

**Entergy Arkansas, LLC
Independence Steam Electric Station
Recycle Ponds**

2022 Annual Groundwater Monitoring and Corrective Action Report

**Prepared in Compliance with the EPA Final Rule for the Disposal of
Coal Combustion Residuals Title 40 CFR Part 257**

Prepared for:



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Prepared by:



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January 31, 2023

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EXECUTIVE SUMMARY

Entergy Arkansas, LLC (Entergy), operated two recycle ponds as part of its process water system for bottom ash transport at the Independence Steam Electric Station (Plant) located near Newark, Arkansas. The recycle ponds provided intermediate storage of waters used in the transport of coal combustion residuals (CCR) generated from the combustion of coal at the plant. The West pond commenced closure as of August 2020 and the East pond commenced closure as of February 2021. Closure by removal was completed in the second half of 2022. Management of the CCRs at the recycle ponds is performed pursuant to national criteria established in Title 40 of the Code of Federal Regulations (40 CFR), Part 257 (CCR Rule), effective April 19, 2015 and subsequent revisions to the CCR Rule.

The Plant conducted one semi-annual detection monitoring event in 2022 for the recycle ponds CCR unit monitoring well network per 40 CFR § 257.94. The statistical analyses completed for the second semi-annual 2021 and first semi-annual 2022 sampling event analytical data did not identify statistically significant increases (SSIs). The recycle ponds CCR Unit operated under the detection monitoring program (40 CFR § 257.94) during the duration of 2022.

1. INTRODUCTION

Entergy Arkansas, LLC (Entergy), operated two recycle ponds as part of its process water system for bottom ash transport at the Plant located near Newark, Arkansas (Lat: 35.67826 / Long: -91.408848). The recycle ponds provided intermediate storage of waters used in the transport of CCR generated from the combustion of coal at the Plant. The West pond commenced closure as of August 2020 and the East pond commenced closure in February 2021. Closure by removal was completed in the second half of 2022. The recycle ponds are managed in accordance with the national criteria established in the CCR Rule. Entergy installed a groundwater monitoring system at the recycle ponds CCR Unit that is subject to the groundwater monitoring and corrective action requirements provided under §§257.90 through 257.98 of the CCR rule. In accordance with §257.90(e) of the CCR rule, Entergy must prepare an annual report that provides information regarding the groundwater monitoring and corrective action program at the recycle ponds CCR Unit.

2. GROUNDWATER MONITORING SYSTEM

The recycle ponds CCR unit groundwater monitoring system consists of 10 monitoring wells as shown on Figure 1 included in Appendix A. Pursuant to §257.91(f) of the CCR rule, a qualified Arkansas-registered professional engineer has certified the groundwater monitoring system, which was designed and constructed to meet the requirements of §257.91.

3. INSTALLED OR DECOMMISSIONED WELLS DURING 2022

Entergy did not install any new wells or decommission any existing wells in the certified groundwater monitoring system during 2022.

4. GROUNDWATER MONITORING DATA

In accordance with §257.90(e)(3), all monitoring data obtained under §§257.90 through 257.98 during 2022 are provided in Appendix B. Data include:

- Summary of the number of groundwater samples that were collected for analysis for each background and downgradient well;
- Dates the samples were collected; and
- Whether the sample was collected as part of detection or assessment monitoring.

5. STATUS SUMMARY OF THE 2022 GROUNDWATER MONITORING PROGRAM

Groundwater monitoring was performed in accordance with the detection monitoring requirements of §257.94. A summary of activities related to groundwater detection monitoring performed during 2022 is provided in the list below:

- In accordance with §257.94(b), semiannual detection monitoring was performed during the first half (June) of 2022 for analysis of Appendix III parameters (boron, calcium, chloride, fluoride, pH, sulfate and total dissolved solids (TDS)).
- Statistical evaluation of the semiannual detection monitoring data was performed in accordance with the statistical method certified by a qualified Arkansas-registered professional engineer. The certified statistical method has been posted to Entergy's CCR Rule Compliance Data and Information website.
- Statistical evaluation of the second half 2021 semi-annual detection monitoring event was completed in 2022 and no SSIs were identified; therefore, Entergy did not prepare an alternative source demonstration (ASD) per §257.94(e)(2) for the detection monitoring event for the CADL CCR Unit.
- The first-half 2022 detection monitoring sampling was performed during June 2022. Based on statistical evaluation of the data, resampling was not required, and no statistically significant increases (SSIs) were identified.
- No problems were encountered during 2022 with regard to the detection monitoring and corrective action system. Therefore, no actions were required to modify the system.
- The recycle ponds CCR unit remained in detection monitoring for the duration of 2022.

6. PROJECTED ACTIVITIES FOR 2023

Planned activities for the program during 2023 are listed below:

- Continue managing the recycling ponds in accordance with the post-closure care plan developed for the units.

APPENDIX A

SITE MAP



LEGEND

- ★ RECYCLING POND WELL
- RECYCLING POND BOUNDARY

NOTES

- BASE MAP IMAGERY FROM DIGITALGLOBE, 2016.

1" = 300'
1:3,600

PROJECT:		ENTERGY INDEPENDENCE PLANT 555 POINT FERRY ROAD NEWARK, AR	
TITLE:			
RECYCLING POND WELL LOCATIONS			
DRAWN BY:		S. MAJOR	PROJ. NO.: 431479
CHECKED BY:		L. BURRIS	FIGURE 1
APPROVED BY:		J. HOUSE	
DATE:		DECEMBER 2020	
		Two United Plaza 8550 United Plaza Blvd., Suite 502 Baton Rouge, LA Phone: 225.216.7483	
FILE NO.:		431479-001.mxd	

APPENDIX B
GROUNDWATER MONITORING DATA

Sampling Schedule, Entergy Independence Recycle Ponds Network		
Well ID	Detection Monitoring Sampling Dates and Wells Sampled	
	6/06/2022	Number of Samples Collected
RP-1	X	1
RP-2	X	1
RP-3	X	1
RP-4	X	1
RP-5	X	1
RP-6	X	1
RP-7	X	1
RP-8	X	1
RP-9	X	1
RP-10	X	1

Notes: All samples collected in 2022 were part of the detection monitoring program. No samples collected in 2022 were part of an assessment monitoring program.

Field pH data collected during 2022, Entergy Independence Recycle Ponds Network		
Well ID	Date Collected	pH (su)
RP-1	6/6/2022	7.11
RP-2	6/6/2022	6.97
RP-3	6/6/2022	7.08
RP-4	6/6/2022	6.91
RP-5	6/6/2022	7.08
RP-6	6/6/2022	7.72
RP-7	6/6/2022	7.73
RP-8	6/6/2022	7.00
RP-9	6/6/2022	7.08
RP-10	6/6/2022	7.44

GBMc & Associates - Bryant, AR

Sample Delivery Group: L1503624
Samples Received: 06/09/2022
Project Number: 1145-21-081
Description: Entergy ISES
Site: ISES
Report To: Jonathan Brown
219 Brown Lane
Bryant, AR 72022

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

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

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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

SAMPLE SUMMARY

MW-1R L1503624-01 GW

Collected by
Danielle Braund

Collected date/time
06/07/22 16:00

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878757	1	06/13/22 16:07	06/13/22 17:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	1	07/01/22 13:48	07/01/22 13:48	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	5	07/01/22 14:33	07/01/22 14:33	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882587	1	06/23/22 14:03	07/01/22 03:10	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882557	1	06/27/22 03:06	06/28/22 01:01	SJM	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

MW-2 L1503624-02 GW

Collected by
Danielle Braund

Collected date/time
06/07/22 10:25

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878757	1	06/13/22 16:07	06/13/22 17:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	1	07/01/22 14:48	07/01/22 14:48	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882587	1	06/23/22 14:03	07/01/22 03:12	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882557	1	06/27/22 03:06	06/28/22 01:11	SJM	Mt. Juliet, TN

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

MW-3 L1503624-03 GW

Collected by
Danielle Braund

Collected date/time
06/08/22 10:40

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1879782	1	06/15/22 15:02	06/15/22 15:42	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	1	07/01/22 15:18	07/01/22 15:18	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882587	1	06/23/22 14:03	07/01/22 03:15	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882557	1	06/27/22 03:06	06/28/22 01:14	SJM	Mt. Juliet, TN

⁹ Sc

MW-6 L1503624-04 GW

Collected by
Danielle Braund

Collected date/time
06/08/22 09:20

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1879782	1	06/15/22 15:02	06/15/22 15:42	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	1	07/01/22 15:33	07/01/22 15:33	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 10:34	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882557	1	06/27/22 03:06	06/28/22 01:17	SJM	Mt. Juliet, TN

MW-7 L1503624-05 GW

Collected by
Danielle Braund

Collected date/time
06/07/22 15:10

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878757	1	06/13/22 16:07	06/13/22 17:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	1	07/01/22 15:48	07/01/22 15:48	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 10:44	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882557	1	06/27/22 03:06	06/28/22 01:21	SJM	Mt. Juliet, TN

MW-8 L1503624-06 GW

Collected by
Danielle Braund

Collected date/time
06/08/22 13:50

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1879782	1	06/15/22 15:02	06/15/22 15:42	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	1	07/01/22 16:03	07/01/22 16:03	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888329	5	07/01/22 16:28	07/01/22 16:28	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 10:47	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882557	1	06/27/22 03:06	06/28/22 01:24	SJM	Mt. Juliet, TN

ACCOUNT:

GBMc & Associates - Bryant, AR

PROJECT:

1145-21-081

SDG:

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07/11/22 15:52

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SAMPLE SUMMARY

MW-9 L1503624-07 GW

Collected by
Danielle Braund

Collected date/time
06/08/22 13:12

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1880039	1	06/15/22 18:14	06/15/22 18:54	SJF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888429	1	07/02/22 05:17	07/02/22 05:17	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 10:50	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:12	LD	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

MW-10 L1503624-08 GW

Collected by
Danielle Braund

Collected date/time
06/08/22 12:00

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1880039	1	06/15/22 18:14	06/15/22 18:54	SJF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888429	1	07/02/22 05:30	07/02/22 05:30	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 10:52	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:26	LD	Mt. Juliet, TN

Collected by
Danielle Braund

Collected date/time
06/07/22 18:00

Received date/time
06/09/22 09:00

MW-11 L1503624-09 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878757	1	06/13/22 16:07	06/13/22 17:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888425	1	07/02/22 18:11	07/02/22 18:11	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:01	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:30	LD	Mt. Juliet, TN

Collected by
Danielle Braund

Collected date/time
06/08/22 14:33

Received date/time
06/09/22 09:00

MW-13 L1503624-10 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1880039	1	06/15/22 18:14	06/15/22 18:54	SJF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888429	1	07/02/22 05:44	07/02/22 05:44	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:03	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:33	LD	Mt. Juliet, TN

Collected by
Danielle Braund

Collected date/time
06/07/22 08:27

Received date/time
06/09/22 09:00

MW-17 L1503624-11 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878757	1	06/13/22 16:07	06/13/22 17:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888425	1	07/02/22 18:25	07/02/22 18:25	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:06	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:36	LD	Mt. Juliet, TN

Collected by
Danielle Braund

Collected date/time
06/07/22 09:10

Received date/time
06/09/22 09:00

MW-18 L1503624-12 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878757	1	06/13/22 16:07	06/13/22 17:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888425	1	07/02/22 18:40	07/02/22 18:40	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:09	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:46	LD	Mt. Juliet, TN

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07/11/22 15:52

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SAMPLE SUMMARY

RP-1 L1503624-13 GW

Collected by
Danielle Braund

Collected date/time
06/06/22 18:12

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 12:19	07/01/22 12:19	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:12	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:49	LD	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

RP-2 L1503624-14 GW

Collected by
Danielle Braund

Collected date/time
06/07/22 08:27

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1879064	1	06/14/22 11:58	06/14/22 13:06	SLP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888425	1	07/02/22 18:54	07/02/22 18:54	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:14	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:53	LD	Mt. Juliet, TN

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

RP-3 L1503624-15 GW

Collected by
Danielle Braund

Collected date/time
06/06/22 17:35

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 12:47	07/01/22 12:47	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:17	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:56	LD	Mt. Juliet, TN

⁹ Sc

RP-4 L1503624-16 GW

Collected by
Danielle Braund

Collected date/time
06/06/22 13:00

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 13:02	07/01/22 13:02	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:20	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 15:59	LD	Mt. Juliet, TN

RP-5 L1503624-17 GW

Collected by
Danielle Braund

Collected date/time
06/06/22 12:22

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 13:16	07/01/22 13:16	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:23	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 16:02	LD	Mt. Juliet, TN

RP-6 L1503624-18 GW

Collected by
Danielle Braund

Collected date/time
06/06/22 13:27

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 13:31	07/01/22 13:31	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:25	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 16:06	LD	Mt. Juliet, TN

SAMPLE SUMMARY

RP-7 L1503624-19 GW

				Collected by Danielle Braund	Collected date/time 06/06/22 16:02	Received date/time 06/09/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 14:43	07/01/22 14:43	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:34	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 16:09	LD	Mt. Juliet, TN

RP-8 L1503624-20 GW

				Collected by Danielle Braund	Collected date/time 06/06/22 14:58	Received date/time 06/09/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 14:57	07/01/22 14:57	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:36	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 16:12	LD	Mt. Juliet, TN

RP-9 L1503624-21 GW

				Collected by Danielle Braund	Collected date/time 06/06/22 14:20	Received date/time 06/09/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 15:12	07/01/22 15:12	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:39	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1886539	1	06/28/22 10:09	06/28/22 13:42	SJM	Mt. Juliet, TN

RP-10 L1503624-22 GW

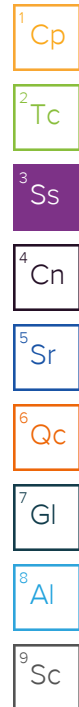
				Collected by Danielle Braund	Collected date/time 06/06/22 13:40	Received date/time 06/09/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 15:26	07/01/22 15:26	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:42	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:07	06/28/22 16:15	LD	Mt. Juliet, TN

DUPLICATE 2 RP-9 L1503624-23 GW

				Collected by Danielle Braund	Collected date/time 06/06/22 14:20	Received date/time 06/09/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1878565	1	06/13/22 13:20	06/13/22 14:24	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888423	1	07/01/22 15:41	07/01/22 15:41	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882588	1	06/26/22 09:28	07/01/22 11:45	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 16:25	LD	Mt. Juliet, TN

DUPLICATE 4 MW-6 L1503624-24 GW

				Collected by Danielle Braund	Collected date/time 06/08/22 09:20	Received date/time 06/09/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1880039	1	06/15/22 18:14	06/15/22 18:54	SJF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1888429	1	07/02/22 05:57	07/02/22 05:57	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882589	1	06/24/22 10:35	06/30/22 20:00	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 16:29	LD	Mt. Juliet, TN



SAMPLE SUMMARY

FIELD BLANK 2 L1503624-25 GW

Collected by
Danielle Braund

Collected date/time
06/08/22 12:05

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1879782	1	06/15/22 15:02	06/15/22 15:42	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1889341	1	07/03/22 12:48	07/03/22 12:48	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1882589	1	06/24/22 10:35	06/30/22 20:03	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1882558	1	06/26/22 11:02	06/28/22 16:32	LD	Mt. Juliet, TN

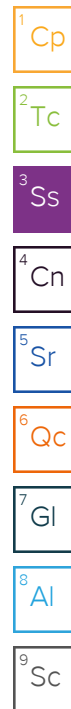
TRIP BLANK L1503624-26 GW

Collected by
Danielle Braund

Collected date/time
06/08/22 12:05

Received date/time
06/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1880034	1	06/15/22 17:25	06/15/22 18:05	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1889341	1	07/03/22 13:00	07/03/22 13:00	LBR	Mt. Juliet, TN

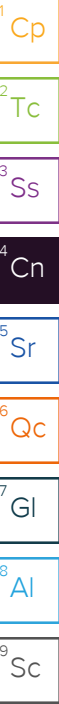


CASE NARRATIVE

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



Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
pH (On Site)	7.03	su

Analyte

pH (On Site) 7.03 su

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	639		13.3	1	06/13/2022 17:17	WG1878757

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	100		1.00	1	07/01/2022 13:48	WG1888329
Fluoride	ND		0.150	1	07/01/2022 13:48	WG1888329
Sulfate	170		25.0	5	07/01/2022 14:33	WG1888329

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 03:10	WG1882587

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	85.9		1.00	1	06/28/2022 01:01	WG1882557

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
pH (On Site)	7.83	su

Analyte

pH (On Site) 7.83 su

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	767		13.3	1	06/13/2022 17:17	WG1878757

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	16.5		1.00	1	07/01/2022 14:48	WG1888329
Fluoride	0.169		0.150	1	07/01/2022 14:48	WG1888329
Sulfate	284	<u>E</u>	5.00	1	07/01/2022 14:48	WG1888329

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 03:12	WG1882587

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	127		1.00	1	06/28/2022 01:11	WG1882557

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.51	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	483		10.0	1	06/15/2022 15:42	WG1879782

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	39.2		1.00	1	07/01/2022 15:18	WG1888329
Fluoride	0.182		0.150	1	07/01/2022 15:18	WG1888329
Sulfate	93.9		5.00	1	07/01/2022 15:18	WG1888329

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.275		0.200	1	07/01/2022 03:15	WG1882587

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	62.7		1.00	1	06/28/2022 01:14	WG1882557

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
pH (On Site)	7.09	su

Analyte

pH (On Site) 7.09 su

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	388		10.0	1	06/15/2022 15:42	WG1879782

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	30.0		1.00	1	07/01/2022 15:33	WG1888329
Fluoride	ND		0.150	1	07/01/2022 15:33	WG1888329
Sulfate	105	E	5.00	1	07/01/2022 15:33	WG1888329

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 10:34	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	61.9		1.00	1	06/28/2022 01:17	WG1882557

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
pH (On Site)	8.33	su

Analyte

pH (On Site) 8.33 su

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	510		10.0	1	06/13/2022 17:17	WG1878757

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	29.8		1.00	1	07/01/2022 15:48	WG1888329
Fluoride	0.666		0.150	1	07/01/2022 15:48	WG1888329
Sulfate	51.3		5.00	1	07/01/2022 15:48	WG1888329

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 10:44	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	47.5		1.00	1	06/28/2022 01:21	WG1882557

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	8.33	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	839		13.3	1	06/15/2022 15:42	WG1879782

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	141		5.00	5	07/01/2022 16:28	WG1888329
Fluoride	0.160		0.150	1	07/01/2022 16:03	WG1888329
Sulfate	268		25.0	5	07/01/2022 16:28	WG1888329

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 10:47	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	115		1.00	1	06/28/2022 01:24	WG1882557

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.31	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	789		13.3	1	06/15/2022 18:54	WG1880039

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	52.5		1.00	1	07/02/2022 05:17	WG1888429
Fluoride	ND		0.150	1	07/02/2022 05:17	WG1888429
Sulfate	311	E	5.00	1	07/02/2022 05:17	WG1888429

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.593		0.200	1	07/01/2022 10:50	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	102		1.00	1	06/28/2022 15:12	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.52	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	604		13.3	1	06/15/2022 18:54	WG1880039

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	47.5		1.00	1	07/02/2022 05:30	WG1888429
Fluoride	0.186		0.150	1	07/02/2022 05:30	WG1888429
Sulfate	178		5.00	1	07/02/2022 05:30	WG1888429

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	1.21		0.200	1	07/01/2022 10:52	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	81.2		1.00	1	06/28/2022 15:26	WG1882558

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.73	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	360		10.0	1	06/13/2022 17:17	WG1878757

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	39.7		1.00	1	07/02/2022 18:11	WG1888425
Fluoride	0.217		0.150	1	07/02/2022 18:11	WG1888425
Sulfate	35.3		5.00	1	07/02/2022 18:11	WG1888425

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:01	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	62.0		1.00	1	06/28/2022 15:30	WG1882558

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.64	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	397		10.0	1	06/15/2022 18:54	WG1880039

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	20.4		1.00	1	07/02/2022 05:44	WG1888429
Fluoride	0.166		0.150	1	07/02/2022 05:44	WG1888429
Sulfate	72.7		5.00	1	07/02/2022 05:44	WG1888429

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:03	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	72.9		1.00	1	06/28/2022 15:33	WG1882558

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	6.97	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	209		10.0	1	06/13/2022 17:17	WG1878757

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	5.48		1.00	1	07/02/2022 18:25	WG1888425
Fluoride	ND		0.150	1	07/02/2022 18:25	WG1888425
Sulfate	18.4		5.00	1	07/02/2022 18:25	WG1888425

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:06	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	41.6		1.00	1	06/28/2022 15:36	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.25	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	260		10.0	1	06/13/2022 17:17	WG1878757

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	5.12		1.00	1	07/02/2022 18:40	WG1888425
Fluoride	ND		0.150	1	07/02/2022 18:40	WG1888425
Sulfate	29.7		5.00	1	07/02/2022 18:40	WG1888425

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:09	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	57.3		1.00	1	06/28/2022 15:46	WG1882558

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.11	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	204		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	7.62		1.00	1	07/01/2022 12:19	WG1888423
Fluoride	ND		0.150	1	07/01/2022 12:19	WG1888423
Sulfate	14.8		5.00	1	07/01/2022 12:19	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:12	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	46.1		1.00	1	06/28/2022 15:49	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	6.97	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	207		10.0	1	06/14/2022 13:06	WG1879064

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	5.69		1.00	1	07/02/2022 18:54	WG1888425
Fluoride	ND		0.150	1	07/02/2022 18:54	WG1888425
Sulfate	18.2		5.00	1	07/02/2022 18:54	WG1888425

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:14	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	43.9		1.00	1	06/28/2022 15:53	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.08	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	173		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	4.91		1.00	1	07/01/2022 12:47	WG1888423
Fluoride	ND		0.150	1	07/01/2022 12:47	WG1888423
Sulfate	8.70		5.00	1	07/01/2022 12:47	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:17	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	43.5		1.00	1	06/28/2022 15:56	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	6.91	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	291		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

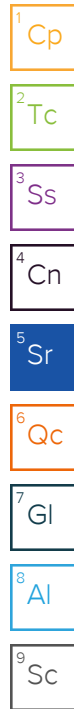
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	7.58		1.00	1	07/01/2022 13:02	WG1888423
Fluoride	0.213		0.150	1	07/01/2022 13:02	WG1888423
Sulfate	80.1		5.00	1	07/01/2022 13:02	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.270		0.200	1	07/01/2022 11:20	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	58.3		1.00	1	06/28/2022 15:59	WG1882558



Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.08	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	533		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	12.2		1.00	1	07/01/2022 13:16	WG1888423
Fluoride	0.419		0.150	1	07/01/2022 13:16	WG1888423
Sulfate	284	E	5.00	1	07/01/2022 13:16	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	1.23		0.200	1	07/01/2022 11:23	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	70.7		1.00	1	06/28/2022 16:02	WG1882558

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.72	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	645		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	12.1		1.00	1	07/01/2022 13:31	WG1888423
Fluoride	0.389		0.150	1	07/01/2022 13:31	WG1888423
Sulfate	269	E	5.00	1	07/01/2022 13:31	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.264		0.200	1	07/01/2022 11:25	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	105		1.00	1	06/28/2022 16:06	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.23	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	275		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	7.16		1.00	1	07/01/2022 14:43	WG1888423
Fluoride	0.153		0.150	1	07/01/2022 14:43	WG1888423
Sulfate	57.7		5.00	1	07/01/2022 14:43	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:34	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	56.8		1.00	1	06/28/2022 16:09	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	362		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	9.27		1.00	1	07/01/2022 14:57	WG1888423
Fluoride	ND		0.150	1	07/01/2022 14:57	WG1888423
Sulfate	54.9		5.00	1	07/01/2022 14:57	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:36	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	67.4		1.00	1	06/28/2022 16:12	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	200		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	6.14		1.00	1	07/01/2022 15:12	WG1888423
Fluoride	ND		0.150	1	07/01/2022 15:12	WG1888423
Sulfate	13.6		5.00	1	07/01/2022 15:12	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:39	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	47.2		1.00	1	06/28/2022 13:42	WG1886539

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.44	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	400		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	9.29		1.00	1	07/01/2022 15:26	WG1888423
Fluoride	ND		0.150	1	07/01/2022 15:26	WG1888423
Sulfate	97.9		5.00	1	07/01/2022 15:26	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.442		0.200	1	07/01/2022 11:42	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	72.9		1.00	1	06/28/2022 16:15	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.08	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	201		10.0	1	06/13/2022 14:24	WG1878565

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	6.25		1.00	1	07/01/2022 15:41	WG1888423
Fluoride	ND		0.150	1	07/01/2022 15:41	WG1888423
Sulfate	13.6		5.00	1	07/01/2022 15:41	WG1888423

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	07/01/2022 11:45	WG1882588

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	47.2		1.00	1	06/28/2022 16:25	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Additional Information - Results for field analyses are not accredited to ISO 17025

	Result	Units
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Analyte

pH (On Site)	7.09	su
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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	393		10.0	1	06/15/2022 18:54	WG1880039

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	29.1		1.00	1	07/02/2022 05:57	WG1888429
Fluoride	ND		0.150	1	07/02/2022 05:57	WG1888429
Sulfate	103		5.00	1	07/02/2022 05:57	WG1888429

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	06/30/2022 20:00	WG1882589

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	61.6		1.00	1	06/28/2022 16:29	WG1882558

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

FIELD BLANK 2

Collected date/time: 06/08/22 12:05

SAMPLE RESULTS - 25

L1503624

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10.0	1	06/15/2022 15:42	WG1879782

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	ND		1.00	1	07/03/2022 12:48	WG1889341
Fluoride	ND		0.150	1	07/03/2022 12:48	WG1889341
Sulfate	ND		5.00	1	07/03/2022 12:48	WG1889341

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	06/30/2022 20:03	WG1882589

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Calcium	ND		1.00	1	06/28/2022 16:32	WG1882558

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10.0	1	06/15/2022 18:05	WG1880034

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	ND		1.00	1	07/03/2022 13:00	WG1889341
Fluoride	ND		0.150	1	07/03/2022 13:00	WG1889341
Sulfate	ND		5.00	1	07/03/2022 13:00	WG1889341

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3803508-1 06/13/22 14:24

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

L1501792-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1501792-03 06/13/22 14:24 • (DUP) R3803508-3 06/13/22 14:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1630	1710	1	4.50		5

L1502376-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1502376-02 06/13/22 14:24 • (DUP) R3803508-4 06/13/22 14:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1690	1770	1	4.34		5

Laboratory Control Sample (LCS)

(LCS) R3803508-2 06/13/22 14:24

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	2440	2530	104	81.5-118	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3803516-1 06/13/22 17:17

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

L1502144-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1502144-01 06/13/22 17:17 • (DUP) R3803516-3 06/13/22 17:17

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	513	533	1	3.82		5

7Gl

8Al

L1502241-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1502241-01 06/13/22 17:17 • (DUP) R3803516-4 06/13/22 17:17

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	588	605	1	2.90		5

9Sc

Laboratory Control Sample (LCS)

(LCS) R3803516-2 06/13/22 17:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	2440	2560	105	81.5-118	

Method Blank (MB)

(MB) R3804220-1 06/14/22 13:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

L1502184-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1502184-03 06/14/22 13:06 • (DUP) R3804220-3 06/14/22 13:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Dissolved Solids	1100	1150	1	4.67		5

L1502292-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1502292-02 06/14/22 13:06 • (DUP) R3804220-4 06/14/22 13:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Dissolved Solids	756	817	1	7.80	J3	5

Sample Narrative:

OS: Achieving a constant weight is not possible due to sample matrix

Laboratory Control Sample (LCS)

(LCS) R3804220-2 06/14/22 13:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Dissolved Solids	2440	2430	99.6	81.5-118	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3805936-1 06/15/22 15:42

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1503326-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1503326-01 06/15/22 15:42 • (DUP) R3805936-3 06/15/22 15:42

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1660	1730	1	4.13		5

L1503505-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1503505-01 06/15/22 15:42 • (DUP) R3805936-4 06/15/22 15:42

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1370	1470	1	6.77	<u>J3</u>	5

Laboratory Control Sample (LCS)

(LCS) R3805936-2 06/15/22 15:42

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	2440	2390	98.0	81.5-118	

Method Blank (MB)

(MB) R3805602-1 06/15/22 18:05

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

L1502298-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1502298-02 06/15/22 18:05 • (DUP) R3805602-3 06/15/22 18:05

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	2390	2770	1	14.9	J3	5

L1502850-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1502850-03 06/15/22 18:05 • (DUP) R3805602-4 06/15/22 18:05

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	773	796	1	2.89		5

Laboratory Control Sample (LCS)

(LCS) R3805602-2 06/15/22 18:05

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	2440	2350	96.3	81.5-118	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3804645-1 06/15/22 18:54

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

L1502860-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1502860-01 06/15/22 18:54 • (DUP) R3804645-3 06/15/22 18:54

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1730	2090	1	19.1	J3	5

L1502920-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1502920-02 06/15/22 18:54 • (DUP) R3804645-4 06/15/22 18:54

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	593	611	1	2.88		5

Laboratory Control Sample (LCS)

(LCS) R3804645-2 06/15/22 18:54

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	2440	2380	97.5	81.5-118	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3810374-1 07/01/22 08:09

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1503316-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1503316-07 07/01/22 09:06 • (DUP) R3810374-3 07/01/22 09:20

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Fluoride	ND	ND	1	0.000		15

L1503624-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1503624-02 07/01/22 14:48 • (DUP) R3810374-6 07/01/22 15:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	16.5	16.5	1	0.0583		15
Fluoride	0.169	0.173	1	2.69		15
Sulfate	284	283	1	0.0122	E	15

Laboratory Control Sample (LCS)

(LCS) R3810374-2 07/01/22 08:24

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	40.0	40.3	101	80.0-120	
Fluoride	8.00	8.22	103	80.0-120	
Sulfate	40.0	40.0	99.9	80.0-120	

L1503594-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503594-02 07/01/22 10:49 • (MS) R3810374-4 07/01/22 11:34 • (MSD) R3810374-5 07/01/22 11:49

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	11.8	63.6	63.8	104	104	1	80.0-120			0.221	15
Fluoride	5.00	ND	5.21	5.25	104	105	1	80.0-120			0.772	15
Sulfate	50.0	ND	51.2	51.3	102	103	1	80.0-120			0.314	15

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1503624-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1503624-06 07/01/22 16:03 • (MS) R3810374-7 07/01/22 16:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	141	186	91.3	1	80.0-120	E
Fluoride	5.00	0.160	5.31	103	1	80.0-120	
Sulfate	50.0	269	283	28.5	1	80.0-120	E V

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3811380-1 07/01/22 11:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1503624-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1503624-13 07/01/22 12:19 • (DUP) R3811380-3 07/01/22 12:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	7.62	7.57	1	0.665		15
Fluoride	ND	ND	1	0.760		15
Sulfate	14.8	14.8	1	0.279		15

L1503624-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1503624-23 07/01/22 15:41 • (DUP) R3811380-6 07/01/22 15:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6.25	6.11	1	2.39		15
Fluoride	ND	ND	1	3.08		15
Sulfate	13.6	13.6	1	0.194		15

Laboratory Control Sample (LCS)

(LCS) R3811380-2 07/01/22 11:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.9	102	80.0-120	
Fluoride	8.00	8.58	107	80.0-120	
Sulfate	40.0	42.0	105	80.0-120	

1
Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

L1503624-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503624-18 07/01/22 13:31 • (MS) R3811380-4 07/01/22 13:45 • (MSD) R3811380-5 07/01/22 14:00

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 %
Chloride	50.0	12.1	65.7	64.7	107	105	1	80.0-120			1.48	15
Fluoride	5.00	0.389	5.61	5.52	104	103	1	80.0-120			1.67	15
Sulfate	50.0	269	317	320	95.7	102	1	80.0-120	E	E	0.938	15

L1503658-38 Original Sample (OS) • Matrix Spike (MS)

(OS) L1503658-38 07/01/22 17:36 • (MS) R3811380-7 07/01/22 17:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	11.9	64.4	105	1	80.0-120	
Fluoride	5.00	0.382	5.48	102	1	80.0-120	
Sulfate	50.0	266	309	85.7	1	80.0-120	E

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3811634-1 07/02/22 10:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1502176-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1502176-01 07/02/22 12:24 • (DUP) R3811634-3 07/02/22 12:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6.37	6.38	1	0.232		15
Fluoride	0.315	0.313	1	0.732		15
Sulfate	17.1	17.0	1	0.258		15

L1502408-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1502408-01 07/02/22 16:15 • (DUP) R3811634-6 07/02/22 16:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	8.79	8.80	1	0.0671		15
Fluoride	ND	ND	1	3.02		15
Sulfate	5.06	5.04	1	0.533		15

Laboratory Control Sample (LCS)

(LCS) R3811634-2 07/02/22 10:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	41.0	103	80.0-120	
Fluoride	8.00	8.48	106	80.0-120	
Sulfate	40.0	41.5	104	80.0-120	

1
Cp

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Tc

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Ss

4
Cn

5
Sr

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Qc

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Gl

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Al

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Sc

L1502176-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1502176-01 07/02/22 12:24 • (MS) R3811634-4 07/02/22 12:53 • (MSD) R3811634-5 07/02/22 13:07

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 %
Chloride	50.0	6.37	58.7	58.9	105	105	1	80.0-120			0.455	15
Fluoride	5.00	0.315	5.54	5.57	105	105	1	80.0-120			0.439	15
Sulfate	50.0	17.1	70.5	70.8	107	107	1	80.0-120			0.446	15

L1502408-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1502408-01 07/02/22 16:15 • (MS) R3811634-7 07/02/22 16:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	8.79	62.1	107	1	80.0-120	
Fluoride	5.00	ND	5.34	105	1	80.0-120	
Sulfate	50.0	5.06	59.2	108	1	80.0-120	

1
Cp

2
Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3813110-1 07/01/22 23:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1502374-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1502374-02 07/02/22 00:36 • (DUP) R3813110-3 07/02/22 00:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	57.1	58.4	1	2.25		15
Fluoride	2.05	2.11	1	2.85		15
Sulfate	90.3	92.8	1	2.78		15

L1503523-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1503523-07 07/02/22 04:10 • (DUP) R3813110-6 07/02/22 04:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3.49	3.07	1	12.7		15
Fluoride	ND	ND	1	0.000		15
Sulfate	ND	ND	1	17.7	P1	15

Laboratory Control Sample (LCS)

(LCS) R3813110-2 07/01/22 23:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.0	100	80.0-120	
Fluoride	8.00	8.11	101	80.0-120	
Sulfate	40.0	41.4	103	80.0-120	

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

L1503145-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503145-02 07/02/22 02:23 • (MS) R3813110-4 07/02/22 02:36 • (MSD) R3813110-5 07/02/22 02:50

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 %
Chloride	50.0	25.7	75.4	75.2	99.5	99.0	1	80.0-120			0.284	15
Fluoride	5.00	ND	5.11	5.02	102	100	1	80.0-120			1.75	15
Sulfate	50.0	132	178	182	91.3	100	1	80.0-120			2.44	15

L1506380-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1506380-05 07/02/22 06:11 • (MS) R3813110-7 07/02/22 06:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	22.5	69.1	93.2	1	80.0-120	
Fluoride	5.00	ND	4.97	97.3	1	80.0-120	
Sulfate	50.0	ND	50.9	96.2	1	80.0-120	

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3811476-1 07/03/22 10:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1503502-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1503502-09 07/03/22 11:33 • (DUP) R3811476-3 07/03/22 11:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	10.5	10.4	1	1.52		15
Fluoride	0.257	0.229	1	11.7		15
Sulfate	ND	ND	1	0.000		15

L1503640-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1503640-21 07/03/22 15:17 • (DUP) R3811476-6 07/03/22 15:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	66.9	66.5	10	0.645		15
Fluoride	ND	ND	10	0.000		15
Sulfate	729	732	10	0.314		15

Laboratory Control Sample (LCS)

(LCS) R3811476-2 07/03/22 10:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.6	102	80.0-120	
Fluoride	8.00	8.34	104	80.0-120	
Sulfate	40.0	41.0	103	80.0-120	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1503502-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503502-09 07/03/22 11:33 • (MS) R3811476-4 07/03/22 11:58 • (MSD) R3811476-5 07/03/22 12:11

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 %
Chloride	50.0	10.5	61.3	61.8	101	103	1	80.0-120			0.886	15
Fluoride	5.00	0.257	5.26	5.29	100	101	1	80.0-120			0.518	15
Sulfate	50.0	ND	49.6	50.1	99.3	100	1	80.0-120			0.907	15

L1503640-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503640-21 07/03/22 15:17 • (MS) R3811476-7 07/03/22 16:07 • (MSD) R3811476-8 07/03/22 16:20

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 %
Chloride	50.0	66.9	114	114	95.1	94.2	10	80.0-120			0.369	15
Fluoride	5.00	ND	6.11	5.98	122	120	10	80.0-120	J5		2.08	15
Sulfate	50.0	729	730	728	0.977	0.000	10	80.0-120	V	V	0.222	15

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3809786-1 07/01/22 02:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3809786-2 07/01/22 02:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	1.00	100	80.0-120	

L1503148-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503148-05 07/01/22 02:05 • (MS) R3809786-4 07/01/22 02:10 • (MSD) R3809786-5 07/01/22 02:13

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 %
Boron	1.00	ND	1.15	1.17	103	105	1	75.0-125			2.19	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3810113-1 07/01/22 10:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3810113-2 07/01/22 10:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.973	97.3	80.0-120	

L1503624-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503624-04 07/01/22 10:34 • (MS) R3810113-4 07/01/22 10:39 • (MSD) R3810113-5 07/01/22 10:41

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 %
Boron	1.00	ND	1.06	1.02	99.6	96.2	1	75.0-125			3.30	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3809770-1 06/30/22 19:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3809770-2 06/30/22 19:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	1.01	101	80.0-120	

L1502373-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1502373-02 06/30/22 19:12 • (MS) R3809770-4 06/30/22 19:17 • (MSD) R3809770-5 06/30/22 19:20

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 %
Boron	1.00	2.62	3.50	3.49	87.3	86.1	1	75.0-125			0.350	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3808196-1 06/27/22 23:50

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) R3808196-2 06/27/22 23:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	5.00	4.58	91.7	80.0-120	

L1503203-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503203-01 06/27/22 23:57 • (MS) R3808196-4 06/28/22 00:04 • (MSD) R3808196-5 06/28/22 00:07

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	34.2	39.0	38.7	95.5	89.9	1	75.0-125			0.720	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3808596-1 06/28/22 15:04

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

Laboratory Control Sample (LCS)

(LCS) R3808596-2 06/28/22 15:08

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Calcium	5.00	5.05	101	80.0-120	

L1503624-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503624-07 06/28/22 15:12 • (MS) R3808596-4 06/28/22 15:19 • (MSD) R3808596-5 06/28/22 15:22

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Calcium	5.00	102	106	105	89.3	79.5	1	75.0-125			0.462	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3808377-1 06/28/22 13:07

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

Laboratory Control Sample (LCS)

(LCS) R3808377-2 06/28/22 13:10

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Calcium	5.00	4.88	97.5	80.0-120	

L1506071-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506071-07 06/28/22 13:13 • (MS) R3808377-4 06/28/22 13:20 • (MSD) R3808377-5 06/28/22 13:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l		mg/l	mg/l	%	%		%			%	%
Calcium	5.00		104	104	63.8	59.6	1	75.0-125	V	V	0.199	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

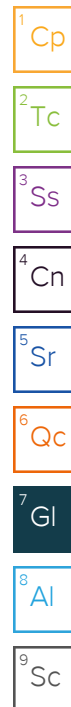
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Abbreviations and Definitions

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

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
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

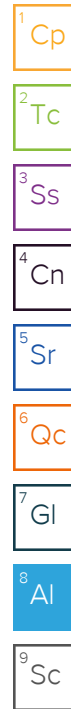
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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	LA000356
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.



COC 1

GBMc & Associates - Bryant, AR 219 Brown Lane Bryant, AR 72022				Billing Information:				Analysis / Container / Preservative				Chain of Custody Page <u>1</u> of <u>3</u>			
				Accounts Payable 219 Brown Ln. Bryant, AR 72022				Pres Chk				 Pace Analytical* National Center for Testing & Innovation 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 			
Report to:				Email To:				B, Ca 250mIHDPE-HNO3 Cl, F, SO4, TDS 250mIHDPE-NoPres							
Jonathan Brown				jbrown@gbmcassoc.com;											
Project Description:				City/State								Please Circle:			
Entergy ISES				Collected: Newark, AR								PT MT CT ET			
Phone: 501-847-7077		Client Project #		Lab Project #											
		1145-21-081		GBMCBAR-ENTERGYISES											
Collected by (print):		Site/Facility ID #		P.O. #											
Danielle Braund		ISES													
Collected by (signature):		Rush? (Lab MUST Be Notified)		Quote #											
<i>Danielle Braund</i> Immediately Packed on Ice N <u> </u> Y <u>X</u>		☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Date Results Needed											
Sample ID		Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs								
MW-1R		Grab	GW	24.9	6/7/22	1600	2	X	X				7.03	-01	
MW-2		Grab	GW	23.5	6/7/22	1025	2	X	X				7.83	-02	
MW-3		Grab	GW	24.5	6/8/22	1040	2	X	X				7.51	-03	
MW-6		Grab	GW	22.1	6/8/22	0920	2	X	X				7.09	-04	
MW-7		Grab	GW	22.1	6/7/22	1510	2	X	X				8.33	-05	
MW-8		Grab	GW	23.1	6/8/22	1350	2	X	X				7.34	-06	
MW-9		Grab	GW	21.9	6/8/22	1312	2	X	X				7.31	-07	
MW-10		Grab	GW	24.8	6/8/22	1200	2	X	X				7.52	-08	
MW-11		Grab	GW	24.3	6/7/22	1800	2	X	X				7.73	-09	
MW-13		Grab	GW	19.2	6/8/22	1433	2	X	X				7.64	-10	
* Matrix:		Remarks:		Tracking #											
SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Final pH in remarks Samples returned via: ☐ UPS ☐ FedEx ☐ Courier		pH _____ Temp _____ Flow _____ Other _____		Sample Receipt Checklist COC Seal Present/Intact: <u> </u> NP <u> </u> N COC Signed/Accurate: <u> </u> Y <u> </u> N Bottles arrive intact: <u> </u> Y <u> </u> N Correct bottles used: <u> </u> Y <u> </u> N Sufficient volume sent: <u> </u> Y <u> </u> N If Applicable VOA Zero Headspace: <u> </u> Y <u> </u> N Preservation Correct/Checked: <u> </u> Y <u> </u> N RAD Screen <0.5 mR/hr: <u> </u> Y <u> </u> N									
Relinquished by : (Signature)		Date:	Time:	Received by: (Signature)		Trip Blank Received: Yes <u>(No)</u>		Bottles Received:		If preservation required by Login: Date/Time					
<i>Danielle Braund</i>		6/9/22	1300			HCL / MeOH TBR		52							
Relinquished by : (Signature)		Date:	Time:	Received by: (Signature)		Date:		Time:		Hold:		Condition:			
						6/10/22		900				NCF		OK	

GBMc & Associates - Bryant, AR

219 Brown Lane
Bryant, AR 72022Report to:
Jonathan BrownProject Description:
Entergy ISES

Phone: 501-847-7077

Collected by (print):
Danielle BraundCollected by (signature):
*Danielle Braund*Immediately
Packed on Ice N ☐ Y ☒

Billing Information:

Accounts Payable
219 Brown Ln.
Bryant, AR 72022Email To:
jbrown@gbmcassoc.com;City/State
Collected: Newark, ARPlease Circle:
PT MT CT ET

Analysis / Container / Preservative

Chain of Custody

Page 2 of 3

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG #

Table #

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

Client Project # 1145-21-081	Lab Project # GBMCBAR-ENTERGYISES
Site/Facility ID # ISES	P.O. #
Rush? (Lab MUST Be Notified) Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day ☐	Quote # Date Results Needed No. of Cntrs

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
MW-17	Grab	GW	19.3	6/7/22	0827	2
MW-18	Grab	GW	21.2	6/7/22	0910	2
RP-1	Grab	GW	20.8	6/6/22	1812	2
RP-2	Grab	GW	19.3	6/7/22	0827	2
RP-3	Grab	GW	16.9	6/6/22	1735	2
RP-4	Grab	GW	21.2	6/6/22	1300	2
RP-5	Grab	GW	24.6	6/6/22	1222	2
RP-6	Grab	GW	24.0	6/6/22	1327	2
RP-7	Grab	GW	23.8	6/6/22	1602	2
RP-8	Grab	GW	23.1	6/6/22	1458	2

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

Remarks:

Final pH in remarks

Samples returned via:

UPS FedEx Courier

Tracking #

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Date:

Date:

Date:

Time:

Time:

Time:

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

Trip Blank Received: Yes (No)

HCL / MeOH
TBR

Temp: °C Bottles Received:

Date: Time:

Sample Receipt Checklist

COC Seal Present/Intact: ☒ NP ☐ NCOC Signed/Accurate: ☒ NBottles arrive intact: ☒ NCorrect bottles used: ☒ NSufficient volume sent: ☒ N

If Applicable

VOA Zero Headspace: ☒ Y ☐ NPreservation Correct/Checked: ☒ NRAD Screen <0.5 mR/hr: ☒ N

If preservation required by Login: Date/Time

Hold:

Condition:
NCF / OK

14503624

Tracking Numbers	Temperature
5719 6189 6928	JA6 3.0 to 3.0
574 6189 7306	PA7 2.6 to 2.6
519 6189 6880	PA7 3.1 to 3.1
5719 6189 6939	PA7 3.7 to 3.7
5719 6189 6911	PA7 2.5 to 2.5
5719 6189 6906	PA7 2.8 to 2.8

5719 6189 6891

PA7
2.1 to 2.1