

Pre-Bid Meeting Summary

Tuesday, November 18, 2025, 11:00 AM

Project Name: Meridian HW

Project Number: DEL2515208034 E008-363

The information contained in this summary is intended to correct any composition errors and serve to eliminate any misunderstanding of the basic plans and specifications the same as if being originally incorporated therein.

1. Attendees:

Name	Title	Organization
Brandy Gibson	Operations Coordinator	DNR
Andy Ripley	Assistant AML Director	DNR
Travis Dunn	Project Coordinator	DNR
Shannon Baumgart	Project Manager	DNR
Dan Hillman	Environmental Specialist	DNR
Bill Neider	Project Engineers	Michael Baker Int.

2. Bid/Contract Information

- a. The plans and specifications are available at [DNR: Engineering: DNR Projects Bidding Information](http://www.in.gov/dnr/engineering/bidding/). (www.in.gov/dnr/engineering/bidding/).
- b. The bids are due in Indianapolis, as described in the NTB.
- c. The **bid opening is scheduled for December 16, 2025, at 2:00 PM. Bids must be received by 1:31 PM.**
- d. This project has an estimate over \$150,000; **pre-qualification by Public Works in 1799.04 Mine Reclamation is required.**
- e. Pre-Qualification questions can be made to Tracy Cross with the Department of Administration, Public Works Division, at (317)232-3255.
- f. The contract will be funded by utilizing federal AML grant reimbursement funds.
- g. Base bid quantities are identified in the specifications. The Schedule of Supplemental Unit Price Sheet must be submitted with the bid.
- h. The **2024 AML Standard Specifications** are located on the AML Construction page: <https://www.in.gov/dnr/reclamation/abandoned-mines/aml-contractors-and-bidding/>.

- i. A contract and purchase order **may** be in place withing **6-10 weeks from the bid date (late January/early February)**.
- j. The contractor must schedule a pre-construction meeting with the Division of Reclamation within 10 calendar days of the date on the notification to proceed prior to starting construction.
- k. The **Construction end date is November 30, 2026**.
- l. There is a **penalty assessment for late completion** at a rate of **\$1,000 per calendar day**.
- m. The **contractor is to include a \$100,000 remediation allowance** in the base bid for owner directed changes. There will be a line item on the schedule of values.
- n. Minority and Women Business goals have been established and are identified in the NTB.
- o. AVS Checks will be performed on the low bidder to ensure no negative history in the federal mine database (bond forfeitures and outstanding violations).
- p. Davis Bacon prevailing wage is required on this project. Contractors **MUST**: use Davis Bacon wage determination rates to pay their employees and certify their payroll each week. Certified payroll should be submitted weekly to the operations coordinator, Brandy Gibson, at cgibson@dnr.in.gov.
- q. Build America Buy America is required on this project. Contractors **MUST**: comply with the Buy-America guidelines.
- r. Contractors **MUST**: report the number of current or former employees of the coal mine industry that are working on this project.

3. Brief Project Description

The purpose of this project is to clear and grub, backfill highwall, construct ponds and wetlands, improve drainage, enhance fish and wildlife habitat, and enhance recreational opportunities.

4. Project Manager Notes

This project is private property. Ownership has just recently changed hands but will not affect the design

Meridian and adjacent Haul Road will remain open. Signage for heavy equipment crossing will be required at the crossing with warnings upon approaching. Final payment will not be made until Pike County Road Supt. Josh Byrd approves final work. No Bond is being required but road condition is expected to be as good as when completed.

Deliveries shall come and go from the south.

An effort to gather and chip remaining trees more than 3" diameter will be required prior to April 1

The eastern project boundary, also a property line will need to be staked throughout construction. A survey was completed during design by Trimark and will be provided to the contractor.

5. Engineer's Comments

- a. There is no Geotechnical Report or boring performed for the project.
- b. Earthwork is anticipated to be balanced for the entire project; minimal material from east of Meridian Road will be needed for the site west of Meridian Road.
- c. Construction plans show the cut & fill adjustment area.
- d. Construction does not include any impact to County Rd. 900S, Meridian Road, and Haul Road.
- e. All the existing open water bodies are approximately 24.3 million gallons (120,320 cubic yards) of water.
- f. Contractor shall not impact Emergent Wetlands A & C, located on the northern end of the project site.

6. Environmental Specialists Comments

On site there are currently 16.20 acres of open water, 0.35 acres of forested wetland, and 2.52 acres of emergent wetland. The plans call for 18.27 acres of open water and 1.51 acres of emergent wetlands to be constructed. The emergent wetlands will be in the form of a shallow bench surrounding each pond that is constructed. There are 2 wetlands that are just outside of the grading limits. These wetlands should not be affected. The overall water quality is fair, pH is around 7 throughout the whole site but does have some higher concentrations of Aluminum, Iron, and Manganese. There are water sample results and a map showing the location where samples were taken. All water discharged off site must meet "new acid source" standards defined in NPDES Rule 7. Tree clearing can only occur between October 1st and April 1st due to bat protection.

7. Questions & Answers

Are you anticipating water treatment at this site?

Yes

How many discharge points will we have?

There is one suggested discharge point but whoever wins the bid can work with the project manager and environmental specialist to determine additional discharge points if needed.

Should the contractor expect to encounter Gob during construction?

Yes. There is some visible gob towards the northern end of the project limits.

Will there be pumping across the road?

You will work with the project manager and environmental specialist to find additional discharge points. Keep in mind the road must remain open while the project is being completed.

What sampling is required in the NPDES permit?

Contractors must comply with Rule 7 of the NPDES General Permit Program, 327 IAC 15-7 - new acid discharge. See Section 208 – Dewatering of the 2024 AML Standard Specifications for details.

8. Addendum Items

9. Additional Information

Questions after the pre-bid meeting will be received via email at cgibson@dnr.in.gov by the close of business on November 25, 2025.

Any Clarification points will be provided on the [DNR: Engineering: DNR Projects Bidding Information](#) page no later than the close of business on December 10, 2025.



Certificate of Analysis 4065396

Jayne Peltier
IDNR Division of Reclamation
14619 W State Rd 48
Jasonville, IN 47438

Customer ID: 44-100880
Report Printed: 07/05/2024 12:47

Project Name: Quarterly AML

Workorder: 4065396

Dear Jayne Peltier

Enclosed are the analytical results for samples received by the laboratory 06/27/2024 09:30.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Farmersburg
- Pace Analytical Services LLC Kentucky - Madisonville

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY
#460291 Pikeville, KY
#E871136 Englewood, OH

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Rob Whittington, Project Manager



Pace Analytical Services, LLC

P.O. Box 907

Madisonville, KY 42431

270.821.7375

www.pacelabs.com

SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4065396-01	AML Quarterly/147A	Water	06/25/2024 11:32	06/27/2024 9:30	Daniel Hillman
4065396-02	AML Quarterly/147B	Water	06/25/2024 11:56	06/27/2024 9:30	Daniel Hillman
<u>LabNumber</u>	<u>Measurement</u>	<u>Value</u>			
4065396-01	Field pH	7.4			



ANALYTICAL RESULTS

Lab Sample ID: **4065396-01**
Description: **AML Quarterly 147A**

Sample Collection Date Time: 06/25/2024 11:32
Sample Received Date Time: 06/27/2024 09:30

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Aluminum	0.15		mg/L	0.05	0.04	EPA 200.7 REV 4.4	07/02/2024 09:31	07/02/2024 16:21	AKB
Iron	2.26		mg/L	0.100	0.025	EPA 200.7 REV 4.4	07/02/2024 09:31	07/02/2024 16:21	AKB
Manganese	18.1	D1	mg/L	0.400	0.200	EPA 200.7 REV 4.4	07/02/2024 09:31	07/03/2024 17:10	AKB

Conventional Chemistry Analyses Farmersburg

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Acidity	ND	u	mg/L	5	2	2310 B-1997	06/27/2024 14:51	06/27/2024 15:01	DLP
Total Alkalinity	284		mg/L	4	4	2320 B-2011	06/28/2024 11:42	06/28/2024 13:33	DLP
pH (Lab)	7.50	H3	Std. Units	0.10	0.10	SW846-9045	06/27/2024 09:48	06/27/2024 09:48	DLP

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Sulfate	1400	D	mg/L	20.0	20.0	EPA 300.0 REV 2.1	06/30/2024 17:15	06/30/2024 17:15	JBP1

ANALYTICAL RESULTS

Lab Sample ID: **4065396-02**
Description: **AML Quarterly 147B**

Sample Collection Date Time: 06/25/2024 11:56
Sample Received Date Time: 06/27/2024 09:30

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Aluminum	0.12		mg/L	0.05	0.04	EPA 200.7 REV 4.4	07/02/2024 09:31	07/02/2024 16:24	AKB
Iron	0.373		mg/L	0.100	0.025	EPA 200.7 REV 4.4	07/02/2024 09:31	07/02/2024 16:24	AKB
Manganese	0.711		mg/L	0.004	0.002	EPA 200.7 REV 4.4	07/02/2024 09:31	07/02/2024 16:24	AKB

Conventional Chemistry Analyses Farmersburg

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Acidity	ND	u	mg/L	5	2	2310 B-1997	06/27/2024 14:51	06/27/2024 15:01	DLP
Total Alkalinity	173		mg/L	4	4	2320 B-2011	06/28/2024 11:42	06/28/2024 13:37	DLP
pH (Lab)	7.64	H3	Std. Units	0.10	0.10	SW846-9045	06/27/2024 09:48	06/27/2024 09:48	DLP

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Sulfate	959	D	mg/L	20.0	20.0	EPA 300.0 REV 2.1	06/30/2024 17:43	06/30/2024 17:43	JBP1



Notes for work order 4065396

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
 - Results contained in this report are only representative of the samples received.
 - PACE does not provide interpretation of these results unless otherwise stated .
 - All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
 - All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
 - Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
 - The Chain of Custody document is included as part of this report.
 - All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.
- Concentrations reported are estimated values.

Qualifiers

D	Results reported from dilution.
D1	Sample required dilution due to high concentration of target analyte.
D2	Sample required dilution due to matrix interference.
H3	Sample received and analyzed past holding time.
M1	Matrix spike recovery was high; the method control sample recovery was acceptable.
M2	Matrix spike recovery was low; the method control sample recovery was acceptable.
U	Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).

Standard Qualifiers/Acronyms

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDG0151 - EPA 200.2

Blank (BDG0151-BLK1)

Prepared: 7/2/2024 9:31, Analyzed: 7/2/2024 15:55

Aluminum	ND	0.05	mg/L							U
Iron	ND	0.100	mg/L							U
Manganese	ND	0.004	mg/L							U

Blank (BDG0151-BLK2)

Prepared: 7/2/2024 9:31, Analyzed: 7/5/2024 8:28

Aluminum	ND	0.05	mg/L							U
Iron	ND	0.100	mg/L							U
Manganese	ND	0.004	mg/L							U

LCS (BDG0151-BS1)

Prepared: 7/2/2024 9:31, Analyzed: 7/2/2024 16:08

Aluminum	0.07	0.05	mg/L	0.0625		110	85-115			
Iron	6.49	0.100	mg/L	6.25		104	85-115			
Manganese	0.065	0.004	mg/L	0.0625		104	85-115			

LCS (BDG0151-BS2)

Prepared: 7/2/2024 9:31, Analyzed: 7/5/2024 8:28

Aluminum	ND	0.05	mg/L	0.0625			85-115			U
Iron	ND	0.100	mg/L	6.25			85-115			U
Manganese	ND	0.004	mg/L	0.0625			85-115			U

Matrix Spike (BDG0151-MS1)

Source: 4010687-02

Prepared: 7/2/2024 9:31, Analyzed: 7/2/2024 16:46

Aluminum	0.10	0.05	mg/L	0.0625	0.04	91.8	80-120			
Iron	6.47	0.100	mg/L	6.25	0.085	102	80-120			
Manganese	0.096	0.004	mg/L	0.0625	0.030	105	80-120			

Matrix Spike (BDG0151-MS2)

Source: 4071487-01

Prepared: 7/2/2024 9:31, Analyzed: 7/2/2024 16:52

Aluminum	9.01	0.50	mg/L	0.0625	9.36	NR	80-120			D2, M2
Iron	41.8	1.00	mg/L	6.25	37.5	68.7	80-120			D2, M2
Manganese	0.950	0.040	mg/L	0.0625	0.978	NR	80-120			D2, M2



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDG0151 - EPA 200.2

Matrix Spike (BDG0151-MS3) Source: 4010687-02

Prepared: 7/2/2024 9:31, Analyzed: 7/5/2024 8:28

Aluminum	ND	0.05	mg/L	0.0625	0.04	NR	80-120			U
Iron	ND	0.100	mg/L	6.25	0.085	NR	80-120			U
Manganese	ND	0.004	mg/L	0.0625	0.030	NR	80-120			U

Matrix Spike (BDG0151-MS4) Source: 4071487-01

Prepared: 7/2/2024 9:31, Analyzed: 7/5/2024 8:28

Aluminum	ND	0.05	mg/L	0.0625	9.36	NR	80-120			U
Iron	ND	0.100	mg/L	6.25	37.5	NR	80-120			U
Manganese	ND	0.004	mg/L	0.0625	0.978	NR	80-120			U

Matrix Spike Dup (BDG0151-MSD1) Source: 4010687-02

Prepared: 7/2/2024 9:31, Analyzed: 7/2/2024 16:49

Aluminum	0.10	0.05	mg/L	0.0625	0.04	94.6	80-120	1.74	20	
Iron	6.51	0.100	mg/L	6.25	0.085	103	80-120	0.563	20	
Manganese	0.095	0.004	mg/L	0.0625	0.030	103	80-120	1.22	20	

Matrix Spike Dup (BDG0151-MSD2) Source: 4071487-01

Prepared: 7/2/2024 9:31, Analyzed: 7/2/2024 16:55

Aluminum	8.16	0.50	mg/L	0.0625	9.36	NR	80-120	9.95	20	D2, M2
Iron	44.9	1.00	mg/L	6.25	37.5	119	80-120	7.30	20	D2
Manganese	0.859	0.040	mg/L	0.0625	0.978	NR	80-120	10.1	20	D2, M2

Matrix Spike Dup (BDG0151-MSD3) Source: 4010687-02

Prepared: 7/2/2024 9:31, Analyzed: 7/5/2024 8:28

Aluminum	ND	0.05	mg/L	0.0625	0.04	NR	80-120		20	U
Iron	ND	0.100	mg/L	6.25	0.085	NR	80-120		20	U
Manganese	ND	0.004	mg/L	0.0625	0.030	NR	80-120		20	U

Matrix Spike Dup (BDG0151-MSD4) Source: 4071487-01

Prepared: 7/2/2024 9:31, Analyzed: 7/5/2024 8:28

Aluminum	ND	0.05	mg/L	0.0625	9.36	NR	80-120		20	U
Iron	ND	0.100	mg/L	6.25	37.5	NR	80-120		20	U
Manganese	ND	0.004	mg/L	0.0625	0.978	NR	80-120		20	U



Conventional Chemistry Analyses Farmersburg - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDF2836 - Default Prep Wet Chem 5

LCS (BDF2836-BS1)

Prepared: 6/27/2024 9:48, Analyzed: 6/27/2024 9:48

pH (Lab)	7.01		Std. Units	7.00		100	98.5-101.5		
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Duplicate (BDF2836-DUP1)

Source: 4065396-02

Prepared: 6/27/2024 9:48, Analyzed: 6/27/2024 9:48

pH (Lab)	7.67	0.10	Std. Units		7.64			0.392	10	H3
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Batch BDF2898 - Default Prep Wet Chem 5

Blank (BDF2898-BLK1)

Prepared: 6/27/2024 14:51, Analyzed: 6/27/2024 15:01

Acidity	ND	5	mg/L							U
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LCS (BDF2898-BS1)

Prepared: 6/27/2024 14:51, Analyzed: 6/27/2024 15:03

Acidity	1220	5	mg/L	1240		98.4	80-120			
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Duplicate (BDF2898-DUP1)

Source: 4065398-01

Prepared: 6/27/2024 14:51, Analyzed: 6/27/2024 15:09

Acidity	13	5	mg/L		14			5.28	25	
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Batch BDF3048 - Default Prep Wet Chem 5

Blank (BDF3048-BLK1)

Prepared: 6/28/2024 11:42, Analyzed: 6/28/2024 11:52

Total Alkalinity	ND	4	mg/L							U
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LCS (BDF3048-BS1)

Prepared: 6/28/2024 11:42, Analyzed: 6/28/2024 11:59

Total Alkalinity	253	4	mg/L	250		101	80-120			
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Duplicate (BDF3048-DUP1)

Source: 4063896-04

Prepared: 6/28/2024 11:42, Analyzed: 6/28/2024 13:22

Total Alkalinity	957	4	mg/L		950			0.734	10	
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Conventional Chemistry Analyses Farmersburg - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDF3048 - Default Prep Wet Chem 5

Matrix Spike (BDF3048-MS1) Source: 4063896-04

Prepared: 6/28/2024 11:42, Analyzed: 6/28/2024 13:13

Total Alkalinity	1110	4	mg/L	125	950	128	80-120			M1
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Ion Chromatography Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDF3125 - Default Prep IC

Blank (BDF3125-BLK1)

Prepared: 7/1/2024 1:28, Analyzed: 7/1/2024 1:28

Sulfate	ND	1.0	mg/L							U
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LCS (BDF3125-BS1)

Prepared: 7/1/2024 1:01, Analyzed: 7/1/2024 1:01

Sulfate	23.4		mg/L	25.0		93.8	90-110			
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Matrix Spike (BDF3125-MS1) Source: 4065398-02

Prepared: 6/30/2024 23:11, Analyzed: 6/30/2024 23:11

Sulfate	2090		mg/L	500	1710	76.2	80-120			D, M2
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Matrix Spike (BDF3125-MS2) Source: 4065452-01

Prepared: 7/1/2024 0:06, Analyzed: 7/1/2024 0:06

Sulfate	60.2		mg/L	25.0	36.3	95.6	80-120			
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Matrix Spike Dup (BDF3125-MSD1) Source: 4065398-02

Prepared: 6/30/2024 23:39, Analyzed: 6/30/2024 23:39

Sulfate	2190		mg/L	500	1710	96.5	80-120	4.75	20	D
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Matrix Spike Dup (BDF3125-MSD2) Source: 4065452-01

Prepared: 7/1/2024 0:33, Analyzed: 7/1/2024 0:33

Sulfate	63.8		mg/L	25.0	36.3	110	80-120	5.75	20	
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Certified Analyses included in this Report

Analyte	Certifications
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EPA 200.7 REV 4.4 in Water

Aluminum	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
Iron	KY Wastewater Mdv (00030) VA NELAC MDV (460210) KY Drinking Water Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 NC Drinking Water (21706) MS Drinking Water MADV
Manganese	VA NELAC MDV (460210) KY Wastewater Mdv (00030) KY Drinking Water Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 NC Drinking Water (21706) MS Drinking Water MADV

EPA 300.0 REV 2.1 in Water

Sulfate	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
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Sample Acceptance Checklist for Work Order 4065396

Shipped By:

Temperature: 6.00° Celcius

Condition

Check if Custody Seals are Present/Intact	☐
Check if Custody Signatures are Present	☒
Check if Collector Signature Present	☒
Check if bottles are intact	☒
Check if bottles are correct	☒
Check if bottles have sufficient volume	☒
Check if samples received on ice	☒
Check if VOA headspace is acceptable	☐
Check if samples received in holding time.	☒
Check if samples are preserved properly	☒



Certificate of Analysis 4083645

Jayne Peltier
IDNR Division of Reclamation
14619 W State Rd 48
Jasonville, IN 47438

Customer ID: 44-100880
Report Printed: 08/19/2024 12:28

Project Name: Quarterly AML

Workorder: 4083645

Dear Jayne Peltier

Enclosed are the analytical results for samples received by the laboratory 08/08/2024 08:23.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Farmersburg
- Pace Analytical Services LLC Kentucky - Madisonville

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY
#460291 Pikeville, KY
#E871136 Englewood, OH

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Rob Whittington, Project Manager



Pace Analytical Services, LLC

P.O. Box 907

Madisonville, KY 42431

270.821.7375

www.pacelabs.com

SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4083645-01	AML Quarterly/147 CC	Water	08/07/2024 13:28	08/08/2024 8:23	Daniel Hillman
4083645-02	AML Quarterly/147 DD	Water	08/07/2024 14:00	08/08/2024 8:23	Daniel Hillman
<u>LabNumber</u>	<u>Measurement</u>	<u>Value</u>			
4083645-01	Field pH	7.6			
4083645-02	Field pH	8.2			



ANALYTICAL RESULTS

Lab Sample ID: **4083645-01**

Sample Collection Date Time: 08/07/2024 13:28

Description: **AML Quarterly 147 CC**

Sample Received Date Time: 08/08/2024 08:23

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Aluminum	0.33		mg/L	0.05	0.04	EPA 200.7 REV 4.4	08/12/2024 11:47	08/16/2024 18:23	AIS
Iron	1.39		mg/L	0.100	0.025	EPA 200.7 REV 4.4	08/12/2024 11:47	08/16/2024 18:23	AIS
Manganese	0.681		mg/L	0.004	0.002	EPA 200.7 REV 4.4	08/12/2024 11:47	08/16/2024 18:23	AIS

Conventional Chemistry Analyses Farmersburg

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Acidity	17	Y1	mg/L	5	2	2310 B-1997	08/13/2024 09:05	08/13/2024 09:22	DLP
Total Alkalinity	146		mg/L	4	4	2320 B-2011	08/09/2024 12:38	08/09/2024 13:18	DLP
pH (Lab)	7.12	H3	Std. Units	0.10	0.10	SM 4500-H+ B-2011	08/08/2024 13:40	08/08/2024 13:40	DLP

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Sulfate	2710	D	mg/L	20.0	20.0	EPA 300.0 REV 2.1	08/13/2024 22:20	08/13/2024 22:20	CLS3



ANALYTICAL RESULTS

Lab Sample ID: **4083645-02**

Sample Collection Date Time: 08/07/2024 14:00

Description: **AML Quarterly 147 DD**

Sample Received Date Time: 08/08/2024 08:23

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Aluminum	0.12		mg/L	0.05	0.04	EPA 200.7 REV 4.4	08/12/2024 11:47	08/16/2024 18:29	AIS
Iron	0.036		mg/L	0.100	0.025	EPA 200.7 REV 4.4	08/12/2024 11:47	08/16/2024 18:29	AIS
Manganese	0.175		mg/L	0.004	0.002	EPA 200.7 REV 4.4	08/12/2024 11:47	08/16/2024 18:29	AIS

Conventional Chemistry Analyses Farmersburg

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Acidity	5		mg/L	5	2	2310 B-1997	08/13/2024 09:05	08/13/2024 09:26	DLP
Total Alkalinity	ND	u	mg/L	4		2320 B-2011	08/09/2024 12:38	08/09/2024 12:48	DLP
pH (Lab)	7.87	H3	Std. Units	0.10	0.10	SM 4500-H+ B-2011	08/08/2024 13:40	08/08/2024 13:40	DLP

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Sulfate	4840	D	mg/L	20.0	20.0	EPA 300.0 REV 2.1	08/13/2024 22:47	08/13/2024 22:47	CLS3



Notes for work order 4083645

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
 - Results contained in this report are only representative of the samples received.
 - PACE does not provide interpretation of these results unless otherwise stated .
 - All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
 - All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
 - Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
 - The Chain of Custody document is included as part of this report.
 - All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.
- Concentrations reported are estimated values.

Qualifiers

D	Results reported from dilution.
D2	Sample required dilution due to matrix interference.
H3	Sample received and analyzed past holding time.
M1	Matrix spike recovery was high; the method control sample recovery was acceptable.
M2	Matrix spike recovery was low; the method control sample recovery was acceptable.
U	Target analyte was analyzed for, but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).
Y1	Sample RPD exceeded the method control limit.

Standard Qualifiers/Acronyms

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDH1064 - EPA 200.2

Blank (BDH1064-BLK1)

Prepared: 8/12/2024 11:47, Analyzed: 8/16/2024 17:07

Aluminum	ND	0.05	mg/L							U
Iron	ND	0.100	mg/L							U
Manganese	ND	0.004	mg/L							U

LCS (BDH1064-BS1)

Prepared: 8/12/2024 11:47, Analyzed: 8/16/2024 17:10

Aluminum	0.07	0.05	mg/L	0.0625		112	85-115			
Iron	6.30	0.100	mg/L	6.25		101	85-115			
Manganese	0.063	0.004	mg/L	0.0625		101	85-115			

Matrix Spike (BDH1064-MS1)

Source: 4083223-01

Prepared: 8/12/2024 11:47, Analyzed: 8/16/2024 18:42

Aluminum	ND	0.50	mg/L	0.0625	ND		80-120			D2, M2, U
Iron	6.68	1.00	mg/L	6.25	0.512	98.7	80-120			D2
Manganese	0.255	0.040	mg/L	0.0625	0.192	100	80-120			D2

Matrix Spike (BDH1064-MS2)

Source: 4083650-01

Prepared: 8/12/2024 11:47, Analyzed: 8/16/2024 18:57

Aluminum	ND	0.50	mg/L	0.0625	ND		80-120			D2, M2, U
Iron	6.38	1.00	mg/L	6.25	ND	102	80-120			D2
Manganese	0.130	0.040	mg/L	0.0625	0.071	94.4	80-120			D2

Matrix Spike Dup (BDH1064-MSD1)

Source: 4083223-01

Prepared: 8/12/2024 11:47, Analyzed: 8/16/2024 18:54

Aluminum	ND	0.50	mg/L	0.0625	ND		80-120		20	D2, M2, U
Iron	6.96	1.00	mg/L	6.25	0.512	103	80-120	4.08	20	D2
Manganese	0.249	0.040	mg/L	0.0625	0.192	90.4	80-120	2.38	20	D2

Matrix Spike Dup (BDH1064-MSD2)

Source: 4083650-01

Prepared: 8/12/2024 11:47, Analyzed: 8/16/2024 19:00

Aluminum	ND	0.50	mg/L	0.0625	ND		80-120		20	D2, M2, U
Iron	6.40	1.00	mg/L	6.25	ND	102	80-120	0.354	20	D2
Manganese	0.140	0.040	mg/L	0.0625	0.071	110	80-120	7.39	20	D2



Conventional Chemistry Analyses Farmersburg - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDH0889 - Default Prep Wet Chem 5

LCS (BDH0889-BS1)

Prepared: 8/8/2024 13:40, Analyzed: 8/8/2024 13:40

pH (Lab)	7.02		Std. Units	7.00		100	98.5-101.5		
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Duplicate (BDH0889-DUP1)

Source: 4083645-01

Prepared: 8/8/2024 13:40, Analyzed: 8/8/2024 13:40

pH (Lab)	7.14	0.10	Std. Units		7.12		0.281	10	H3
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Batch BDH1039 - Default Prep Wet Chem 5

Blank (BDH1039-BLK1)

Prepared: 8/9/2024 12:38, Analyzed: 8/9/2024 12:48

Total Alkalinity	ND	4	mg/L						U
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LCS (BDH1039-BS1)

Prepared: 8/9/2024 12:38, Analyzed: 8/9/2024 12:55

Total Alkalinity	250	4	mg/L	250		100	80-120		
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Duplicate (BDH1039-DUP1)

Source: 4081167-04

Prepared: 8/9/2024 12:38, Analyzed: 8/9/2024 13:10

Total Alkalinity	913	4	mg/L		894		2.10	10	
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Matrix Spike (BDH1039-MS1)

Source: 4081167-04

Prepared: 8/9/2024 12:38, Analyzed: 8/9/2024 13:02

Total Alkalinity	1060	4	mg/L	125	894	133	80-120		M1
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Batch BDH1294 - Default Prep Wet Chem 5

Blank (BDH1294-BLK1)

Prepared: 8/13/2024 9:05, Analyzed: 8/13/2024 9:15

Acidity	ND	5	mg/L						U
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LCS (BDH1294-BS1)

Prepared: 8/13/2024 9:05, Analyzed: 8/13/2024 9:17

Acidity	1290	5	mg/L	1240		104	80-120		
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Pace Analytical Services, LLC

P.O. Box 907

Madisonville, KY 42431

270.821.7375

www.pacelabs.com

Conventional Chemistry Analyses Farmersburg - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BDH1294 - Default Prep Wet Chem 5										
Duplicate (BDH1294-DUP1) Source: 4083645-01										
Prepared: 8/13/2024 9:05, Analyzed: 8/13/2024 9:24										
Acidity	11	5	mg/L		17			37.1	25	Y1



Ion Chromatography Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDH1413 - Default Prep IC

Blank (BDH1413-BLK1)

Prepared: 8/14/2024 9:47, Analyzed: 8/14/2024 9:47

Sulfate	ND	1.0	mg/L						U
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Blank (BDH1413-BLK2)

Prepared: 8/14/2024 19:48, Analyzed: 8/14/2024 19:48

Sulfate	ND	1.0	mg/L						U
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LCS (BDH1413-BS1)

Prepared: 8/14/2024 9:20, Analyzed: 8/14/2024 9:20

Sulfate	26.1		mg/L	25.0		104	90-110		
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LCS (BDH1413-BS2)

Prepared: 8/14/2024 19:20, Analyzed: 8/14/2024 19:20

Sulfate	26.4		mg/L	25.0		106	90-110		
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Matrix Spike (BDH1413-MS1)

Source: 4075756-01RE1

Prepared: 8/14/2024 7:30, Analyzed: 8/14/2024 7:30

Sulfate	87600		mg/L	2500	2270	NR	80-120		D, M1
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Matrix Spike (BDH1413-MS2)

Source: 4080973-01

Prepared: 8/14/2024 8:25, Analyzed: 8/14/2024 8:25

Sulfate	33.5		mg/L	25.0	7.3	105	80-120		
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Matrix Spike Dup (BDH1413-MSD1)

Source: 4075756-01RE1

Prepared: 8/14/2024 7:57, Analyzed: 8/14/2024 7:57

Sulfate	85800		mg/L	2500	2270	NR	80-120	2.06	20	D, M1
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Matrix Spike Dup (BDH1413-MSD2)

Source: 4080973-01

Prepared: 8/14/2024 8:52, Analyzed: 8/14/2024 8:52

Sulfate	34.4		mg/L	25.0	7.3	109	80-120	2.58	20	
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Certified Analyses included in this Report

Analyte	Certifications
EPA 200.7 REV 4.4 in Water	
Aluminum	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
Iron	KY Wastewater Mdv (00030) VA NELAC MDV (460210) KY Drinking Water Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 NC Drinking Water (21706) MS Drinking Water MADV
Manganese	VA NELAC MDV (460210) KY Wastewater Mdv (00030) KY Drinking Water Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 NC Drinking Water (21706) MS Drinking Water MADV
EPA 300.0 REV 2.1 in Water	
Sulfate	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431



Sample Acceptance Checklist for Work Order 4083645

Shipped By: Pace Analytical Services LL

Temperature: 1.20° Celcius

Condition

Check if Custody Seals are Present/Intact	☐
Check if Custody Signatures are Present	☒
Check if Collector Signature Present	☒
Check if bottles are intact	☒
Check if bottles are correct	☒
Check if bottles have sufficient volume	☒
Check if samples received on ice	☒
Check if VOA headspace is acceptable	☐
Check if samples received in holding time.	☒
Check if samples are preserved properly	☒

[illegible]



Certificate of Analysis 4076295

Jayne Peltier
IDNR Division of Reclamation
14619 W State Rd 48
Jasonville, IN 47438

Customer ID: 44-100880
Report Printed: 08/15/2024 16:17

Project Name: Quarterly AML

Workorder: 4076295

Dear Jayne Peltier

Enclosed are the analytical results for samples received by the laboratory 07/31/2024 08:35.

The results relate to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services LLC Kentucky - Farmersburg
- Pace Analytical Services LLC Kentucky - Madisonville

If you have any questions concerning this report, please feel free to contact me.



#460210 Madisonville, KY
#460291 Pikeville, KY
#E871136 Englewood, OH

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Rob Whittington, Project Manager



SAMPLE SUMMARY

Lab ID	Client Sample ID/Alias	Matrix	Date Collected	Date Received	Sampled By
4076295-01	AML Quarterly/147Z	Water	07/29/2024 12:45	07/31/2024 8:35	Ben Booher
<u>LabNumber</u>	<u>Measurement</u>	<u>Value</u>			
4076295-01	Field pH	4.4			

ANALYTICAL RESULTS

Lab Sample ID: **4076295-01**

Sample Collection Date Time: 07/29/2024 12:45

Description: **AML Quarterly 147Z**

Sample Received Date Time: 07/31/2024 08:35

Metals by EPA 200 Series Methods Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Aluminum	0.22		mg/L	0.05	0.04	EPA 200.7 REV 4.4	08/13/2024 11:59	08/13/2024 19:19	AIS
Iron	5.24		mg/L	0.100	0.025	EPA 200.7 REV 4.4	08/06/2024 08:14	08/09/2024 22:33	AIS
Manganese	2.14	D1	mg/L	0.040	0.020	EPA 200.7 REV 4.4	08/06/2024 08:14	08/09/2024 22:36	AIS

Conventional Chemistry Analyses Farmersburg

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Acidity	19		mg/L	5	2	2310 B-1997	08/06/2024 12:54	08/06/2024 13:10	DLP
Total Alkalinity	97		mg/L	4	4	2320 B-2011	07/31/2024 13:13	07/31/2024 13:53	DLP
pH (Lab)	6.78	H3	Std. Units	0.10	0.10	SM 4500-H+ B-2011	07/31/2024 09:26	07/31/2024 09:26	RMM

Ion Chromatography Madisonville

Analyte	Result	Flag	Units	MRL	MDL	Method	Prepared	Analyzed	Analyst
Sulfate	1340	D	mg/L	20.0	20.0	EPA 300.0 REV 2.1	08/03/2024 20:02	08/03/2024 20:02	JBP1



Notes for work order 4076295

- Samples collected by PACE personnel are done so in accordance with procedures set forth in PACE field services SOPs .
 - Results contained in this report are only representative of the samples received.
 - PACE does not provide interpretation of these results unless otherwise stated .
 - All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
 - All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
 - Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
 - The Chain of Custody document is included as part of this report.
 - All Library Search analytes should be regarded as tentative identification based on the presumptive evidence of the mass spectra.
- Concentrations reported are estimated values.

Qualifiers

D	Results reported from dilution.
D1	Sample required dilution due to high concentration of target analyte.
D2	Sample required dilution due to matrix interference.
H3	Sample received and analyzed past holding time.
J	Estimated value.
L1	The associated blank spike recovery was above method acceptance limits.
M1	Matrix spike recovery was high; the method control sample recovery was acceptable.
M2	Matrix spike recovery was low; the method control sample recovery was acceptable.
U	Target analyte was analyzed for , but was below detection limit (the value associated with the qualifier is the laboratory method detection limit in our LIMS system).

Standard Qualifiers/Acronyms

MDL	Method Detection Limit
MRL	Minimum Reporting Limit
ND	Not Detected
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
% Rec	Percent Recovery
RPD	Relative Percent Difference
>	Greater than
<	Less than



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDH0433 - EPA 200.2

Blank (BDH0433-BLK2)

Prepared: 8/6/2024 8:14, Analyzed: 8/9/2024 21:23

Aluminum	ND	0.05	mg/L							U
Iron	ND	0.100	mg/L							U
Manganese	ND	0.004	mg/L							U

Blank (BDH0433-BLK3)

Prepared: 8/6/2024 8:14, Analyzed: 8/12/2024 17:26

Aluminum	ND	0.05	mg/L							U
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LCS (BDH0433-BS2)

Prepared: 8/6/2024 8:14, Analyzed: 8/9/2024 21:26

Aluminum	0.08	0.05	mg/L	0.0625		127	85-115			L1
Iron	6.73	0.100	mg/L	6.25		108	85-115			
Manganese	0.067	0.004	mg/L	0.0625		108	85-115			

LCS (BDH0433-BS3)

Prepared: 8/6/2024 8:14, Analyzed: 8/12/2024 17:29

Aluminum	0.08	0.05	mg/L	0.0625		124	85-115			L1
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Matrix Spike (BDH0433-MS3)

Source: 4075551-01

Prepared: 8/6/2024 8:14, Analyzed: 8/9/2024 23:34

Aluminum	0.41	0.50	mg/L	0.0625	ND	658	80-120			D2, M1, J
Iron	6.69	1.00	mg/L	6.25	ND	107	80-120			D2
Manganese	0.077	0.040	mg/L	0.0625	ND	123	80-120			D2, M1

Matrix Spike (BDH0433-MS4)

Source: 4081487-01

Prepared: 8/6/2024 8:14, Analyzed: 8/9/2024 23:40

Aluminum	0.10	0.05	mg/L	0.0625	ND	155	80-120			M1
Iron	6.17	0.100	mg/L	6.25	ND	98.8	80-120			
Manganese	0.069	0.004	mg/L	0.0625	0.004	103	80-120			

Matrix Spike Dup (BDH0433-MSD3)

Source: 4075551-01

Prepared: 8/6/2024 8:14, Analyzed: 8/9/2024 23:37

Aluminum	0.45	0.50	mg/L	0.0625	ND	722	80-120	9.29	20	D2, M1, J
Iron	6.69	1.00	mg/L	6.25	ND	107	80-120	0.127	20	D2
Manganese	0.082	0.040	mg/L	0.0625	ND	132	80-120	7.03	20	D2, M1



Metals by EPA 200 Series Methods Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDH0433 - EPA 200.2

Matrix Spike Dup (BDH0433-MSD4)

Source: 4081487-01

Prepared: 8/6/2024 8:14, Analyzed: 8/9/2024 23:44

Aluminum	0.10	0.05	mg/L	0.0625	ND	155	80-120	0.113	20	M1
Iron	6.24	0.100	mg/L	6.25	ND	99.9	80-120	1.11	20	
Manganese	0.067	0.004	mg/L	0.0625	0.004	101	80-120	2.09	20	

Batch BDH1326 - EPA 200.2

Blank (BDH1326-BLK1)

Prepared: 8/13/2024 11:59, Analyzed: 8/13/2024 19:09

Aluminum	ND	0.05	mg/L							U
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LCS (BDH1326-BS1)

Prepared: 8/13/2024 11:59, Analyzed: 8/13/2024 19:13

Aluminum	0.07	0.05	mg/L	0.0625		114	85-115			
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Matrix Spike (BDH1326-MS1)

Source: 4082133-01

Prepared: 8/13/2024 11:59, Analyzed: 8/13/2024 20:09

Aluminum	ND	0.50	mg/L	0.0625	ND		80-120			D2, M2, U
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Matrix Spike Dup (BDH1326-MSD1)

Source: 4082133-01

Prepared: 8/13/2024 11:59, Analyzed: 8/13/2024 20:13

Aluminum	ND	0.50	mg/L	0.0625	ND		80-120		20	D2, M2, U
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Conventional Chemistry Analyses Farmersburg - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch BDG3296 - Default Prep Wet Chem 5

LCS (BDG3296-BS1)

Prepared: 7/31/2024 9:26, Analyzed: 7/31/2024 9:26

pH (Lab)	7.05		Std. Units	7.00		101	98.5-101.5		
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Duplicate (BDG3296-DUP1)

Source: 4076295-01

Prepared: 7/31/2024 9:26, Analyzed: 7/31/2024 9:26

pH (Lab)	6.79	0.10	Std. Units		6.78		0.147	10	H3
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Batch BDG3328 - Default Prep Wet Chem 5

Blank (BDG3328-BLK1)

Prepared: 7/31/2024 13:13, Analyzed: 7/31/2024 13:23

Total Alkalinity	ND	4	mg/L						U
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LCS (BDG3328-BS1)

Prepared: 7/31/2024 13:13, Analyzed: 7/31/2024 13:30

Total Alkalinity	253	4	mg/L	250		101	80-120		
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Duplicate (BDG3328-DUP1)

Source: 4074925-04

Prepared: 7/31/2024 13:13, Analyzed: 7/31/2024 13:41

Total Alkalinity	868	4	mg/L		888		2.28	10	
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Matrix Spike (BDG3328-MS1)

Source: 4074925-04

Prepared: 7/31/2024 13:13, Analyzed: 7/31/2024 13:37

Total Alkalinity	1030	4	mg/L	125	888	114	80-120		
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Batch BDH0559 - Default Prep Wet Chem 5

Blank (BDH0559-BLK1)

Prepared: 8/6/2024 12:54, Analyzed: 8/6/2024 13:04

Acidity	ND	5	mg/L						U
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LCS (BDH0559-BS1)

Prepared: 8/6/2024 12:54, Analyzed: 8/6/2024 13:06

Acidity	1210	5	mg/L	1240		97.6	80-120		
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Pace Analytical Services, LLC

P.O. Box 907

Madisonville, KY 42431

270.821.7375

www.pacelabs.com

Conventional Chemistry Analyses Farmersburg - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDH0559 - Default Prep Wet Chem 5

Duplicate (BDH0559-DUP1)

Source: 4076295-01

Prepared: 8/6/2024 12:54, Analyzed: 8/6/2024 13:12

Acidity	15	5	mg/L		19			23.1	25	
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Ion Chromatography Madisonville - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BDH0297 - Default Prep IC

Blank (BDH0297-BLK1)

Prepared: 8/4/2024 0:42, Analyzed: 8/4/2024 0:42

Sulfate	ND	1.0	mg/L							U
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LCS (BDH0297-BS1)

Prepared: 8/4/2024 0:17, Analyzed: 8/4/2024 0:17

Sulfate	24.4		mg/L	25.0		97.8	90-110			
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Matrix Spike (BDH0297-MS1) Source: 4080141-01

Prepared: 8/3/2024 23:26, Analyzed: 8/3/2024 23:26

Sulfate	171		mg/L	25.0	146	102	80-120			
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Matrix Spike Dup (BDH0297-MSD1) Source: 4080141-01

Prepared: 8/3/2024 23:51, Analyzed: 8/3/2024 23:51

Sulfate	170		mg/L	25.0	146	96.4	80-120	0.814	20	
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Certified Analyses included in this Report

Analyte	Certifications
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EPA 200.7 REV 4.4 in Water

Aluminum	VA NELAC MDV (460210) KY Wastewater Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
Iron	KY Wastewater Mdv (00030) VA NELAC MDV (460210) KY Drinking Water Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 NC Drinking Water (21706) MS Drinking Water MADV
Manganese	VA NELAC MDV (460210) KY Wastewater Mdv (00030) KY Drinking Water Mdv (00030) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431 NC Drinking Water (21706) MS Drinking Water MADV

EPA 300.0 REV 2.1 in Water

Sulfate	KY Drinking Water Mdv (00030) VA NELAC MDV (460210) KY Wastewater Mdv (00030) TN Drinking Water (02819) WV Wastewater Madisonville (241), 825 Industrial Rd Madisonville, KY 42431
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Sample Acceptance Checklist for Work Order 4076295

Shipped By: Pace Analytical Services LL

Temperature: 3.70° Celcius

Condition

Check if Custody Seals are Present/Intact	☐
Check if Custody Signatures are Present	☒
Check if Collector Signature Present	☒
Check if bottles are intact	☒
Check if bottles are correct	☒
Check if bottles have sufficient volume	☒
Check if samples received on ice	☒
Check if VOA headspace is acceptable	☐
Check if samples received in holding time.	☒
Check if samples are preserved properly	☒

CHAIN-OF-CUSTODY Analytical Request Document

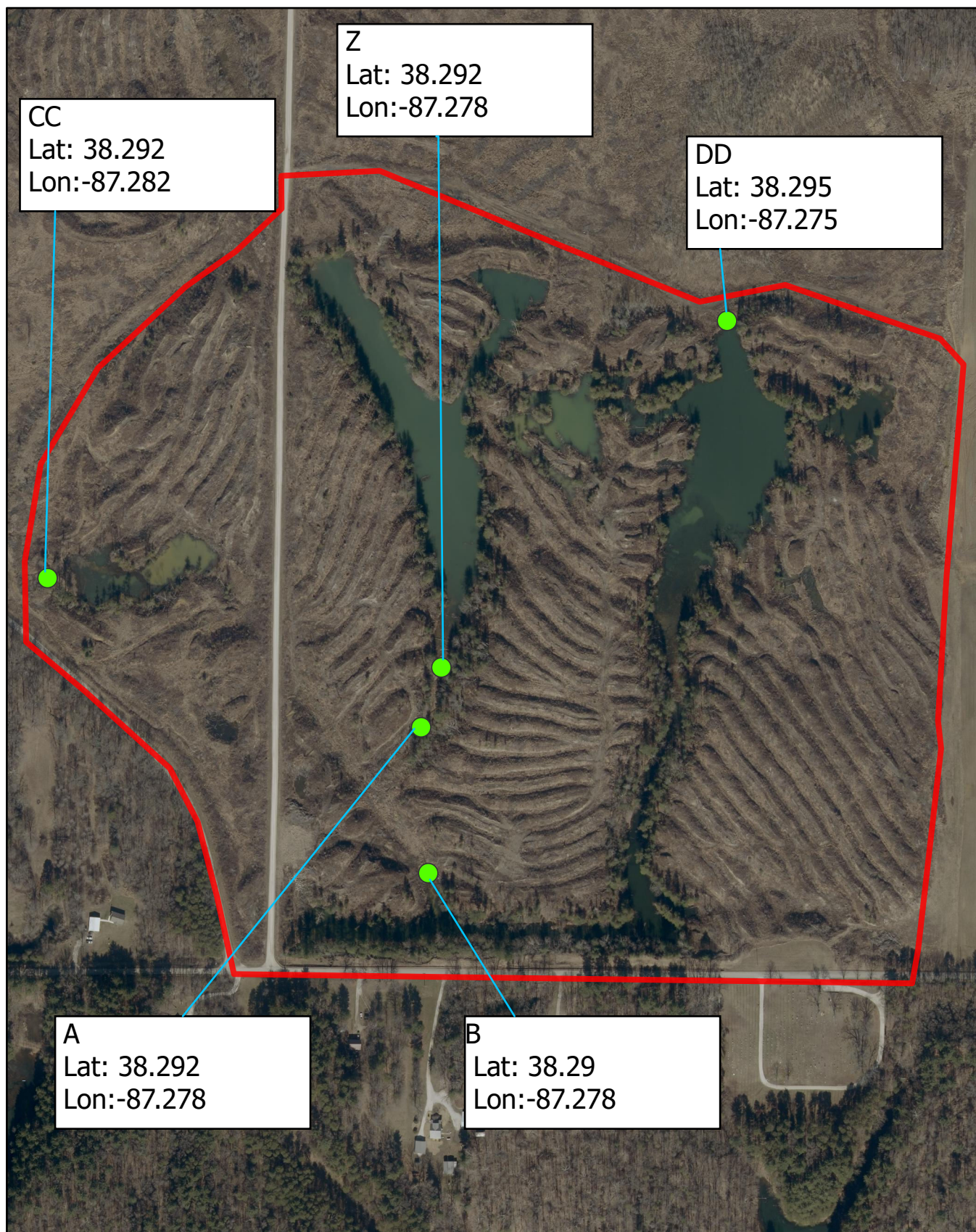
LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

4076295

ALL SHADED AREAS are for LAB USE ONLY

Chain-of-Custody is a LEGAL DOCUMENT- Complete all relevant fields

[illegible]



0 0.2 0.4 Miles

Legend

- ▭ Project Boundary
- Water Sampling Point

147 - Meridian Highwall Water Sampling Map

