06:55	WG2142541
Fluoride	79.1	J	64.0	150	1	10/01/2023 06:55	WG2142541
Sulfate	53000		594	5000	1	10/01/2023 06:55	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	67.3	J	20.0	200	1	09/30/2023 22:52	WG2139087
Calcium	129000		79.3	1000	1	09/30/2023 22:52	WG2139087

Collected date/time: 09/21/23 16:50 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	546000		10000	1	09/26/2023 12:13	WG2139032

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	22900		379	1000	1	10/01/2023 07:21	WG2142541
Fluoride	69.9	J	64.0	150	1	10/01/2023 07:21	WG2142541
Sulfate	67400		594	5000	1	10/01/2023 07:21	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	85.6	J	20.0	200	1	09/30/2023 22:55	WG2139087
Calcium	146000		79.3	1000	1	09/30/2023 22:55	WG2139087

Collected date/time: 09/21/23 13:30 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	738000		20000	1	09/26/2023 12:13	WG2139032

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	232000		3790	10000	10	10/01/2023 07:59	WG2142541
Fluoride	78.8	J	64.0	150	1	10/01/2023 07:46	WG2142541
Sulfate	40600		594	5000	1	10/01/2023 07:46	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	46.3	J	20.0	200	1	09/30/2023 22:58	WG2139087
Calcium	150000		79.3	1000	1	09/30/2023 22:58	WG2139087

Collected date/time: 09/21/23 14:35 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	506000		10000	1	09/26/2023 17:26	WG2139028

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	50700		379	1000	1	10/01/2023 08:12	WG2142541
Fluoride	83.4	J	64.0	150	1	10/01/2023 08:12	WG2142541
Sulfate	40400		594	5000	1	10/01/2023 08:12	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	89.7	J	20.0	200	1	09/30/2023 23:01	WG2139087
Calcium	117000		79.3	1000	1	09/30/2023 23:01	WG2139087

MW-15 SAMPLE RESULTS - 08

Collected date/time: 09/21/23 15:10 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	398000		10000	1	09/26/2023 14:51	WG2139024

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	32200		379	1000	1	10/01/2023 08:24	WG2142541
Fluoride	86.2	J	64.0	150	1	10/01/2023 08:24	WG2142541
Sulfate	40100		594	5000	1	10/01/2023 08:24	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	52.3	J	20.0	200	1	09/30/2023 23:10	WG2139087
Calcium	98900		79.3	1000	1	09/30/2023 23:10	WG2139087

Collected date/time: 09/21/23 00:00 L1659207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	471000		10000	1	09/26/2023 14:51	WG2139024

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	7160		379	1000	1	10/01/2023 08:37	WG2142541
Fluoride	119	J	64.0	150	1	10/01/2023 08:37	WG2142541
Sulfate	152000		594	5000	1	10/01/2023 08:37	WG2142541

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	2630		20.0	200	1	09/30/2023 23:12	WG2139087
Calcium	97600		79.3	1000	1	09/30/2023 23:12	WG2139087

Method Blank (MB)

(MB) R3979062-1 09/26/23 14:51

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

L1658527-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1658527-02 09/26/23 14:51 • (DUP) R3979062-3 09/26/23 14:51

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	445000	447000	1	0.448		5

L1658605-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1658605-03 09/26/23 14:51 • (DUP) R3979062-4 09/26/23 14:51

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1530000	1600000	1	4.16		5

Laboratory Control Sample (LCS)

(LCS) R3979062-2 09/26/23 14:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8390000	95.3	77.3-123	

Method Blank (MB)

(MB) R3979031-1 09/26/23 17:26

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

L1658605-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1658605-08 09/26/23 17:26 • (DUP) R3979031-3 09/26/23 17:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1460000	1670000	1	13.8	J3	5

L1658795-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1658795-01 09/26/23 17:26 • (DUP) R3979031-4 09/26/23 17:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	484000	504000	1	4.05		5

Laboratory Control Sample (LCS)

(LCS) R3979031-2 09/26/23 17:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8470000	96.3	77.3-123	

Method Blank (MB)

(MB) R3979450-1 09/26/23 12:13

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

L1658529-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1658529-02 09/26/23 12:13 • (DUP) R3979450-3 09/26/23 12:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	764000	844000	1	9.95	J3	5

L1659083-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1659083-13 09/26/23 12:13 • (DUP) R3979450-4 09/26/23 12:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	676000	721000	1	6.49	J3	5

Laboratory Control Sample (LCS)

(LCS) R3979450-2 09/26/23 12:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8510000	96.7	77.3-123	

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3 L1659207-02,03
, 2023
MIAMI FORT POWER PLANT, LAWRENCEBURG ROAD LANDFILL
MFS-257-113

Method Blank (MB)

(MB) R3979078-1 09/26/23 11:11

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

L1658982-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1658982-01 09/26/23 11:11 • (DUP) R3979078-3 09/26/23 11:11

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	624000	639000	1	2.32		5

L1659083-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1659083-06 09/26/23 11:11 • (DUP) R3979078-4 09/26/23 11:11

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	820000	860000	1	4.76		5

Laboratory Control Sample (LCS)

(LCS) R3979078-2 09/26/23 11:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8470000	96.3	77.3-123	

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3
, 2023
MIAMI FORT POWER PLANT, LAWRENCEBURG ROAD LANDFILL
MFS-257-113

L1659207-01,02,03,04,05,06,07,08,09

Method Blank (MB)

(MB) R3980449-1 10/01/23 01:37

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

L1659199-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1659199-01 10/01/23 03:19 • (DUP) R3980449-3 10/01/23 03:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	16300	15400	1	5.83		15
Fluoride	92.7	124	1	29.1	J P1	15
Sulfate	5640	5490	1	2.68		15

L1659207-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1659207-02 10/01/23 05:26 • (DUP) R3980449-6 10/01/23 05:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	9110	9030	1	0.865		15
Fluoride	U	68.7	1	200	J P1	15
Sulfate	21700	21500	1	0.698		15

Laboratory Control Sample (LCS)

(LCS) R3980449-2 10/01/23 01:49

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	41300	103	80.0-120	
Fluoride	8000	8480	106	80.0-120	
Sulfate	40000	39400	98.6	80.0-120	

L1659199-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1659199-01 10/01/23 03:19 • (MS) R3980449-4 10/01/23 04:10 • (MSD) R3980449-5 10/01/23 04:22

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 %
Chloride	40000	16300	51700	52000	88.5	89.3	1	80.0-120			0.604	15
Fluoride	8000	92.7	8050	8050	99.5	99.5	1	80.0-120			0.0683	15
Sulfate	40000	5640	43300	43300	94.1	94.1	1	80.0-120			0.00139	15

L1659207-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1659207-02 10/01/23 05:26 • (MS) R3980449-7 10/01/23 05:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	9110	46700	94.0	1	80.0-120	
Fluoride	8000	U	7820	97.8	1	80.0-120	
Sulfate	40000	21700	56300	86.6	1	80.0-120	

APPENDIX A:
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 3
, 2023
MIAMI FORT POWER PLANT, LAWRENCEBURG ROAD LANDFILL
MFS-257-113

L1659207-01,02,03,04,05,06,07,08,09

Method Blank (MB)

(MB) R3980100-1 09/30/23 21:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Boron	U		20.0	200
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R3980100-2 09/30/23 22:02

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	965	96.5	80.0-120	
Calcium	10000	9850	98.5	80.0-120	

L1658891-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1658891-01 09/30/23 22:05 • (MS) R3980100-4 09/30/23 22:11 • (MSD) R3980100-5 09/30/23 22:13

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	%	%		%			%	%
Boron	1000	238	1200	1210	96.3	97.4	1	75.0-125			0.945	20
Calcium	10000	126000	132000	132000	66.6	65.2	1	75.0-125	V	V	0.109	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.
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
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.
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.

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

Billing Information: Accounts Payable, smeinc_invoice@concursolutions.com

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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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

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

SDG #: J086

Collected by (print): Jamie Bailey

Site/Facility ID #: MFS Unit 113 (Landfill)

P.O. #

Acctnum: LITEGNTN

Template:

Prelogin:

PM: 134

PB:

Shipped Via:

Collected by (signature): [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

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Ca, Cl, F, SO4 125mlHDPE-NonPres	Boron 250mlHDPE-HNO3	TDS 250mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-05	Grab	GW	NA	9/21/23	1230	3	X	X	X		
MW-08	Grab	GW	NA	9/22/23	1030	3	X	X	X		
MW-09	Grab	GW	NA	9/22/23	925	3	X	X	X		
MW-11	Grab	GW	NA	9/21/23	1600	3	X	X	X		
MW-12	Grab	GW	NA	9/21/23	1650	3	X	X	X		
MW-13	Grab	GW	NA	9/21/23	1330	3	X	X	X		
MW-14	Grab	GW	NA	9/21/23	1435	3	X	X	X		
MW-15	Grab	GW	NA	9/21/23	1510	3	X	X	X		
DUP-1	Grab	GW	NA	9/21/23	—	3	X	X	X		

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

Remarks:

pH ______ Temp ______

Flow ______ Other ______

Samples returned via: __ UPS _X_ FedEx __ Courier __ ______

Tracking # 6643 4303 0480

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)		
Jamie Bailey	9/22/23		FedEx	Trip Blank Received: Yes / No HCL / MeOH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: CC 4.8 °C 2.8+0=2.8	Bottles Received: 27
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 9/23/23	Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	September 21, 2023
Source Well:	MW-05	Purge Time:	40 Minutes
Locked?:	Yes	Sample Date:	September 21, 2023
Sampled By:	JEB; EF	Sample Time:	12:30
Weather:	Mostly cloudy;74	Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				73.30	ft-TOC
Total Well Depth:				81.40	ft-TOC
Height of Water Column:				8.10	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.3	Gal
3 * Well Volume	3.97	Gal
5 * Well Volume	6.61	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	11:45	End Time:	12:25	
(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:	1.1		Gallons	Used YSI ProQuattro - B22672B			
Final Volume Purge Rate:	100		mL/min	2100P Turbidimeter - B22918B, DUP-1			
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
	11:45	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:50	0.1	100	73.38	18.6	7.5	0.757	6.3	308	3.24	
	11:55	0.3	100	73.36	19.1	7.4	0.702	3.9	302	3.41	
	12:00	0.4	100	73.36	19.9	7.6	0.690	4.4	293	3.39	
	12:05	0.5	100	73.36	17.5	7.5	0.682	3.9	298	2.57	
	12:10	0.7	100	73.36	16.3	7.5	0.674	3.6	302	1.83	
	12:15	0.8	100	73.36	16.0	7.5	0.678	3.7	296	1.48	
	12:20	0.9	100	73.36	16.2	7.5	0.672	3.6	290	0.97	
	12:25	1.1	100	73.36	16.5	7.5	0.673	3.5	289	1.06	
Final:	12:25	1.1	100	73.36	16.5	7.5	0.673	3.5	289	1.1	End of Purging

Sample Method: Bladder Pump Sample Start Time: 12:30 Sample End Time:

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: DUP-1 Collected

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 22, 2023
Source Well:	MW-08	Purge Time:	40 Minutes
Locked?:	Yes	Sample Date:	September 22, 2023
Sampled By:	JEB:EF	Sample Time:	10:30
Weather:	Sunny; 65	Air Temp:	

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	56.70	ft-TOC
			Total Well Depth:	70.00	ft-TOC
			Height of Water Column:	13.30	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.2	Gal
3 * Well Volume	6.51	Gal
5 * Well Volume	10.85	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	9:45	End Time:	10:25
(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:	1.8		Gallons	Used YSI ProQuattro - B22672B		
	Final Volume Purge Rate:	175		mL/min	2100P Turbidimeter - B22918B		
	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
	09:55	0.5	175	56.69	15.2	7.0	0.794	4.6	285	1.02	
	10:00	0.7	175	56.69	15.7	7.1	0.785	4.8	290	1.32	
	10:05	0.9	175	56.69	17.2	7.1	0.781	4.8	293	1.46	
	10:10	1.2	175	56.69	14.7	7.1	0.773	6.1	307	1.17	
	10:15	1.4	175	56.69	14.7	7.1	0.778	5.9	310	1.23	
	10:20	1.6	175	56.69	15.0	7.1	0.780	5.9	310	1.21	
	10:25	1.8	175	56.69	16.9	7.2	0.779	5.8	307	1.09	
Final:	10:25	1.8	175	56.69	16.9	7.2	0.779	5.8	307	1.1	End of Purging

Sample Method: Bladder Pump Sample Start Time: 10:30 Sample End Time:

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 22, 2023
Source Well:	MW-09	Purge Time:	15 Minutes
Locked?:	Yes	Sample Date:	September 22, 2023
Sampled By:	JEB; EF	Sample Time:	9:25
Weather:	Sunny; 65	Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				24.89	ft-TOC
Total Well Depth:				40.00	ft-TOC
Height of Water Column:				15.11	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.5	Gal
3 * Well Volume	7.40	Gal
5 * Well Volume	12.33	Gal

Well Purging Information

Purge Method:	Peristaltic Pump		Start Time:	9:10	End Time:	9:25	
(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:	0.6		Gallons	Used YSI ProQuattro - B22672B			
Final Volume Purge Rate:	150		mL/min	2100P Turbidimeter - B22918B			
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	0.2	150	24.86	13.8	7.2	1.104	5.5	250	2.65	
	09:20	0.4	150	24.86	13.6	7.0	1.042	5.5	265	1.64	
	09:25	0.6	150	24.86	13.6	5.7	1.042	5.7	274	3.16	
Final:	09:25	0.6	150	24.86	13.6	5.7	1.042	5.7	274	3.2	End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 09:25 Sample End Time:

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: Used Peristaltic Pump to purge and sample well.

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 21, 2023
Source Well:	MW-11	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	September 21, 2023
Sampled By:	JEB;EF	Sample Time:	16:00
Weather:	Mostly cloudy; 80	Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				64.76	ft-TOC
Total Well Depth:				77.00	ft-TOC
Height of Water Column:				12.24	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.0	Gal
3 * Well Volume	5.99	Gal
5 * Well Volume	9.99	Gal

Well Purging Information

Purge Method:	Bladder Pump		Start Time:	15:25	End Time:	15:55	
(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:	0.8		Gallons	Used YSI ProQuattro - B22672B			
Final Volume Purge Rate:	100		mL/min	2100P Turbidimeter - B22918B			
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
	15:35	0.3	100	64.70	16.5	7.6	0.659	7.8	285	2.70	
	15:40	0.4	100	64.70	15.8	7.1	0.841	2.1	291	2.09	
	15:45	0.5	100	64.70	16.8	7.2	0.841	2.0	285	1.51	
	15:50	0.7	100	64.70	16.6	7.2	0.851	2.0	286	1.61	
	15:55	0.8	100	64.70	15.4	7.1	0.842	1.9	290	0.89	
									.		
Final:	15:55	0.8	100	64.70	15.4	7.1	0.842	1.9	290	0.9	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:00 Sample End Time:

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: Sampled @1600

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 21, 2023
Source Well:	MW-12	Purge Time:	40 Minutes
Locked?:	Yes	Sample Date:	September 21, 2023
Sampled By:	JEB; EF	Sample Time:	16:50
Weather:	Mostly cloudy; 80	Air Temp:	

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	70.64	ft-TOC
			Total Well Depth:	80.20	ft-TOC
			Height of Water Column:	9.56	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.6	Gal
3 * Well Volume	4.68	Gal
5 * Well Volume	7.80	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	16:10	End Time:	16:50
(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:	1.1		Gallons	Used YSI ProQuattro - B22672B		
	Final Volume Purge Rate:	100		mL/min	2100P Turbidimeter - B22918B		
	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
	16:10	0.0	---	---	---	---	---	---	---	---	Start Purging
	16:20	0.3	100	70.65	17.1	7.2	0.942	4.3	309	4.71	
	16:25	0.4	100	70.65	17.4	7.0	0.936	1.5	305	3.42	
	16:30	0.5	100	70.65	16.0	7.1	0.936	1.5	305	2.66	
	16:35	0.7	100	70.65	15.4	7.1	0.932	0.6	301	1.78	
	16:40	0.8	100	70.65	17.5	7.1	0.931	0.7	295	1.21	
	16:45	0.9	100	70.65	15.0	7.1	0.930	0.6	287	1.40	
	16:50	1.1	100	70.65	15.3	7.0	0.930	0.6	279	1.65	
Final:	16:50	1.1	100	70.65	15.3	7.0	0.930	0.6	279	1.7	End of Purging

Sample Method: Bladder Pump Sample Start Time: 16:50 Sample End Time:

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 21, 2023
Source Well:	MW-13	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	September 21, 2023
Sampled By:	JEB; EF	Sample Time:	13:30
Weather:	Partly cloudy; 83	Air Temp:	

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	79.97	ft-TOC
			Total Well Depth:	87.07	ft-TOC
			Height of Water Column:	7.10	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.2	Gal
3 * Well Volume	3.48	Gal
5 * Well Volume	5.79	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	12:55	End Time:	13:30	
(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:	0.9		Gallons	Used YSI ProQuattro - B22672B			
	Final Volume Purge Rate:	100		mL/min	2100P Turbidimeter - B22918B			
	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
	12:55	0.0	---	---	---	---	---	---	---	---	Start Purging
	13:05	0.3	100	80.03	16.7	7.2	1.492	4.2	281	2.21	
	13:10	0.4	100	80.03	16.4	7.2	1.500	3.6	275	3.83	
	13:15	0.5	100	80.03	17.7	7.2	1.491	2.9	273	3.22	
	13:20	0.7	100	80.03	19.2	7.2	1.510	2.9	271	3.30	
	13:25	0.8	100	80.03	17.0	7.2	1.513	3.1	276	1.98	
	13:30	0.9	100	80.03	16.6	7.1	1.507	3.0	275	1.11	
Final:	13:30	0.9	100	80.03	16.6	7.1	1.507	3.0	275	1.1	End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:30 Sample End Time:

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 21, 2023
Source Well:	MW-14	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	September 21, 2023
Sampled By:	JEB; EF	Sample Time:	14:35
Weather:	Mostly cloudy; 83	Air Temp:	

Water Level & Well Data

			Measuring Point:	Top of Casing	
			Depth to Water:	45.48	ft-TOC
			Total Well Depth:	85.16	ft-TOC
			Height of Water Column:	39.68	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	6.5	Gal
3 * Well Volume	19.43	Gal
5 * Well Volume	32.38	Gal

Well Purging Information

	Purge Method:	Bladder Pump		Start Time:	14:00	End Time:	14:30
(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:	0.8		Gallons	Used YSI ProQuattro - B22672B		
	Final Volume Purge Rate:	100		mL/min	2100P Turbidimeter - B22918B		
	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	0.1	100	45.42	18.0	7.3	0.900	6.2	293	1.44	
	14:10	0.3	100	45.42	19.9	7.3	0.904	6.1	290	1.66	
	14:15	0.4	100	45.42	16.3	7.2	0.897	6.1	298.2	1.56	
	14:20	0.5	100	45.42	16.0	7.1	0.896	6.0	299	1.33	
	14:25	0.7	100	45.42	15.4	7.1	0.889	5.9	301	2.00	
	14:30	0.8	100	45.42	15.4	7.1	0.887	5.9	303	3.11	
Final:	14:30	0.8	100	45.42	15.4	7.1	0.887	5.9	303	3.11	End of Purging

Sample Method: Bladder Pump Sample Start Time: 14:35 Sample End Time:

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 21, 2023
Source Well:	MW-15	Purge Time:	25 Minutes
Locked?:	Yes	Sample Date:	September 21, 2023
Sampled By:	JEB; EF	Sample Time:	15:10
Weather:	Mostly cloudy; 83	Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:					ft-TOC
Total Well Depth:				78.66	ft-TOC
Height of Water Column:				78.66	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	12.8	Gal
3 * Well Volume	38.51	Gal
5 * Well Volume	64.18	Gal

Well Purging Information

Purge Method:			Bladder Pump	Start Time:	14:50	End Time:	15:15	
(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:			0.7	Gallons	Used YSI ProQuattro - B22672B			
Final Volume Purge Rate:			100	mL/min	2100P Turbidimeter - B22918B			
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	0.1	100	51.98	15.6	7.5	0.728	3.6	108	8.02	
	15:00	0.3	100	51.98	15.0	7.3	0.676	4.3	174	7.99	
	15:05	0.4	100	51.98	15.2	7.3	0.674	4.3	201	7.94	
	15:10	0.5	100	51.98	15.2	7.4	0.675	4.2	222	4.64	
	15:15	0.7	100	51.98	14.7	7.3	0.672	4.2	239	2.70	
Final:	15:15	0.7	100	51.98	14.7	7.3	0.672	4.2	239	2.7	End of Purging

Sample Method: Bladder Pump Sample Start Time: 15:10 Sample End Time:

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	Purge Date:	
Project Location:	North Bend, Ohio	Purge Time:	Minutes
Project Number:	7217-17-003D	Sample Date:	
Source Well:	Source Landfill	Sample Time:	
Locked?:	Yes	Air Temp:	
Sampled By:			
Weather:			

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:		End Time:		
(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:				Gallons				
Final Volume Purge Rate:				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
		0.0	---	---	---	---	---	---	---	---	Start Purging
Final:											End of Purging

Sample Method: Bladder Pump Sample Start Time: Sample End Time:

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**
Lawrenceburg Rd Landfill - Unit 113			
MW-05	9/21/2023	10:06	73.31
MW-08	9/21/2023	10:45	56.70
MW-09	9/21/2023	10:53	24.86
MW-11	9/21/2023	11:00	64.76
MW-12	9/21/2023	11:03	70.64
MW-13	9/21/2023	11:15	79.97
MW-14	9/21/2023	10:34	65.48
MW-15	9/21/2023	10:30	51.98

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ANALYTICAL REPORT

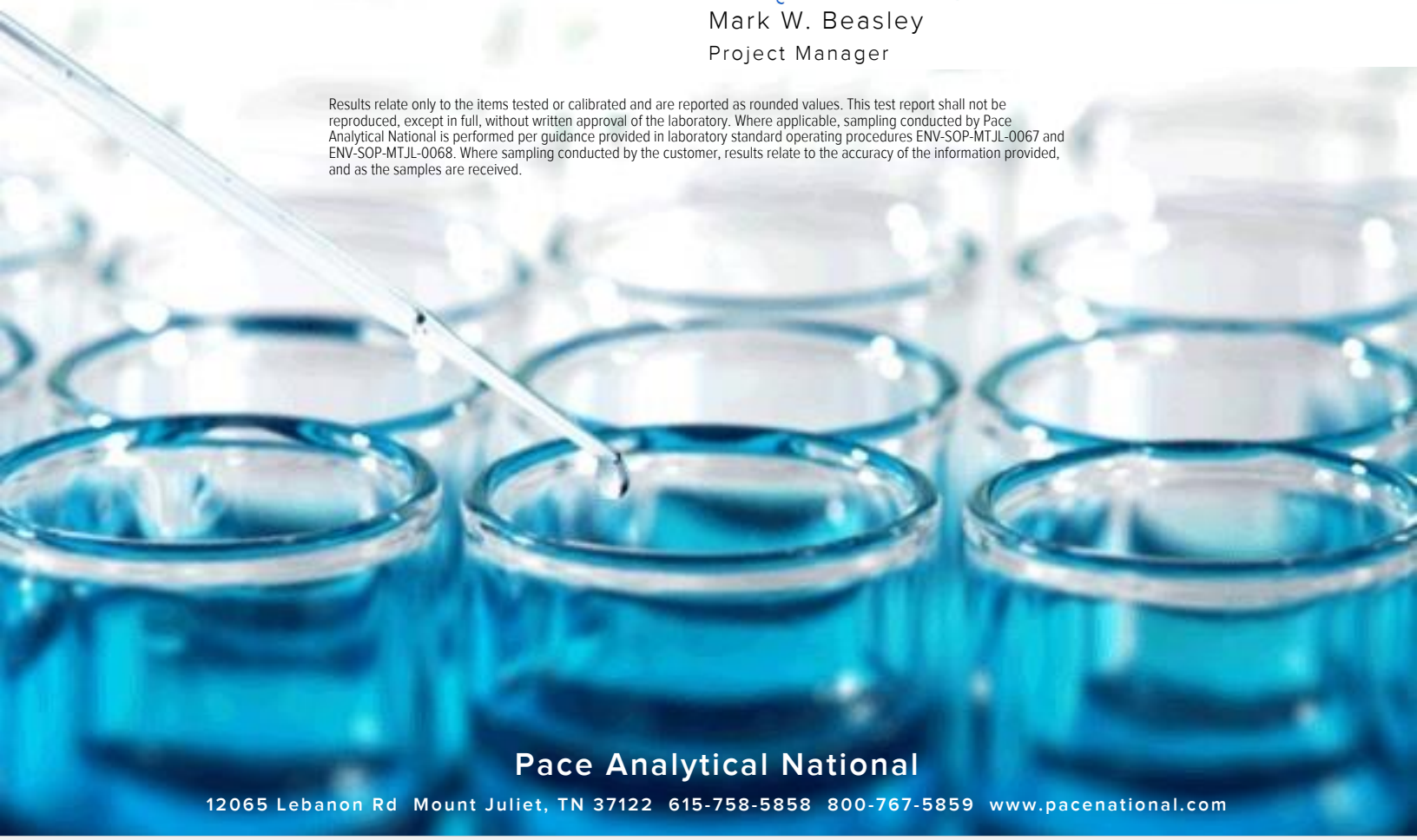
December 28, 2023

S&ME - Nashville, TN

Sample Delivery Group:	L1689292
Samples Received:	12/16/2023
Project Number:	7217-17-003D
Description:	Miami Fort Station - North Bend, OH
Site:	MFS UNIT 113 (LANDFILL)
Report To:	Vince Epps 862 East Crescentville Road Cincinnati, OH 45246

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



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SAMPLE SUMMARY

MW-05 L1689292-01 GW

Collected by: Melkaww Awayo | Collected date/time: 12/12/23 13:45 | Received date/time: 12/16/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2192221	1	12/19/23 13:13	12/19/23 16:14	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2192808	1	12/20/23 10:52	12/20/23 10:52	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2194641	1	12/27/23 02:08	12/27/23 02:08	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	1	12/28/23 03:16	12/28/23 03:16	ASM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	1	12/21/23 10:22	12/26/23 21:08	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	10	12/21/23 10:22	12/26/23 19:48	LD	Mt. Juliet, TN

MW-09R L1689292-02 GW

Collected by: Melkaww Awayo | Collected date/time: 12/15/23 12:00 | Received date/time: 12/16/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2192221	1	12/19/23 13:13	12/19/23 16:14	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2192808	1	12/20/23 11:00	12/20/23 11:00	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2194641	1	12/27/23 02:33	12/27/23 02:33	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	1	12/28/23 03:30	12/28/23 03:30	ASM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	1	12/21/23 10:22	12/26/23 20:33	LD	Mt. Juliet, TN

MW-09 L1689292-03 GW

Collected by: Melkaww Awayo | Collected date/time: 12/13/23 12:55 | Received date/time: 12/16/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2192221	1	12/19/23 13:13	12/19/23 16:14	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2192808	1	12/20/23 11:06	12/20/23 11:06	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2194641	1	12/27/23 02:59	12/27/23 02:59	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	1	12/28/23 03:43	12/28/23 03:43	ASM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	1	12/21/23 10:22	12/26/23 21:12	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	10	12/21/23 10:22	12/26/23 20:09	LD	Mt. Juliet, TN

MW-12 L1689292-04 GW

Collected by: Melkaww Awayo | Collected date/time: 12/13/23 11:55 | Received date/time: 12/16/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2192221	1	12/19/23 13:13	12/19/23 16:14	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2192811	1	12/20/23 09:44	12/20/23 09:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2194641	1	12/27/23 03:24	12/27/23 03:24	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	1	12/28/23 03:57	12/28/23 03:57	ASM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	1	12/21/23 10:22	12/26/23 19:25	LD	Mt. Juliet, TN

MW-13 L1689292-05 GW

Collected by: Melkaww Awayo | Collected date/time: 12/12/23 14:50 | Received date/time: 12/16/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2192221	1	12/19/23 13:13	12/19/23 16:14	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2192811	1	12/20/23 09:57	12/20/23 09:57	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2194641	1	12/27/23 05:06	12/27/23 05:06	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	1	12/28/23 04:50	12/28/23 04:50	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	5	12/28/23 05:28	12/28/23 05:28	ASM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	1	12/21/23 10:22	12/26/23 20:37	LD	Mt. Juliet, TN

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

SAMPLE SUMMARY

DUP-1 L1689292-06 GW

Collected by	Collected date/time	Received date/time
Melkaww Awayo	12/12/23 00:00	12/16/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2192221	1	12/19/23 13:13	12/19/23 16:14	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2192811	1	12/20/23 10:04	12/20/23 10:04	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2194641	1	12/27/23 05:31	12/27/23 05:31	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	1	12/28/23 05:41	12/28/23 05:41	ASM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2196879	5	12/28/23 05:54	12/28/23 05:54	ASM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2193011	1	12/21/23 10:22	12/26/23 20:40	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

MW-05

SAMPLE RESULTS - 01

Collected date/time: 12/12/23 13:45 L1689292

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	494000	J3	10000	1	12/19/2023 16:14	WG2192221

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	234000		8450	20000	1	12/20/2023 10:52	WG2192808
Alkalinity,Carbonate	U		8450	20000	1	12/20/2023 10:52	WG2192808

Sample Narrative:

L1689292-01 WG2192808: 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	7660		379	1000	1	12/28/2023 03:16	WG2196879
Fluoride	192		64.0	150	1	12/28/2023 03:16	WG2196879
Sulfate	181000		594	5000	1	12/27/2023 02:08	WG2194641

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	2850		96.3	300	10	12/26/2023 19:48	WG2193011
Calcium	105000		93.6	1000	1	12/26/2023 21:08	WG2193011
Magnesium	35000		73.5	1000	1	12/26/2023 21:08	WG2193011
Potassium	2500		108	2000	1	12/26/2023 21:08	WG2193011
Sodium	13900		376	2000	1	12/26/2023 21:08	WG2193011

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	598000		10000	1	12/19/2023 16:14	WG2192221

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	339000		8450	20000	1	12/20/2023 11:00	WG2192808
Alkalinity,Carbonate	U		8450	20000	1	12/20/2023 11:00	WG2192808

Sample Narrative:

L1689292-02 WG2192808: 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	42800		379	1000	1	12/28/2023 03:30	WG2196879
Fluoride	171		64.0	150	1	12/28/2023 03:30	WG2196879
Sulfate	137000		594	5000	1	12/27/2023 02:33	WG2194641

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	266		9.63	30.0	1	12/26/2023 20:33	WG2193011
Calcium	143000		93.6	1000	1	12/26/2023 20:33	WG2193011
Magnesium	34000		73.5	1000	1	12/26/2023 20:33	WG2193011
Potassium	4700		108	2000	1	12/26/2023 20:33	WG2193011
Sodium	31600		376	2000	1	12/26/2023 20:33	WG2193011

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	684000		13300	1	12/19/2023 16:14	WG2192221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	368000		8450	20000	1	12/20/2023 11:06	WG2192808
Alkalinity,Carbonate	U		8450	20000	1	12/20/2023 11:06	WG2192808

Sample Narrative:

L1689292-03 WG2192808: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	39700		379	1000	1	12/28/2023 03:43	WG2196879
Fluoride	88.5	J	64.0	150	1	12/28/2023 03:43	WG2196879
Sulfate	180000		594	5000	1	12/27/2023 02:59	WG2194641

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	659		96.3	300	10	12/26/2023 20:09	WG2193011
Calcium	161000		93.6	1000	1	12/26/2023 21:12	WG2193011
Magnesium	35600		73.5	1000	1	12/26/2023 21:12	WG2193011
Potassium	4110		108	2000	1	12/26/2023 21:12	WG2193011
Sodium	27600		376	2000	1	12/26/2023 21:12	WG2193011

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	530000		10000	1	12/19/2023 16:14	WG2192221

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	438000		8450	20000	1	12/20/2023 09:44	WG2192811
Alkalinity,Carbonate	U		8450	20000	1	12/20/2023 09:44	WG2192811

Sample Narrative:

L1689292-04 WG2192811: 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	22600		379	1000	1	12/28/2023 03:57	WG2196879
Sulfate	63500	J6	594	5000	1	12/27/2023 03:24	WG2194641

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Calcium	143000	V	93.6	1000	1	12/26/2023 19:25	WG2193011
Magnesium	38300		73.5	1000	1	12/26/2023 19:25	WG2193011
Potassium	2810		108	2000	1	12/26/2023 19:25	WG2193011
Sodium	12000		376	2000	1	12/26/2023 19:25	WG2193011

MW-13

SAMPLE RESULTS - 05

Collected date/time: 12/12/23 14:50 L1689292

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	792000		20000	1	12/19/2023 16:14	WG2192221

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	397000		8450	20000	1	12/20/2023 09:57	WG2192811
Alkalinity,Carbonate	U		8450	20000	1	12/20/2023 09:57	WG2192811

Sample Narrative:

L1689292-05 WG2192811: 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	261000		1900	5000	5	12/28/2023 05:28	WG2196879
Fluoride	169		64.0	150	1	12/28/2023 04:50	WG2196879
Sulfate	39800		594	5000	1	12/27/2023 05:06	WG2194641

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	62.6		9.63	30.0	1	12/26/2023 20:37	WG2193011
Calcium	148000		93.6	1000	1	12/26/2023 20:37	WG2193011
Magnesium	42900		73.5	1000	1	12/26/2023 20:37	WG2193011
Potassium	2850		108	2000	1	12/26/2023 20:37	WG2193011
Sodium	111000		376	2000	1	12/26/2023 20:37	WG2193011

SAMPLE RESULTS - 06

DUP-1 L1689292-06

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	804000		20000	1	12/19/2023 16:14	WG2192221

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	400000		8450	20000	1	12/20/2023 10:04	WG2192811
Alkalinity,Carbonate	U		8450	20000	1	12/20/2023 10:04	WG2192811

Sample Narrative:

L1689292-06 WG2192811: 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	261000		1900	5000	5	12/28/2023 05:54	WG2196879
Fluoride	164		64.0	150	1	12/28/2023 05:41	WG2196879
Sulfate	38400		594	5000	1	12/27/2023 05:31	WG2194641

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	60.5		9.63	30.0	1	12/26/2023 20:40	WG2193011
Calcium	149000		93.6	1000	1	12/26/2023 20:40	WG2193011
Magnesium	42400		73.5	1000	1	12/26/2023 20:40	WG2193011
Potassium	2870		108	2000	1	12/26/2023 20:40	WG2193011
Sodium	112000		376	2000	1	12/26/2023 20:40	WG2193011

L1689292-01,02,03,04,05,06

Method Blank (MB)

(MB) R4015589-1 12/19/23 16:14

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

L1689292-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1689292-01 12/19/23 16:14 • (DUP) R4015589-3 12/19/23 16:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	494000	520000	1	5.13	J3	5

L1689292-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1689292-02 12/19/23 16:14 • (DUP) R4015589-4 12/19/23 16:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	598000	610000	1	1.99		5

Laboratory Control Sample (LCS)

(LCS) R4015589-2 12/19/23 16:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	9190000	104	85.0-115	

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

Method Blank (MB)

(MB) R4014781-2 12/20/23 08:27

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

L1688916-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1688916-01 12/20/23 08:37 • (DUP) R4014781-3 12/20/23 08:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	1630000	1570000	1	3.61		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1689200-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1689200-15 12/20/23 10:13 • (DUP) R4014781-4 12/20/23 10:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	222000	223000	1	0.456		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) R4014786-2 12/20/23 08:26

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

L1688916-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1688916-04 12/20/23 08:34 • (DUP) R4014786-3 12/20/23 08:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	857000	875000	1	2.14		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1689292-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1689292-04 12/20/23 09:44 • (DUP) R4014786-4 12/20/23 09:50

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	438000	438000	1	0.0761		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) R4017212-1 12/26/23 17:31

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

L1689150-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1689150-04 12/27/23 00:26 • (DUP) R4017212-3 12/27/23 00:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	20200	20200	1	0.133		15

L1689292-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1689292-04 12/27/23 03:24 • (DUP) R4017212-5 12/27/23 03:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	63500	64000	1	0.743		15

Laboratory Control Sample (LCS)

(LCS) R4017212-2 12/26/23 17:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	37500	93.9	80.0-120	

L1689150-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1689150-04 12/27/23 00:26 • (MS) R4017212-4 12/27/23 00:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	20200	54100	84.7	1	80.0-120	

L1689292-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1689292-04 12/27/23 03:24 • (MS) R4017212-7 12/27/23 04:40 • (MSD) R4017212-8 12/27/23 04:53

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	63500	89000	89000	63.6	63.8	1	80.0-120	J6	J6	0.0935	15

Method Blank (MB)

(MB) R4017576-1 12/27/23 13:54

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

L1687343-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1687343-02 12/27/23 22:04 • (DUP) R4017576-3 12/27/23 22:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	8420	8430	1	0.0617		15
Fluoride	244	233	1	4.41		15

L1689292-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1689292-04 12/28/23 03:57 • (DUP) R4017576-6 12/28/23 04:11

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	22600	22400	1	0.875		15
Fluoride	139	153	1	9.32		15

Laboratory Control Sample (LCS)

(LCS) R4017576-2 12/27/23 14:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	42600	107	80.0-120	
Fluoride	8000	8450	106	80.0-120	

L1687343-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1687343-02 12/27/23 22:04 • (MS) R4017576-4 12/27/23 22:31 • (MSD) R4017576-5 12/27/23 22:45

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	8420	49300	49500	102	103	1	80.0-120			0.477	15
Fluoride	8000	244	9270	9330	113	114	1	80.0-120			0.698	15

L1689292-01,02,03,04,05,06

L1689292-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1689292-04 12/28/23 03:57 • (MS) R4017576-7 12/28/23 04:24 • (MSD) R4017576-8 12/28/23 04:37

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	22600	60500	61100	94.9	96.3	1	80.0-120			0.903	15
Fluoride	8000	139	9060	9220	112	114	1	80.0-120			1.74	15

Method Blank (MB)

(MB) R4016810-1 12/26/23 19:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		9.63	30.0
Calcium	U		93.6	1000
Magnesium	U		73.5	1000
Potassium	U		108	2000
Sodium	U		376	2000

Laboratory Control Sample (LCS)

(LCS) R4016810-2 12/26/23 19:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	50.0	52.4	105	80.0-120	
Calcium	5000	5030	101	80.0-120	
Magnesium	5000	5110	102	80.0-120	
Potassium	5000	5130	103	80.0-120	
Sodium	5000	5300	106	80.0-120	

L1689292-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1689292-04 12/26/23 19:25 • (MS) R4016810-4 12/26/23 19:32 • (MSD) R4016810-5 12/26/23 19:35

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	95.1	145	150	100	110	1	75.0-125			3.47	20
Calcium	5000	143000	145000	146000	37.0	45.7	1	75.0-125	V	V	0.299	20
Magnesium	5000	38300	42900	42300	90.3	79.6	1	75.0-125			1.26	20
Potassium	5000	2810	7730	7830	98.4	100	1	75.0-125			1.27	20
Sodium	5000	12000	16900	17100	98.2	103	1	75.0-125			1.33	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.
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
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.
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.

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): Melkamu Awayo

Site/Facility ID #: MFS Unit 113 (Landfill)

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

Chain of Custody Page ___ of ___

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 # L1682292

F227

Acctnum: LITEGNTN
Template:
Prelogin:
PM: 134
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Ca, Cl, F, SO4 125mlHDPE-NonPres	Boron 250mlHDPE-HNO3	TDS 250mlHDPE-NonPres	Alk Bicarb/Carb 125mlHDPE-NonPres	K, Na, Mg 250mlHDPE-HNO3	Ca, Cl, SO4 125mlHDPE-NonPres	Remarks	Sample # (lab only)
MW-05	Grab	GW	NA	12/12/23	13:45	4	X	X	X	X	X			-01
MW-09R	Grab	GW	NA	12/15/23	12:00	4	X	X	X	X	X			-02
MW-09	Grab	GW	NA	12/13/23	12:55	4	X	X	X	X	X			-03
MW-12	Grab	GW	NA	12/13/23	11:55	4			X	X	X	X		-04
MW-13	Grab	GW	NA	12/12/23	14:50	4	X	X	X	X	X			-05
DUP-1	Grab	GW	NA	12/12/23		4	X	X	X	X	X			-06
MS/MSD	Grab	GW	NA	12/13/23		4	X	X	X	X	X			-07

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

Remarks:

pH ______ Temp ______
Flow ______ Other ______

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

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: _NP Y _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)	
[signature]	12/15/23	14:15		Trip Blank Received: Yes / No (circled) HCL / MeoH TBR
				Temp: CA8 °C 4.0+0 — Bottles Received: 32
			Received for lab by: (Signature) Christopher L. Gallion	Date: 12/16/23 Time: 1000

If preservation required by Login: Date/Time: 28 NF 12/16/23

Hold:

Condition: NCF (circled) / OK

12/16 NCF-LITEGNTN-L1689292

R5

Time estimate: oh **Time spent:** oh

Members

Nicolle Faulk (responsible) MB Mark Beasley

Due on *22 December 2023 5:00 PM* for target *Done*

- [x] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [ ] Received additional samples not listed on COC
- [ ] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [ ] Client informed by call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [ ] Date/Time:_____12/18/23_____
- [ ] PM initials:_____MB_____
- [ ] Client Contact:____Vince Epps_____

Comments

Nicolle Faulk *16 December 2023 3:48 PM*

Please clarify what the parent sample is for the MS/MSD

Mark Beasley *18 December 2023 10:53 AM*

MS/MSD = MW-12

Nicolle Faulk *19 December 2023 8:10 AM*

done

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003D	Purge Date:	December 12, 2023
Source Well:	MW-05	Purge Time:	45 Minutes
Locked?:	Yes	Sample Date:	December 12, 2023
Sampled By:	MA	Sample Time:	13:35
Weather:		Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				72.94	ft-TOC
Total Well Depth:				81.40	ft-TOC
Height of Water Column:				8.46	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.4	Gal
3 * Well Volume	4.14	Gal
5 * Well Volume	6.90	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	12:50	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:		0.6		Gallons			
Final Volume Purge Rate:		50		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
	12:50	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:55	0.1	50	72.94	15.0	7.3	0.633	3.1	81	3.02	Clear
	13:10	0.3	50	72.95	15.0	7.3	0.630	2.9	72	1.24	Clear
	13:15	0.3	50	72.95	15.0	7.3	0.627	2.8	70	0.74	Clear
	13:20	0.4	50	72.95	15.0	7.3	0.623	2.9	67	0.48	Clear
	13:25	0.5	50	72.95	15.0	7.3	0.623	2.8	64	0.44	Clear
	13:30	0.5	50	72.95	14.9	7.3	0.624	2.7	63	0.31	Clear
	13:35	0.6	50	72.95	14.9	7.3	0.621	2.6	62	0.53	Clear
Final:	13:35	0.6	50	72.95	14.9	7.3	0.621	2.6	62	0.5	End of Purging

Sample Method: Bladder Pump Sample Start Time: 13:35 Sample End Time: 13:45

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:	December 13, 2023
Source Well:	MW-09	Purge Time:	20 Minutes
Locked?:	Yes	Sample Date:	December 13, 2023
Sampled By:	MA	Sample Time:	12:50
Weather:		Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				24.50	ft-TOC
Total Well Depth:				40.00	ft-TOC
Height of Water Column:				15.50	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	2.5	Gal
3 * Well Volume	7.59	Gal
5 * Well Volume	12.65	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	12:30	End Time:	12:50
(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:		0.3		Gallons			
Final Volume Purge Rate:		50		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
	12:30	0.0	---	---	---	---	---	---	---	---	Start Purging
	12:35	0.1	50	24.50	13.1	7.0	0.809	7.6	70	0.52	Clear
	12:40	0.1	50	24.51	13.0	7.1	0.799	7.6	68	0.40	Clear
	12:45	0.2	50	24.51	13.0	7.1	0.797	7.5	68	0.32	Clear
	12:50	0.3	50	24.53	12.9	7.2	0.794	7.5	65	0.33	Clear
Final:	12:50	0.3	50	24.53	12.9	7.2	0.794	7.5	65	0.3	End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 12:50 Sample End Time: 12:55

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:	7217-17-003A	Purge Date:	December 15, 2023
Source Well:	MW-09R	Purge Time:	20 Minutes
Locked?:	Yes	Sample Date:	December 15, 2023
Sampled By:	MA	Sample Time:	11:55
Weather:		Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				24.30	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:	11:35	End Time:	11:55
(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:		0.3		Gallons			
Final Volume Purge Rate:		50		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	0.1	50	24.30	13.4	7.4	0.480	8.1	128	9.99	Clear
	11:45	0.1	50	24.31	13.2	7.5	0.476	7.9	121	7.23	Clear
	11:50	0.2	50	24.32	13.1	7.5	0.475	7.8	122	6.14	Clear
	11:55	0.3	50	24.32	13.1	7.4	0.473	7.8	123	5.87	Clear
Final:	11:55	0.3	50	24.32	13.1	7.4	0.473	7.8	123	5.9	End of Purging

Sample Method: Peristaltic Pump Sample Start Time: 11:55 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:	December 12, 2023
Source Well:	MW-13	Purge Time:	40 Minutes
Locked?:	Yes	Sample Date:	December 12, 2023
Sampled By:	MA	Sample Time:	14:45
Weather:		Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				79.70	ft-TOC
Total Well Depth:				87.70	ft-TOC
Height of Water Column:				8.00	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.3	Gal
3 * Well Volume	3.92	Gal
5 * Well Volume	6.53	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	14:05	End Time:	14:45
(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:		0.5		Gallons			
Final Volume Purge Rate:		50		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
	14:05	0.0	---	---	---	---	---	---	---	---	Start Purging
	14:10	0.1	50	79.70	13.7	7.0	1.188	4.4	90	0.53	Clear
	14:15	0.1	50	80.70	13.7	7.0	1.190	4.4	89	5.33	Clear
	14:20	0.2	50	81.50	13.5	6.9	1.178	3.9	87	1.86	Clear
	14:25	0.3	50	81.90	13.6	7.0	1.179	4.2	87	1.10	Clear
	14:30	0.3	50	82.10	13.7	7.0	1.181	4.3	84	0.88	Clear
	14:35	0.4	50	82.35	13.7	7.0	1.181	4.3	85	0.70	Clear
	14:40	0.5	50	82.60	13.7	7.0	1.181	4.3	85	1.24	Clear
	14:45	0.5	50	82.90	13.6	7.0	1.180	4.4	84	0.85	Clear
Final:	14:45	0.5	50	82.90	13.6	7.0	1.180	4.4	84	0.9	End of Purging

Sample Method: Bladder Pump Sample Start Time: 14:45 Sample End Time: 14:50

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: DUP 1 collected

Form Revision Date: 2/12/18 16:00

LOW FLOW GROUNDWATER SAMPLING FORM

Project Name:	Miami Fort		
Project Location:	North Bend, Ohio		
Project Number:	7217-17-003A	Purge Date:	December 13, 2023
Source Well:	MW-12	Purge Time:	35 Minutes
Locked?:	Yes	Sample Date:	December 13, 2023
Sampled By:	MA	Sample Time:	11:50
Weather:		Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				70.40	ft-TOC
Total Well Depth:				80.20	ft-TOC
Height of Water Column:				9.80	feet
Screen Length:	20	feet	Stickup:		ft-GRD

Well Volume		
Well Diameter	2	inch
Water Volume	1.6	Gal
3 * Well Volume	4.80	Gal
5 * Well Volume	8.00	Gal

Well Purging Information

Purge Method:		Bladder Pump		Start Time:	11:15	End Time:	11:50	
(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:		0.9		Gallons				
Final Volume Purge Rate:		100		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
	11:15	0.0	---	---	---	---	---	---	---	---	Start Purging
	11:20	0.1	100	70.30	13.4	6.9	0.720	4.4	56	1.69	Clear
	11:25	0.3	100	70.30	13.5	6.9	0.722	4.3	75	1.49	Clear
	11:30	0.4	100	70.30	13.5	6.9	0.722	4.2	79	1.03	Clear
	11:35	0.5	100	70.30	13.6	6.9	0.723	4.4	80	0.96	Clear
	11:40	0.7	100	70.30	13.6	6.9	0.724	4.4	80	1.15	Clear
	11:45	0.8	100	70.30	13.7	6.9	0.724	4.2	81	0.58	Clear
	11:50	0.9	100	70.30	13.7	6.9	0.725	4.0	80	0.76	Clear
Final:	11:50	0.9	100	70.30	13.7	6.9	0.725	4.0	80	0.8	End of Purging

Sample Method: Bladder Pump Sample Start Time: 11:50 Sample End Time: 11:55

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

Notes: MS/MD

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:	December 14, 2023
Source Well:	MW-4A	Purge Time:	30 Minutes
Locked?:	Yes	Sample Date:	December 14, 2023
Sampled By:	MA	Sample Time:	10:30
Weather:		Air Temp:	

Water Level & Well Data

Measuring Point:				Top of Casing	
Depth to Water:				38.05	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:	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:		0.4		Gallons	electric purge pump with low-flow controller		
Final Volume Purge Rate:		50		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	50	38.05	17.2	7.0	1.641	1.5	109	9.95	Clear
	10:10	0.1	50	38.07	17.0	7.1	1.635	1.2	104	8.77	Clear
	10:15	0.2	50	38.08	16.9	7.0	1.621	1.1	99	5.27	Clear
	10:20	0.3	50	38.10	16.9	7.1	1.618	1.1	100	5.01	Clear
	10:25	0.3	50	38.12	16.9	7.1	1.604	1.2	102	4.99	Clear
	10:30	0.4	50	38.15	16.8	7.1	1.610	1.1	100	4.91	Clear
Final:	10:30	0.4	50	38.15	16.8	7.1	1.610	1.1	100	4.9	End of Purging

Sample Method: Submersible Pump Sample Start Time: 10:30 Sample End Time: 10:35

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:	December 13, 2023
Source Well:	4A	Purge Time:	10 Minutes
Locked?:	Yes	Sample Date:	December 13, 2023
Sampled By:	MA	Sample Time:	9:30
Weather:		Air Temp:	

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:	9:20	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:				Gallons				
Final Volume Purge Rate:				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
	09:20	0.0	---	---	---	---	---	---	---	---	Start Purging
	09:30				16.2	7.5	1.629	6.9	102	4.34	Clear
Final:	09:30				16.2	7.5	1.629	6.9	102	4.3	End of Purging

Sample Method: Bladder Pump Sample Start Time: 09:30 Sample End Time: 09:35

Analytical Data

Method	Qty	Container	Preservative	Method	Qty	Container	Preservative

Name	Signature	Date
(1)		

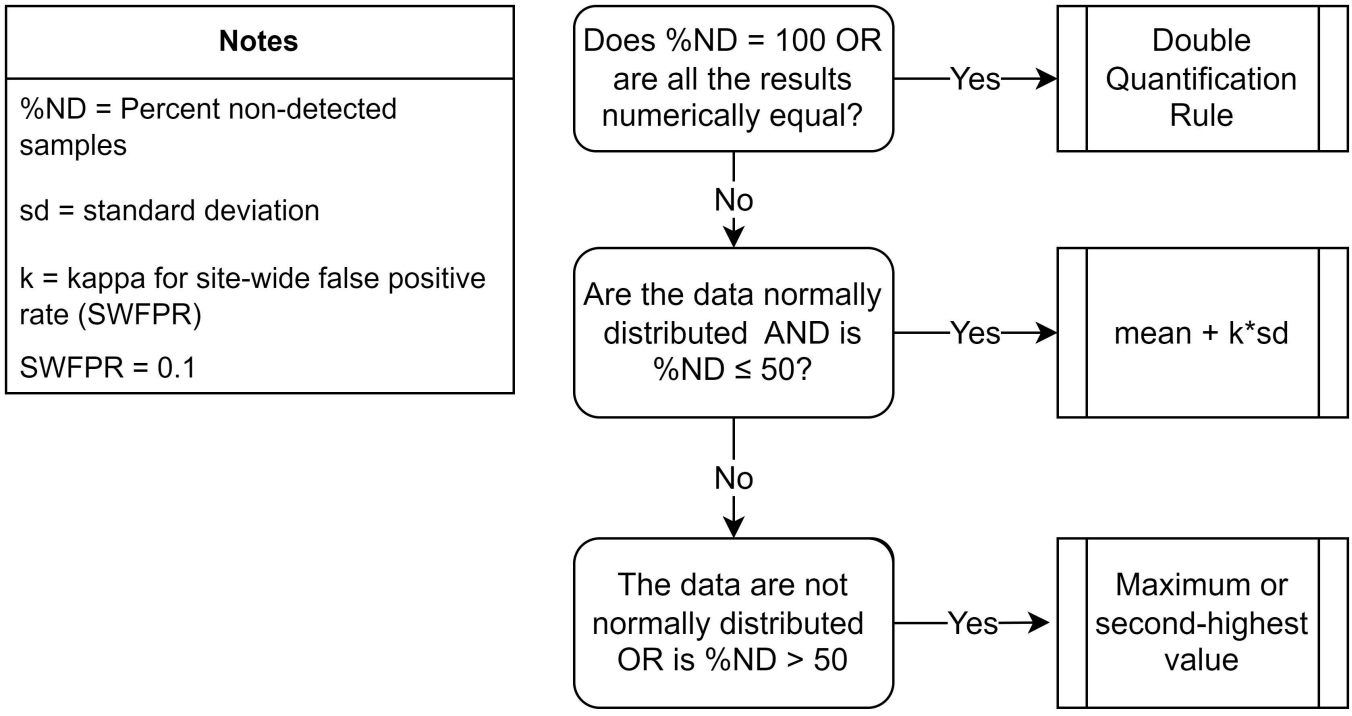
Notes:

Form Revision Date: 2/12/18 16:00

APPENDIX A.
ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - QUARTER 4, 2023
MIAMI FORT POWER PLANT, LAWRENCEBURG ROAD LANDFILL
MFS-257-113

Well ID	Date	Time	Depth
MW-05	12/12/2023	11:50	72.94
MW-09	12/12/2023	11:45	24.5
MW-09R	12/12/2023	11:40	24.3
MW-13	12/12/2023	12:00	79.7
MW-12	12/12/2023	11:30	70.4
MW-4A	12/12/2023	11:05	38.05
4A			

APPENDIX B
STATISTICAL METHODOLOGY FOR DETERMINATION OF BACKGROUND VALUES



When data are not normally distributed or %ND > 50, the maximum value is used if the background sample size is < 60. Where the background sample size is ≥ 60, the achievable per-constituent false positive rates for the maximum and second-highest background values will be compared, and the background value with the achievable per-constituent false positive rate that is closest to, but does not exceed, the target per-constituent false positive rate of 0.015% is used.

APPENDIX C
ALTERNATIVE SOURCE DEMONSTRATIONS

Intended for
Dynegy Miami Fort, LLC

Date
September 19, 2023

Project No.
1940103649-015

40 C.F.R. § 257.94(E)(2): ALTERNATE SOURCE DEMONSTRATION

MIAMI FORT POWER PLANT

LAWRENCEBURG ROAD LANDFILL

CCR UNIT 113

RAMBOLL Bright ideas. Sustainable change.

CERTIFICATIONS

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 other than for 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.
Date: September 19, 2023

I, Brian G. Hennings, 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 other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Brian G. Hennings
Senior Managing Hydrogeologist
Ramboll Americas Engineering Solutions, Inc.
Date: September 19, 2023

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ALTERNATE SOURCE DEMONSTRATION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.94(e)(2) allows the owner or operator of a coal combustion residuals (CCR) unit 90 days from the date of determination of Statistically Significant Increases (SSIs) over background for constituents listed in Appendix III of 40 C.F.R. § 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSI(s), or that the SSI(s) resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (Alternate Source Demonstration).

This Alternate Source Demonstration has been prepared on behalf of Dynegy Miami Fort, LLC, by Ramboll Americas Engineering Solutions, Inc. to provide pertinent information pursuant to 40 C.F.R. § 257. 94(e)(2) for the Miami Fort Power Plant Lawrenceburg Road Landfill located near North Bend, Ohio.

The twelfth semi-annual detection monitoring samples (Detection Monitoring Round D12 [D12]) was completed on March 14, 2023, and analytical data were received on March 23, 2023. Analytical data from A6 were evaluated in accordance with the Multi-Site Statistical Analysis Plan[1] to identify SSIs of 40 C.F.R. § 257 Subpart D (CCR Rule) Appendix III parameters over background concentrations by June 21, 2023, within 90 days of receipt of the analytical data. The statistical determination identified the following SSIs at compliance monitoring wells:

- Calcium at well MW-12

In accordance with the Multi-Site Statistical Analysis Plan, well MW-12 was resampled on July 19, 2023. Following evaluation of analytical data from the resample event, the calcium SSI observed at well MW-12 was not confirmed.

This Alternate Source Demonstration was completed by September 19, 2023, within 90 days of determination of the SSIs (June 21, 2023), as required by 40 C.F.R. § 257.94(e)(2).

[1] Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022. Multi-Site Statistical Analysis Plan. December 28, 2022.