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COAL COMBUSTION RESIDUAL RULE
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

ASH PONDS
MARTIN LAKE STEAM ELECTRIC STATION
RUSK COUNTY, TEXAS

January 31, 2024

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

ACM	Assessment of Corrective Measures
CCR	Coal Combustion Residuals
C.F.R.	Code of Federal Regulations
GWPS	Groundwater Protection Standard
MCL	Maximum Concentration Level
mg/L	Milligrams per Liter
MLSES	Martin Lake Steam Electric Station
MNA	Monitored Natural Attenuation
NA	Not Applicable
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
T.A.C.	Texas Administrative Code
USEPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

Bullock, Bennett & Associates, LLC (BBA) has prepared this report on behalf of Luminant Generation Company LLC (Luminant) to satisfy the 2023 annual groundwater monitoring and corrective action reporting requirements of 40 C.F.R. Part 257 and 30 T.A.C. Chapter 352 for the Ash Pond Area (the "CCR units") at the Martin Lake Steam Electric Station (MLSES) in Rusk County, Texas. The Ash Pond Area CCR units include the East Ash Pond, West Ash Pond, and New Scrubber Pond. The CCR units and CCR monitoring well network are shown on Figure 1.

At the beginning and end of the 2023 reporting period, the CCR units were operating under an Assessment Monitoring Program as described in §257.95. The Assessment Monitoring Program was established on July 16, 2018. Concentrations of Appendix IV constituents at statistically significant levels (SSLs) above groundwater protection standards (GWPSs) were identified in January 2019 based on data collected in 2018 for beryllium, cobalt, and lithium in the Ash Pond Area. An Assessment of Corrective Measures (ACM) was initiated on April 8, 2019 and completed on September 5, 2019 in accordance with §257.96 to address the Appendix IV SSLs. A public meeting was held on November 13, 2019, pursuant to §257.96(e), to discuss the results of the ACM. A Remedy Selection Report (Golder 2022a) was completed in January 2022 in accordance with the requirements of §257.97. Monitored natural attenuation (MNA) with source control measures was selected as the remedy to address the Appendix IV constituents observed at SSLs. A Site-specific feasibility study to evaluate MNA as a potential groundwater remedy for the Appendix IV constituents observed at SSLs was performed in accordance with guidance and best practices promulgated by the USEPA (USEPA 2007a and 2007b) and Interstate Technology and Regulatory Council (ITRC 2010). Summary reports documenting the MNA feasibility study were included as attachments to the Remedy Selection Report.

During 2023, SSLs above GWPSs were observed in the Ash Pond Area for beryllium in wells H-29, H-31, and H-32 and cobalt in wells H-28, H-31, and H-32.

1.0 INTRODUCTION

The CCR Rule (40 C.F.R. 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) was promulgated by the United States Environmental Protection Agency (USEPA) to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. TCEQ has adopted portions of the federal CCR rule at 30 T.A.C. Chapter 352 (Texas CCR Rule), and USEPA published its final approval of the Texas CCR rule on June 28, 2021. *See* 86 Fed. Reg. 33,892 (June 28, 2021). The Texas CCR Rule became effective on July 28, 2021, and it adopts and incorporates by reference the requirements for the annual groundwater monitoring report located at 40 C.F.R. §257.90. *See* 30 T.A.C. § 352.901. It further adopts and incorporates by reference the Federal CCR Program requirements for detection and assessment monitoring in 30 T.A.C. §352.941 and 30 T.A.C. §352.951, respectively. Pursuant to 30 T.A.C. § 352.902, this report will be submitted to TCEQ for review no later than 30 days after the report has been placed in the facility's operating record. For existing CCR landfills and surface impoundments, the CCR Rule requires that the owner or operator prepare an annual groundwater monitoring and corrective action report to document the status of the groundwater monitoring and corrective action program for the CCR unit for the previous calendar year. Per §257.90(e) of the CCR Rule, the report should contain the following information, to the extent available:

(1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

(2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

(3) In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

(4) A narrative discussion of any transition between monitoring programs (*e.g.,* the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

(5) Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

(6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:

(i) At the start of the current annual reporting period, whether the CCR unit was operating

under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;

(ii) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

(iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):

(A) Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and

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

(iv) If it was determined that there was a SSL above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:

(A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;

(B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;

(C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and

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

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

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

2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

The initial Detection Monitoring Program groundwater samples were collected from the Ash Pond Area CCR monitoring well network in September 2017. The evaluation of those data was completed in 2018 using procedures described in the Statistical Analysis Plan (Golder 2022b) to identify statistically significant increases (SSIs) of Appendix III parameters over background concentrations. The Detection Monitoring Program sampling dates and parameters are summarized in the following table:

Detection Monitoring Program Summary

Sampling Dates	Parameters	SSIs	Assessment Monitoring Program Established
September 21, 2017	Appendix III	Yes	July 16, 2018

Alternate source evaluations were inconclusive for one or more of the SSIs. Consequently, an Assessment Monitoring Program was initiated and established for the Ash Pond Area CCR units in 2018 in accordance with §257.94(e)(2).

The initial Assessment Monitoring Program groundwater samples were collected in June 2018. Subsequent Assessment Monitoring Program sampling events have been conducted on a semi-annual basis, as required by the CCR Rule. All CCR groundwater monitoring wells were sampled for Appendix III and Appendix IV constituents during the semi-annual sampling events.

The statistical background prediction limits used to assess Appendix III data and the GWPSs used to assess Appendix IV data are summarized in Tables 1 and 2, respectively. Appendix III and Appendix IV analytical data are summarized in Tables 3 and 4, respectively, and the laboratory analytical reports are provided in Appendix A.

Concentrations of Appendix IV constituents at statistically significant levels (SSLs) above GWPSs were identified in January 2019 for beryllium, cobalt, and lithium. Notification of these SSLs was placed in the operating record on February 6, 2019 and was subsequently placed on the public website in accordance with §257.107(d). An ACM was initiated on April 8, 2019 pursuant to §257.95(g). A justification letter for a 60-day extension due to site-specific circumstances that delayed work on the

ACM was certified on July 3, 2019 in accordance with §257.96(a). A copy of the extension justification letter was provided in the 2019 Annual Groundwater Monitoring and Corrective Action Report. The ACM was completed in September 2019 (Golder 2019) for the parameters detected at SSLs above GWPSs (i.e., beryllium, cobalt, and lithium), pursuant to §257.96.

Additional semi-annual Assessment Monitoring events were conducted in 2019 through 2023. Statistical analysis of the sample data was performed in accordance with the Statistical Analysis Plan (Golder 2022b) and USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-Unified Guidance (USEPA 2009). The statistical analysis included an evaluation of statistical confidence intervals based on Appendix IV sample data collected from downgradient monitoring wells. A 95% lower confidence limit of the mean (LCL) is calculated for each Appendix IV constituent at each downgradient well. The data set used to calculate LCLs is based on current and historical constituent concentrations for a compliance well. In accordance with USEPA (2009) guidance, a statistically significant increase over the GWPS has occurred at a CCR unit when the LCL for at least one assessment monitoring constituent at a downgradient well is greater than the appropriate GWPS. The LCLs for each Appendix IV constituent at each well are compared to GWPSs in Appendix B. SSLs above GWPSs were identified for beryllium and cobalt during each of the semi-annual groundwater assessments in 2019 through 2023. Notification of the beryllium and cobalt SSLs have been made after SSLs are identified in accordance with §257.107(d) and 30 TAC §352.951(d). SSLs for lithium have not been observed since 2018.

The Assessment Monitoring Program sampling dates and parameters are summarized in the following table:

Assessment Monitoring Program Summary

Sampling Completion Dates	Analytical Data Receipt Date	Parameters Collected	Constituents with SSL(s)	SSL Determination Date	Corrective Measures Assessment Initiated	Corrective Measures Assessment Completed
June 13, 2018	July 27, 2018	Appendix III Appendix IV	NA	NA	NA	NA
September 7, 2018	October 8, 2018	Appendix III Appendix IV	Be, Co, Li	January 7, 2019	April 8, 2019	September 5, 2019

Sampling Completion Dates	Analytical Data Receipt Date	Parameters Collected	Constituents with SSL(s)	SSL Determination Date	Corrective Measures Assessment Initiated	Corrective Measures Assessment Completed
May 14, 2019	June 14, 2019	Appendix III Appendix IV	Be and Co	September 5, 2019	NA	NA
September 10, 2019	October 11, 2019	Appendix III Appendix IV	Be and Co	January 8, 2020	NA	NA
May 13, 2020	June 12, 2020	Appendix III Appendix IV	Be and Co	July 22, 2020	NA	NA
October 6, 2020	November 6, 2020	Appendix III Appendix IV	Be and Co	December 7, 2020	NA	NA
June 4, 2021	July 8, 2021	Appendix III Appendix IV	Be and Co	July 14, 2021	NA	NA
October 4, 2021	November 10, 2021	Appendix III Appendix IV	Be and Co	January 10, 2022	NA	NA
May 25, 2022	July 13, 2022	Appendix III Appendix IV	Be and Co	August 1, 2022	NA	NA
September 21, 2022	November 16, 2022	Appendix III Appendix IV	Be and Co	December 24, 2022	NA	NA
May 17, 2023	June 30, 2023	Appendix III Appendix IV	Be and Co	July 28, 2023	NA	NA
August 14, 2023	September 21, 2023	Appendix III Appendix IV	Be and Co	December 11, 2023	NA	NA

Notes:

NA: Not Applicable

3.0 KEY ACTIONS COMPLETED IN 2023

Assessment Monitoring Program groundwater monitoring events were completed in May and August 2023. The number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and the analytical results for the groundwater samples are summarized in Table 3 (Appendix III parameters) and Table 4 (Appendix IV parameters). A map showing the CCR unit and monitoring wells is provided as Figure 1. No CCR wells were installed or decommissioned in 2023.

Water elevations measured in the CCR wells during the 2023 semi-annual groundwater monitoring events are summarized in Table 5 and groundwater potentiometric surface maps are presented in Appendix C. The inferred direction and magnitude of groundwater flow during the semi-annual monitoring events was generally to the east-northeast at about 9 feet per year, which is similar to previously observed conditions at the site.

As noted in Section 2.0, an ACM for the Appendix IV parameters identified at SSLs above GWPSs in 2018 (beryllium, cobalt, and lithium) was completed in September 2019. The ACM evaluated potential corrective measures alternatives, including retrofitting the Ash Ponds liner systems for purposes of source control. A public meeting was held on November 13, 2019, pursuant to §257.96(e), to discuss the results of the ACM. In accordance with §257.102(k)(5), a notification of intent to retrofit the Ash Pond Area liner systems was posted on June 29, 2020. Construction of the the East Ash Pond, West Ash Pond, and New Scrubber Pond retrofits were completed in 2020, 2021, and 2023, respectively, with a new composite liner system meeting the requirements of § 257.70(c).

A Remedy Selection Report (Golder 2022b) was completed in January 2022 in accordance with the requirements of §257.97. MNA with source control measures was selected as the remedy to address the Appendix IV constituents observed at SSLs. A Site-specific feasibility study to evaluate MNA as a potential groundwater remedy for the Appendix IV constituents observed at SSLs was performed in accordance with guidance and best practices promulgated by the USEPA (USEPA 2007a and 2007b) and Interstate Technology and Regulatory Council (ITRC 2010). Summary reports documenting the MNA feasibility study were included as attachments to the Remedy Selection Report. The MNA feasibility study indicated that physical and chemical attenuation of beryllium, cobalt, and lithium is occurring at the site. Concentrations of these constituents in groundwater are stable and the aquifer

has adequate capacity to attenuate these constituents in a reasonable timeframe.

The MNA monitoring well network and MNA sampling and analysis procedures are the same as those used in the current Assessment Monitoring Program. As such, groundwater monitoring activities to satisfy MNA monitoring requirements are ongoing. The MNA groundwater monitoring program and source control measures that constitute the selected remedy have therefore been initiated and the requirement of § 257.98(a) for initiating remedial activities within 90 days of selecting a remedy has been met. The long-term effectiveness of the source control measures and MNA as a remedy will be assessed based on the statistical evaluation of sample concentrations against GWPSs and an evaluation of long-term trends in the sample data.

During 2023, SSLs above GWPSs were observed in the Ash Pond Area for beryllium in wells H-29, H-31, and H-32 and for cobalt in wells H-28, H-31, and H-32. Notifications of the observed SSLs were submitted to the executive director via email as required under 30 TAC § 352.951(d) on August 3, 2023 for the first semi-annual sampling event and December 19, 2023 for the second semi-annual sampling event. SSLs above GWPSs were not observed for any of the other Appendix IV constituents in 2023. Time series plots of the constituents detected at SSLs are provided in Appendix D. The time series plots show that beryllium and cobalt concentrations are generally stable or decreasing in wells where SSLs above GWPSs have been detected. Data will continue to be collected and assessed on a semi-annual basis to evaluate potential trends in the data and evaluate the long-term effectiveness of source control measures and MNA as a remedy.

Per 40 C.F.R. § 257.98(c), the selected remedy will be considered complete when: (1) The owner or operator of the CCR unit demonstrates compliance with the GWPS established under 40 C.F.R. § 257.95(h) has been achieved at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under 40 C.F.R. § 257.91, (2) Compliance with the GWPS established under 40 C.F.R. § 257.95(h) has been achieved by demonstrating that concentrations of constituents listed in Appendix IV to this part have not exceeded the GWPSs for a period of three consecutive years using the statistical procedures and performance standards in 40 C.F.R. § 257.93(f) and (g), and (3) All actions required to complete the remedy have been satisfied.

The Assessment Monitoring Program will continue based on the SSLs of beryllium and cobalt identified at the site in 2023.

4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the CCR groundwater monitoring program in 2023.

5.0 KEY ACTIVITIES PLANNED FOR 2024

The following key activities are planned for 2024:

- Continue the Assessment Monitoring Program in accordance with applicable provisions of 40 C.F.R. §257.95 and 30 T.A.C. §352.951.

6.0 REFERENCES

Golder, 2019. CCR Assessment of Corrective Measures, Martin Lake Steam Electric Station – Ash Pond Area, Rusk County, Texas. September.

Golder, 2022a. Remedy Selection Report, Martin Lake Steam Electric Station – Ash Pond Area, Rusk County, Texas. January 18.

Golder, 2022b. Statistical Analysis Plan – Revision No. 1, Martin Lake Steam Electric Station – Ash Pond Area, Rusk County, Texas.

Interstate Technology and Regulatory Council (ITRC), 2010. A Decision Framework for Applying Monitored Natural Attenuation Processes to Metals and Radionuclides in Groundwater. Technical/Regulatory Guidance, December 2010.

USEPA, 2007a. Monitored Natural Attenuation of Inorganic Contaminants in Ground Water. Volume 1. Technical Basis for Assessment. EPA/600/R-07/139.

USEPA, 2007b. Monitored Natural Attenuation of Inorganic Contaminants in Ground Water. Volume 2. Assessment for Non-Radionuclides Including Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Nitrate, Perchlorate, and Selenium. EPA/600/R-07/140.

USEPA, 2009. Unified Guidance Document: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, EPA 530-R-09-007, March 2009.

SIGNATURE PAGE

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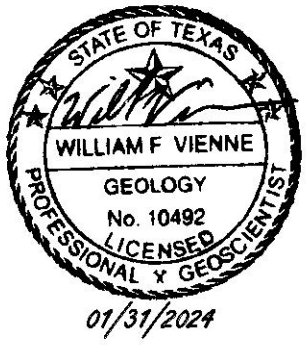

FIGURES

LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 4/6/17.

LUMINANT

MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

Figure 1

ASH POND AREA
SITE PLAN

PROJECT: 23643.01	BY: SLB	DATE: 12/14/2023	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

TABLES

Table 1
Appendix III Background Statistical Values
MLSES Ash Pond Area

Parameter	Statistical Background Value
Boron (mg/L)	0.60
Calcium (mg/L)	57
Chloride (mg/L)	150
Fluoride (mg/L)	0.40
field pH (s.u.)	4.60 7.6
Sulfate (mg/L)	370
Total Dissolved Solids (mg/L)	1,100

Table 2
Appendix IV Analytical Results
MLSES Ash Pond Area

Parameter	Groundwater Protection Standard
Antimony (mg/L)	0.0060
Arsenic (mg/L)	0.010
Barium (mg/L)	2.0
Beryllium (mg/L)	0.0040
Cadmium (mg/L)	0.0050
Chromium (mg/L)	0.10
Cobalt (mg/L)	0.056
Fluoride (mg/L)	4.0
Lead (mg/L)	0.015
Lithium (mg/L)	0.18
Mercury (mg/L)	0.0020
Molybdenum (mg/L)	0.10
Selenium (mg/L)	0.050
Thallium (mg/L)	0.0020
Radium 226+228 (pCi/L)	5.0

TABLE 3
APPENDIX III ANALYTICAL RESULTS
MLSES ASH POND AREA

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO_4 (mg/L)	TDS (mg/L)
Upgradient Wells								
H-26	10/21/15	0.602	24.2	69.2	<0.1	5.82	154	466
	12/14/15	0.0679	9.88	40.3	<0.1	5.91	76	280
	02/23/16	0.206	11.7	17.1	0.151 J	6.84	54	219
	04/05/16	0.289	11.8	27.8	0.199 J	5.89	57	213
	06/07/16	0.441	11.7	48.6	<0.1	5.98	72	278
	08/09/16	0.569	14	70	<0.1	4.63	91	354
	10/18/16	0.439	13.6	49.1	0.127 J	6.63	70	263
	12/11/16	0.537	11.9	57.6	0.161 J	6.73	69	236
	09/21/17	0.579	13.1	67.8	<0.100	6.88	70	288
	06/13/18	0.512	17	66.1	<0.100	6.74	67	313
	09/07/18	0.606	11.3	65.1	<0.100	6.85	61	265
	05/14/19	0.0507	85.2	61.7	0.140 J	6.83	88	453
	09/10/19	0.505	12	72.1	<0.100	6.75	69	265
	05/13/20	0.644	30.4	71	<0.100	6.89	58	280
	10/06/20	0.473	10.9	68.2	<0.100	6.53	52	252
	06/10/21	0.502	13.7	66.1	0.245 J	6.79	61	278
	10/04/21	0.409	12.1	72.8	<0.100	--	56	247
	10/04/21 DUP	0.412	12.6	75.6	<0.1	--	57	253
	05/25/22	0.41	12.8	67.8	<0.100	6.54	48.8	257
	09/21/22	0.414	12.6	71.9	<0.100	6.69	52.2	258
	05/17/23	0.355	16.5	77.3	<0.100	6.58	43.9	302
	08/14/23	0.421	16.1	78.5	<0.100	6.73	48.9	295
H-27	10/21/15	0.58	55.3	117	<0.1	6.24	328	800
	12/14/15	0.474	57.2	112	0.156 J	6.32	317	857
	02/23/16	0.523	53.8	113	0.101 J	5.82	344	811
	04/05/16	0.48	52.7	115	0.124 J	6.04	360	819
	06/07/16	0.319	10.6	40.5	<0.1	6.32	55	207
	08/09/16	0.462	54.3	124	<0.1	4.35	365	854
	10/18/16	0.477	56.5	114	0.144 J	6.87	336	868
	12/11/16	0.427	52.8	119	0.161 J	6.78	355	805
	09/21/17	0.48	61.1	122	<0.100	6.87	378	852
	06/13/18	0.404	57	110	0.208 J	6.52	372	850
	09/07/18	0.347	6.96	58.3	0.14 J	6.72	188	716
	05/14/19	0.35	61.8	132	0.159 J	6.78	406	897
	09/10/19	0.368	57.7	117	<0.1	6.77	365	841
	05/13/20	0.583	53.1	93	<0.100	6.92	274	786
	10/06/20	0.465	11.0	68.0	<0.100	6.55	52	253
	06/10/21	0.537	18	49.3	<0.100	6.74	46	219
	10/04/21	0.0511	39.5	84.7	<0.100	--	97	415
	05/25/22	15.6	199	155	1.47	6.85	1850	3180
	09/21/22	0.0632	21.5	97.6	<0.100	6.83	108	421
	05/17/23	0.0478	23.1	84.2	<0.100	6.71	79.8	379
	08/14/23	0.362	15.4	64	<0.100	6.75	40	254

TABLE 3
APPENDIX III ANALYTICAL RESULTS
MLSES ASH POND AREA

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO_4 (mg/L)	TDS (mg/L)
H-33	10/20/15	0.0462	17.9	60.5	<0.1	5.78	120	415
	12/14/15	0.0596	10.7	59.6	0.136 J	5.73	110	403
	02/23/16	0.0656	11.2	56.1	0.125 J	6.92	111	625
	04/05/16	0.0659	14.9	58.3	0.14 J	6.31	113	589
	06/07/16	0.0571	20.1	67.5	<0.1	6.04	121	515
	08/09/16	0.0431	11.2	64.9	<0.1	5.13	120	442
	10/18/16	0.0539	11.1	59.2	<0.1	6.86	114	398
	12/11/16	0.0594	12.1	63.2	0.132 J	6.85	112	395
	09/21/17	0.0452	13.7	67.9	<0.100	7.02	107	412
	06/13/18	0.114	24	65.5	0.105 J	6.72	94	447
	09/07/18	0.112	22.4	66.2	0.135 J	6.73	97	489
	05/14/19	0.0592	68.6	80.4	0.166 J	6.81	104	559
	09/10/19	0.0631	44.1	86.1	<0.1	6.75	119	495
	05/13/20	0.103	24	84.3	<0.100	6.63	113	439
	10/06/20	0.0763	19.7	83.0	<0.100	6.88	108	417
	06/10/21	0.072	81.6	86.8	0.272 J	6.64	112	569
	06/04/21 DUP	0.0605	81.3	85.0	0.265 J	--	113	563
	10/04/21	0.0557	49.1	99.8	<0.100	--	117	499
	05/25/22	0.0625	28.9	87.7	<0.100	6.87	97.2	446
	09/21/22	0.058	21.4	96.9	<0.100	6.74	109	425
	05/17/23	0.0646	41.6	100	<0.100	6.77	105	493
	5/17/23 DUP	0.0507	41.9	95.2	<0.100	6.77	104	486
	08/14/23	0.157	52	102	<0.100	6.79	104	511
	8/14/23 DUP	0.0634	43.6	101	<0.100	6.79	104	518
Downgradient Wells								
H-28	10/21/15	9.25	113	109	<0.1	5.92	1,010	1,830
	12/14/15	1.02	17.3	15.5	<0.1	6.02	113	299
	02/23/16	10.2	123	97.4	<0.1	4.45	1,070	1,910
	04/05/16	10.3	120	94.4	<0.1	5.97	1,080	1,890
	06/07/16	3.66	45.4	62.2	<0.1	6.16	465	817
	08/09/16	9.29	116	98.4	<0.1	3.83	1,080	2,100
	10/18/16	4.96	67.3	91.4	0.165 J	6.82	643	1,460
	12/11/16	3.94	45.7	56.7	0.114 J	6.64	445	766
	09/21/17	6.06	74.1	88.5	<0.100	6.77	702	1,220
	06/13/18	6.97	92.1	96.5	0.126 J	6.59	826	1,490
	09/07/18	4.54	60.5	93.4	<0.100	6.84	679	1,330
	05/14/19	8.51	99.7	98.9	<0.100	6.32	935	1,680
	09/10/19	5.69	68.9	95.9	<0.100	6.89	716	1,390
	05/13/20	7.03	88.9	86.7	<0.100	6.58	676	1,220
	10/06/20	5.14	70.8	88.7	<0.100	6.72	638	1,220
	06/10/21	7.07	88.7	90.9	<0.100	6.57	817	1,480
	10/04/21	5.24	71.3	93.7	<0.100	--	681	1,220
	05/25/22	4.95	75.8	87.2	<0.100	6.96	670	1320
	09/20/22	4.98	67	87.6	<0.100	6.57	622	1190
	05/17/23	5.47	81.4	99.2	<0.100	6.57	719	1350
	08/14/23	5.79	73.5	94.7	<0.100	6.61	662	1310

TABLE 3
APPENDIX III ANALYTICAL RESULTS
MLSES ASH POND AREA

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO_4 (mg/L)	TDS (mg/L)
H-29	10/21/15	0.0788	16	65.2	<0.1	5.78	171	441
	12/14/15	0.29	165	8.68	0.56	5.92	178	990
	02/23/16	0.268	59.4	14.6	0.239 J	11.20	156	334
	04/05/16	0.361	80.8	14.2	0.363 J	6.04	181	489
	06/07/16	0.311	29.8	19.3	0.27 J	6.13	166	308
	08/09/16	0.172	64.6	53.1	<0.1	5.97	124	575
	10/18/16	0.953	150	4.33	1.15	6.63	346	607
	12/11/16	1.02	130	4.65	1.4	6.59	365	651
	09/21/17	1.4	147	42	0.304	6.78	170	782
	06/13/18	5.89	81.1	84.1	0.123 J	6.75	713	1,240
	09/07/18	3.21	46.7	78.6	<0.100	6.77	544	1,030
	05/14/19	8.12	95.9	81.8	0.104 J	6.52	780	1,400
	09/10/19	8.05	97.1	90.5	<0.1	6.62	930	1,600
	05/13/20	6.98	84.9	70.7	<0.100	6.72	769	1,340
	10/06/20	11.0	156	167	1.76	6.62	1,400	2,440
	06/10/21	7.28	89.7	80.2	<0.100	6.78	482	987
	10/04/21	17.9	241	201	0.223 J	--	2,330	3,690
	05/25/22	3.1	47.5	45.7	<0.100	6.72	338	654
	09/20/22	10.3	136	156	0.819	6.76	1550	2640
	05/17/23	4.39	64.7	80.6	<0.100	6.42	522	1010
	08/14/23	3.7	48.5	63.8	<0.100	6.53	435	865
H-31	10/20/15	17.2	194	179	0.889	6.57	1,930	3,270
	12/14/15	20.4	236	147	0.692	6.60	1,740	2,250
	02/23/16	22.3	252	199	0.921	5.33	2,510	4,180
	04/05/16	21.1	250	186	1.36	6.46	2,450	3,920
	06/07/16	22.2	244	241	0.783	6.42	2,720	4,570
	08/09/16	24.1	251	217	0.216 J	4.38	2,730	4,440
	10/18/16	20	236	187	0.298 J	6.82	1,960	3,690
	12/11/16	22.3	246	201	0.892	6.82	2,640	4,170
	09/21/17	23.8	260	227	0.308 J	6.87	2,870	4,570
	06/12/18	16.6	246	205	0.646	6.61	2,390	4,100
	09/07/18	0.838	12.2	17.7	<0.275	6.77	136	457
	05/14/19	20	234	225	0.96	6.42	2,470	4,230
	09/10/19	19.7	234	232	2.1	6.78	2,640	4,220
	05/13/20	22.9	235	223	0.231 J	6.81	2,340	4,150
	10/06/20	9.77	148	110	0.494	6.78	1,150	2,000
	06/10/21	18.3	224	230	0.806	6.72	2,760	4,270
	10/04/21	16.7	244	208	<0.100	--	2,110	3,400
	05/25/22	17.3	255	205	1.16	6.72	2260	3940
	09/20/22	22.8	287	239	1.34	6.72	2730	4610
	05/17/23	19.4	262	225	0.874	6.68	2400	4060
	08/14/23	4.61	57.8	66.7	<0.100	6.64	455	918

TABLE 3
APPENDIX III ANALYTICAL RESULTS
MLSES ASH POND AREA

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO_4 (mg/L)	TDS (mg/L)
H-32	10/20/15	1.22	42.2	120	0.374 J	6.18	309	797
	12/14/15	1.39	37.4	122	0.619	6.29	325	860
	02/23/16	1.48	45.3	123	0.701	4.82	323	842
	04/05/16	1.65	44.3	125	1.05	6.17	337	831
	06/07/16	1.82	45.6	137	0.858	6.05	350	829
	08/09/16	1.69	45.4	132	0.68	3.64	342	839
	10/18/16	1.72	50.5	121	0.904	6.75	319	888
	12/11/16	2.5 J	44.3	120	1.00	6.83	341	759
	09/21/17	2.07 J	52.8	129	0.519	6.82	337	807
	06/12/18	1.82 J	52.6	126	1.02	6.75	339	793
	09/07/18	0.292 J	10.9	17.8	0.551	6.79	54	283
	05/14/19	2.08	45.2	135	1.15	6.02	320	910
	09/10/19	1.87	45.9	127	0.923	6.68	365	810
	05/13/20	2.15	43.3	124	0.641	6.93	343	791
	10/06/20	1.79	49.0	116	0.814	6.59	336	777
	06/10/21	2.08	41.2	107	0.721 J	6.77	335	764
	10/04/21	1.93	49.3	118	0.656	--	359	765
	05/25/22	1.98	45	105	0.758	6.65	322	775
	09/20/22	1.91	44.8	111	0.67	6.92	327	766
	05/17/23	1.93	45.8	110	0.502	6.54	315	759
	08/14/23	3.74	48.0	61.3	<0.100	6.52	416	849

Notes:

1. Abbreviations: mg/L - milligrams per liter; TDS - total dissolved solids; s.u. - standard units.
2. J - concentration is below method quantitation limit; result is an estimate.

TABLE 4
APPENDIX IV GROUNDWATER ANALYTICAL DATA
MLSES ASH POND AREA

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb.^ (pCi/L)
Upgradient Wells																		
H-26	10/21/15	<0.0008	0.00364 J	0.0785	0.000349 J	<0.0003	<0.002	0.0385	<0.1	<0.0003	0.0139	<0.00008	<0.002	<0.002	<0.0005	0.919	<1.64	2.56
	12/14/15	<0.0008	<0.002	0.0401	0.000458 J	<0.0003	<0.002	0.0244	<0.1	<0.0003	0.0769	<0.00008	<0.002	<0.002	<0.0005	0.619	<1.95	2.57
	02/23/16	<0.0008	<0.002	0.0423	<0.0003	<0.0003	0.0077	0.00813	0.151 J	0.000315 J	0.0124	<0.00008	0.00248 J	0.0022 J	<0.0005	0.37	<2.06	2.43
	04/05/16	<0.0008	<0.002	0.0408	<0.0003	<0.0003	0.00798	0.0125	0.199 J	<0.0003	0.0121	<0.00008	<0.002	<0.002	<0.0005	<0.243	<1.06	<1.303
	06/07/16	<0.0008	<0.002	0.0467	0.000721 J	<0.0003	<0.002	0.0217	<0.1	<0.0003	0.0132	<0.00008	<0.002	<0.002	<0.0005	0.245	1.67	1.92
	08/09/16	<0.0008	0.0029 J	0.0431	0.00136	<0.0003	<0.002	0.0352	<0.1	<0.0003	0.0155	<0.00008	<0.002	<0.002	<0.0005	<0.2	<0.932	<1.132
	10/18/16	<0.0008	<0.002	0.0497	0.000709 J	<0.0003	<0.002	0.0214	0.127 J	<0.0003	0.0136	<0.00008	<0.002	0.00265 J	<0.0005	0.243	<0.622	0.87
	12/11/16	<0.0008	<0.002	0.0468	0.00146	<0.0003	0.00311 J	0.0275	0.161 J	0.000358 J	0.014	<0.00008	<0.002	<0.002	<0.0005	0.248	1.82	2.07
	06/13/18	<0.0008	<0.002	0.0659	0.0016	<0.0003	0.00213 J	0.0261	<0.100	<0.0003	0.032	<0.00008	<0.002	<0.002	<0.0005	<0.297	3.72	4.017
	09/07/18	NA	<0.002	0.0470	0.00155	<0.0003	0.00319 J	0.0247	<0.100	<0.0003	0.0489	NA	NA	<0.002	NA	<0.473	<0.665	<1.138
	05/14/19	<0.0008	0.0041 J	0.1900	0.00147	<0.0003	0.0406	0.0795	0.140 J	0.000972 J	0.147	<0.00008	<0.002	0.00222 J	<0.0005	1.43	0.598	2.028
	09/10/19	NA	<0.002	0.046	0.00165	<0.0003	<0.002	0.0237	<0.1	0.000313 J	0.0141	NA	NA	0.0109	NA	0.115	2.74	2.85
	05/13/20	<0.0008	<0.002	0.129	0.00166	<0.0003	0.00314 J	0.0241	<0.100	0.000798	0.0218 J	<0.00008	<0.002	0.0147	<0.0005	0.295	0.585	0.88
	10/06/20	<0.000800	<0.00200	0.0528	0.00168	<0.000300	<0.00200	0.0231	<0.100	<0.000300	0.0152	<0.0000800	<0.00200	0.00909	<0.000500	0.898	0.293	1.19
	06/04/21	<0.000800	<0.00200	0.0629	0.00153	<0.000300	<0.00200	0.024	0.245 J	0.000621 J	0.0148	<0.000400	<0.00200	0.0201	<0.000500	0.263	1.13	1.39
	10/04/21	<0.000800	<0.00200	0.0491	0.00147	<0.000300	<0.00200	0.0227	<0.100	0.000408 J	0.0119	<0.0000800	<0.00200	0.00669	<0.000500	0.332	2.17	2.5
	10/4/21 DUP	<0.000800	<0.00200	0.0508	0.0017	<0.000300	<0.00200	0.0232	<0.100	0.000398 J	0.0131	<0.0000800	<0.00200	0.00727	<0.000500	0.140 J	1.050	1.19
	05/25/22	<0.000800	<0.00200	0.0608	0.00169	<0.000300	0.00269 J	0.0246	<0.100	0.00138	0.0174	<0.0000800	<0.00200	0.0139	<0.000500	<0.218	0.508 J	0.621 J
	09/21/22	<0.000800	<0.00200	0.0587	0.0016	<0.000300	<0.00200	0.026	<0.100	0.000507 J	0.0161	<0.0000800	<0.00200	0.00859	<0.000500	0.0719 J	0.502	0.574
	05/17/23	<0.000800	<0.00200	0.099	0.00122	<0.000300	0.00298 J	0.0242	<0.100	0.000615 J	0.0211	<0.0000800	<0.00200	0.0138	<0.000500	0.567	1.15	1.72
	08/14/23	<0.000800	<0.00200	0.0890	0.00150	<0.000300	0.00216 J	0.0244	<0.100	0.000518 J	0.0201	0.0000824 J	<0.00200	0.0140	<0.000500	0.375	1.62	1.99
H-27	10/21/15	<0.0008	<0.002	0.0378	<0.0003	<0.0003	<0.002	0.00432 J	<0.1	<0.0003	0.0607	<0.00008	<0.002	<0.002	<0.0005	<0.553	<1.67	<2.223
	12/14/15	<0.0008	0.0021 J	0.039	<0.0003	<0.0003	<0.002	0.00326 J	0.156 J	0.000339 J	0.0624	<0.00008	<0.002	<0.002	<0.0005	0.468	<1.68	2.15
	02/23/16	<0.0008	<0.002	0.0266	<0.0003	<0.0003	<0.002	<0.003	0.101 J	<0.0003	0.0601	<0.00008	<0.002	<0.002	<0.0005	0.921	<1.62	2.54
	04/05/16	<0.0008	<0.002	0.0245	<0.0003	<0.0003	<0.002	<0.003	0.124 J	<0.0003	0.0573	<0.00008	<0.002	<0.002	<0.0005	0.269	<2.05	2.32
	06/07/16	<0.0008	<0.002	0.0342	0.000609 J	<0.0003	<0.002	0.016	<0.1	<0.0003	0.0107	<0.00008	<0.002	<0.002	<0.0005	0.269	<0.658	0.927
	08/09/16	<0.0008	<0.002	0.0241	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0616	<0.00008	<0.002	<0.002	<0.0005	0.408	<0.632	1.04
	10/18/16	<0.0008	<0.002	0.0248	<0.0003	<0.0003	<0.002	<0.003	0.144J	<0.0003	0.0576	<0.00008	<0.002	<0.002	<0.0005	<0.178	1.07	1.25
	12/11/16	<0.0008	<0.002	0.0236	<0.0003	<0.0003	<0.002	<0.003	0.161 J	<0.0003	0.0606	<0.00008	<0.002	<0.002	<0.0005	0.143	1.54	1.68
	06/13/18	<0.0008	<0.002	0.0237	<0.0003	<0.0003	0.00964	<0.003	0.208 J	<0.0003	0.108	<0.00008	<0.002	<0.002	<0.0005	0.267	<1.4	1.667
	09/07/18	NA	<0.002	0.0196	<0.0003	<0.0003	0.0453	<0.003	0.140 J	<0.0003	0.306	NA	NA	0.00773	NA	<0.285	1.43	1.715
	05/14/19	<0.0008	<0.002	0.0208	<0.0003	<0.0003	<0.002	<0.003	0.159 J	<0.0003	0.0678	<0.00008	<0.002	<0.002	<0.0005	1.10	0.928	2.028
	09/10/19	NA	<0.002	0.384	<0.0003	<0.0003	0.00668	<0.003	<0.1	<0.0003	0.103	NA	NA	0.0027 J	NA	0.185	3.57	3.76
	05/13/20	<0.0008	<0.002	0.0668	<0.0003	<0.0003	0.0133	<0.003	<0.100	<0.0003	0.170	<0.00008	<0.002	0.00671	<0.0005	0.166	<0.9	0.166
	10/06/20	<0.000800	<0.00200	0.0519	0.00167	<0.000300	<0.00200	0.0233	<0.100	0.000390 J	0.0152	<0.0000800	<0.00200	0.00961	<0.000500	0.409	0.789	1.2
	06/04/21	<0.000800	<0.00200	0.0771	0.00149	<0.000300	0.0363	0.0254	<0.100	<0.000300	0.0165	<0.0000800	<0.00200	0.00414 J	<0.000500	0.226	1.15	1.38
	10/04/21	<0.000800	<0.00200	0.115	0.000461 J	<0.000300	0.00265 J	0.0295	<0.100	<0.000300	0.105	<0.0000800	<0.00200	<0.00200	<0.000500	0.571	1.65	2.22
	05/25/22	<0.000800	0.0111	0.00857 J	0.0294	0.000666 J	0.00475 J	0.39	1.47	0.00154	0.144	<0.0000800	<0.00200	0.012	<0.000500	0.345	<0.258	0.618 J
	09/21/22	<0.000800	<0.00200	0.0794	0.000786 J	<0.000300	0.00287 J	0.0386	<0.100	<0.000300	0.152	<0.0000800	<0.00200	<0.00200	<0.000500	0.302	1.07	1.37
	05/17/23	<0.000800	<0.00200	0.0911	0.000440 J	<0.000300	<0.00200	0.0246	<0.100	<0.000300	0.0958	<0.0000800	<0.00200	<0.00200	<0.000500	0.714	<0.308	0.714
	08/14/23	<0.000800	<0.00200	0.0836	0.00123	<0.000300	0.00318 J	0.0216	<0.100	0.00149	0.0182	0.000113 J	<0.00200	0.0136	<0.000500	0.619	0.896	1.52

TABLE 4
APPENDIX IV GROUNDWATER ANALYTICAL DATA
MLSES ASH POND AREA

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb.^ (pCi/L)
H-33	10/20/15	<0.0008	0.00208 J	0.0586	0.000351 J	<0.0003	<0.002	0.0274	<0.1	<0.0003	0.0814	<0.00008	<0.002	<0.002	<0.0005	1.76	1.64	3.40
	12/14/15	<0.0008	0.00205 J	0.0473	0.000382 J	<0.0003	<0.002	0.0293	0.136 J	<0.0003	0.0903	<0.00008	<0.002	<0.002	<0.0005	1.94	<1.79	3.73
	02/23/16	<0.0008	<0.002	0.0529	0.000311 J	<0.0003	0.0194	0.0163	0.125 J	<0.0003	0.182	<0.00008	<0.002	<0.002	<0.0005	0.906	<2.32	3.23
	04/05/16	<0.0008	<0.002	0.0576	0.000302 J	<0.0003	0.0171	0.016	0.14 J	<0.0003	0.16	<0.00008	<0.002	<0.002	<0.0005	0.328	1.08	1.41
	06/07/16	<0.0008	<0.002	0.0774	0.000604 J	<0.0003	0.0153	0.0196	<0.1	<0.0003	0.163	<0.00008	<0.002	<0.002	<0.0005	0.276	0.897	1.17
	08/09/16	<0.0008	<0.002	0.0424	0.000519 J	<0.0003	0.00291 J	0.0284	<0.1	<0.0003	0.102	<0.00008	<0.002	<0.002	<0.0005	<0.149	0.649	0.80
	10/18/16	<0.0008	0.00347 J	0.0464	0.000617 J	<0.0003	0.0309	0.0644	<0.1	0.000329 J	0.118	<0.00008	<0.002	<0.002	<0.0005	0.096	<0.517	0.61
	12/11/16	<0.0008	0.00218 J	0.0537	0.000865 J	<0.0003	0.0368	0.0408	0.132 J	0.000495 J	0.115	<0.00008	<0.002	<0.002	<0.0005	0.159	1.29	1.45
	06/13/18	<0.0008	0.00283 J	0.0741	0.0004 J	<0.0003	0.0182	0.0266	0.105 J	0.0009 J	0.183	<0.00008	<0.002	<0.002	<0.0005	0.795	<0.712	1.507
	09/07/18	NA	0.00239 J	0.0757	0.0003 J	<0.0003	0.0105	0.0288	0.135 J	<0.0003	0.160	NA	NA	<0.002	NA	0.334	<0.645	0.979
	05/14/19	<0.0008	0.00355 J	0.158	0.00114	<0.0003	0.0342	0.0648	0.166 J	0.000772 J	0.161	<0.00008	<0.002	<0.002	<0.0005	0.850	1.35	2.200
	09/10/19	NA	<0.002	0.111	0.000518 J	<0.0003	0.00637	0.0347	<0.100	<0.0003	0.142	NA	NA	<0.002	NA	0.6	2.97	3.57
	05/13/20	<0.0008	<0.002	0.0784	0.00053 J	<0.0003	0.00755	0.0312	<0.100	0.00191	0.173	<0.00008	<0.002	0.00243 J	<0.0005	0.395	1.9	2.29
	10/06/20	<0.000800	<0.00200	0.068	0.000721 J	<0.000300	0.00317 J	0.0331	<0.100	0.000358 J	0.128	<0.0000800	<0.00200	<0.00200	<0.000500	0.33	0.737	1.07
	06/04/21	<0.000800	<0.00200	0.213	0.000342 J	<0.000300	0.00464 J	0.0258	0.272 J	<0.000300	0.155	<0.0000800	<0.00200	<0.00200	<0.000500	0.329	0.32	1.41
	06/4/21 DUP	<0.000800	<0.00200	0.208	0.000319 J	<0.000300	0.00458 J	0.0248	0.265	<0.000300	0.153	<0.0000800	<0.00200	<0.00200	<0.000500	0.869	1.14	2.01
	10/04/21	<0.000800	<0.00200	0.129	0.000583 J	<0.000300	0.00337	0.0340	<0.100	0.000347 J	0.131	<0.0000800	<0.00200	<0.00200	<0.000500	0.422	1.21	1.63
	05/25/22	<0.000800	<0.00200	0.0996	0.000536 J	<0.000300	0.00696	0.0295	<0.100	<0.000300	0.189	<0.0000800	<0.00200	<0.00200	<0.000500	0.277	1.35	1.63
	5/25/22 DUP	<0.000800	<0.00200	0.101	0.000533 J	<0.000300	0.00709	0.0301	<0.100	<0.000300	0.191	<0.0000800	<0.00200	<0.00200	<0.000500	0.251 J	1.02	1.27
	09/21/22	<0.000800	<0.00200	0.0789	0.000812 J	<0.000300	0.00272 J	0.0389	<0.100	<0.000300	0.151	<0.0000800	<0.00200	<0.00200	<0.000500	0.232 J	1.09	1.32
	05/17/23	<0.000800	<0.00200	0.125	0.000538 J	<0.000300	0.00360 J	0.0349	<0.100	<0.000300	0.156	<0.0000800	<0.00200	<0.00200	<0.000500	0.472	1.38	1.85
	5/17/23 DUP	<0.000800	<0.00200	0.129	0.000525 J	<0.000300	0.00381 J	0.0356	<0.100	<0.000300	0.16	<0.0000800	<0.00200	<0.00200	<0.000500	0.411	0.991	1.4
	08/14/23	<0.000800	<0.00200	0.157	0.000863 J	<0.000300	0.0157	0.0377	<0.100	0.00128	0.153	<0.0000800	<0.00200	<0.00200	<0.000500	0.314	1.69	2.00
	8/14/23 DUP	<0.000800	<0.00200	0.135	0.000777 J	<0.000300	0.0114	0.0368	<0.100	0.000999 J	0.153	<0.0000800	<0.00200	<0.00200	<0.000500	0.402	0.785	1.19
Downgradient Wells																		
H-28	10/21/15	<0.0008	0.00278 J	0.0396	0.00148	0.00121	<0.002	0.188	<0.1	0.000491 J	0.154	<0.00008	<0.002	0.00682	<0.0005	<0.558	<1.65	<2.208
	12/14/15	<0.0008	<0.002	0.0224	<0.0003	0.000572 J	<0.002	0.0225	<0.1	<0.0003	0.021	<0.00008	<0.002	<0.002	<0.0005	0.707	<1.18	1.89
	02/23/16	<0.0008	0.00225 J	0.0202	0.00133	0.00151	<0.002	0.201	<0.1	0.00053 J	0.159	<0.00008	<0.002	0.00222 J	<0.0005	<0.396	2.24	2.64
	04/05/16	<0.0008	<0.002	0.0173	0.0011	0.00252	<0.002	0.199	<0.1	0.00087 J	0.15	<0.00008	<0.002	0.00237 J	<0.0005	<0.231	1.76	1.99
	06/07/16	<0.0008	<0.002	0.0468	0.000934 J	0.000664 J	<0.002	0.0944	<0.1	<0.0003	0.0959	<0.00008	<0.002	<0.002	<0.0005	0.310	1.48	1.79
	08/09/16	<0.0008	<0.002	0.0155	0.00275	0.0016	<0.002	0.195	<0.1	0.000774 J	0.155	<0.00008	<0.002	0.00286 J	<0.0005	<0.451	1.41	1.86
	10/18/16	<0.0008	0.00284J	0.0174	0.00685	0.000744 J	<0.002	0.169	0.165J	0.00108	0.155	<0.00008	<0.002	0.00273 J	<0.0005	<0.228	0.645	0.87
	12/11/16	<0.0008	<0.002	0.0471	0.000698 J	0.000668 J	<0.002	0.0924	0.114 J	<0.0003	0.0869	<0.00008	<0.002	<0.002	<0.0005	<0.149	1.13	1.28
	06/13/18	<0.0008	<0.002	0.0186	0.00393	0.0038	<0.002	0.169	0.126 J	0.000448 J	0.18	<0.00008	<0.002	<0.002	<0.0005	0.327	<1.56	1.887
	09/07/18	NA	<0.002	0.0192	0.00704	0.00115	<0.002	0.162	<0.100	0.00118 J	0.203	NA	NA	0.00281 J	NA	<0.243	0.845	1.088
	05/14/19	<0.0008	<0.002	0.0141	0.00281	0.00212	<0.002	0.187	<0.100	0.000595 J	0.172	<0.00008	<0.002	0.00619	<0.0005	0.444	0.615	1.059
	09/10/19	NA	<0.002	0.145	0.0058	0.000951	<0.002	0.146	<0.1	0.00132	0.169	NA	NA	0.00461	NA	0.205	4.26	4.47
	05/13/20	<0.0008	<0.002	0.0149	0.00252	0.00126	<0.002	0.159	<0.100	0.00751 J	0.171	<0.00008	<0.002	0.0032 J	<0.0005	0.151	0.984	1.13
	10/06/20	<0.000800	<0.00200	0.0166	0.00563	0.000835 J	<0.00200	0.145	<0.100	0.00106	0.173	<0.0000800	<0.00200	0.00468 J	<0.000500	0.898	0.293	1.19
	06/04/21	<0.000800	<0.00200	0.0167	0.00353	0.00121	<0.00200	0.164	<0.100	0.000812 J	0.159	0.000101 J	<0.00200	<0.00200	<0.000500	0.229	0.796 J	1.03
	10/04/21	<0.000800	<0.00200	0.0135	0.00627	0.000763 J	<0.00200	0.148	<0.100	0.00127	0.163	<0.0000800	<0.00200	0.00477 J	<0.000500	0.119 J	0.798	0.917
	05/25/22	<0.000800	<0.00200	0.0144	0.00571	0.000848 J	<0.00200	0.163	<0.100	0.000599 J	0.172	<0.0000800	<0.00200	<0.00200	<0.000500	0.202 J	1.55	1.75
	09/20/22	<0.000800	<0.00200	0.0148	0.00705	0.000692 J	<0.00200	0.164	<0.100	0.00145	0.197	<0.0000800	<0.00200	<0.00200	<0.000500	0.320	0.601	0.921
	05/17/23	<0.000800	<0.00200	0.0132	0.00689	0.000786 J	<0.00200	0.175	<0.100	0.000770 J	0.194	<0.0000800	<0.00200	<0.00200	<0.000500	0.189 J	0.563	0.753
	08/14/23	<0.000800	<0.00200	0.0134	0.00736	0.000842 J	<0.00200	0.172	<0.100	0.00124	0.21	<0.0000800	<0.00200	<0.00200	<0.000500	<0.147	<0.368	<0.515

TABLE 4
APPENDIX IV GROUNDWATER ANALYTICAL DATA
MLSES ASH POND AREA

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb.^ (pCi/L)
H-29	10/21/15	<0.0008	<0.002	0.159	0.000359 J	<0.0003	<0.002	0.0301	<0.1	<0.0003	0.0156	<0.00008	<0.002	<0.002	<0.0005	0.464	1.82	2.28
	12/14/15	<0.0008	<0.002	0.277	<0.0003	<0.0003	0.062	<0.003	0.56	0.000542 J	0.0202	<0.00008	0.00819	0.0282	<0.0005	<0.53	<1.25	<1.78
	02/23/16	<0.0008	0.00203 J	0.151	<0.0003	<0.0003	0.019	<0.003	0.239 J	<0.0003	0.0135	<0.00008	0.00603	0.0148	<0.0005	<0.374	<2.22	<2.594
	04/05/16	<0.0008	<0.002	0.167	<0.0003	<0.0003	0.042	<0.003	0.363 J	<0.0003	0.0175	<0.00008	0.00697	0.0232	<0.0005	<0.228	<0.897	<1.125
	06/07/16	<0.0008	<0.002	0.136	<0.0003	<0.0003	0.0274	<0.003	0.27 J	<0.0003	0.0188	<0.00008	0.00551	0.0152	<0.0005	0.173	<0.834	1.01
	08/09/16	<0.0008	0.00995	0.315	<0.0003	<0.0003	0.00297 J	0.00473 J	<0.1	<0.0003	0.0143	<0.00008	<0.002	<0.002	<0.0005	0.261	<0.578	0.84
	10/18/16	<0.0008	<0.002	0.118	<0.0003	<0.0003	0.00412 J	<0.003	1.15	0.000427J	0.0056 J	<0.00008	0.00305 J	0.0681	<0.0005	0.155	<0.439	0.59
	12/11/16	<0.0008	<0.002	0.0779	<0.0003	<0.0003	<0.002	<0.003	1.4	<0.0003	<0.005	<0.00008	0.00307 J	0.0642	<0.0005	<0.113	<0.599	<0.712
	06/13/18	<0.0008	<0.002	0.0157	0.00345	0.00318	<0.002	0.153	0.123 J	0.000779 J	0.153	<0.00008	<0.002	<0.002	<0.0005	<0.274	<1.62	<1.894
	09/07/18	NA	<0.002	0.0374	0.00513	0.000938	<0.002	0.119	<0.100	0.00172	0.145	NA	NA	0.00374 J	NA	<0.371	<0.71	<1.081
	05/14/19	<0.0008	<0.002	0.0138	0.00341	0.00219	<0.002	0.183	0.104 J	0.000543 J	0.173	<0.00008	<0.002	0.00616	<0.0005	<0.339	<0.707	<1.046
	09/10/19	NA	<0.002	0.0135	0.00233	0.00127	<0.002	0.164	<0.1	0.000916 J	0.157	NA	NA	0.00395 J	NA	0.364	4.99	5.35
	05/13/20	<0.0008	<0.002	0.0117	0.0013	0.00129	<0.002	0.142	<0.100	0.000684 J	0.134	<0.00008	<0.002	0.00281 J	<0.0005	0.246	0.545	0.791
	10/06/20	<0.000800	0.00696	0.0165	0.0256	<0.000300	0.00205 J	0.377	1.76	0.000438	0.164	<0.0000800	<0.00200	0.0513	<0.000500	0.0273	0.741	0.769
	06/04/21	<0.000800	<0.00200	0.0168	0.0032	0.00126	<0.00200	0.168	<0.100	0.000554 J	0.159	0.000118 J	<0.00200	<0.00200	<0.000500	0.136 J	0.853	0.989
	10/04/21	<0.000800	0.0130	0.0222	0.0340	0.000847 J	0.00477 J	0.430	0.223 J	0.00235	0.159	<0.0000800	<0.00200	0.117	<0.000500	0.155 J	1.82	1.97
	05/25/22	<0.000800	<0.00200	0.0132	0.00339	0.000521 J	<0.00200	0.0964	<0.100	0.000590 J	0.102	0.0000976 J	<0.00200	<0.00200	<0.000500	0.340	1.45	1.79
	09/20/22	<0.000800	0.0051	0.0142	0.0165	0.000874 J	0.00201 J	0.271	0.819	0.0025	0.195	<0.0000800	<0.00200	0.00558	<0.000500	0.253 J	1.00	1.26
	05/17/23	<0.000800	<0.00200	0.0299	0.0052	0.000693 J	<0.00200	0.134	<0.100	0.000637 J	0.147	<0.0000800	<0.00200	<0.00200	<0.000500	0.581	1.23	1.81
	08/14/23	<0.000800	<0.00200	0.0122	0.00492	0.000540 J	<0.00200	0.115	<0.100	0.000886	0.135	<0.0000800	<0.00200	<0.00200	<0.000500	0.487	0.671	1.16
H-31	10/20/15	<0.0008	0.0168	0.0732	0.0126	0.0032	0.00687	0.434	0.889	<0.0003	0.137	<0.00008	<0.002	0.116	<0.0005	0.943	<1.88	2.82
	12/14/15	<0.0008	0.00513	0.0388	0.00702	<0.0003	0.00456 J	0.0651	0.692	<0.0003	0.149	<0.00008	<0.002	0.0231	<0.0005	1.61	<1.29	2.90
	02/23/16	<0.0008	0.00436 J	0.0243	0.0101	<0.0003	<0.002	0.0594	0.921	<0.0003	0.146	<0.00008	<0.002	0.0209	<0.0005	<0.419	<1.64	<2.059
	04/05/16	<0.0008	0.00514	0.0241	0.00925	<0.0003	0.00435 J	0.0685	1.36	<0.0003	0.146	<0.00008	<0.002	0.0226	<0.0005	<0.334	<0.897	<1.231
	06/07/16	<0.0008	0.0038 J	0.0242	0.00789	<0.0003	<0.002	0.0406	0.783	<0.0003	0.157	<0.00008	<0.002	0.0307	<0.0005	0.257	<0.555	0.81
	08/09/16	<0.0008	0.00886	0.0191	0.00734	<0.0003	<0.002	0.286	0.216 J	<0.0003	0.17	<0.00008	<0.002	0.0202	<0.0005	1.31	0.900	2.21
	10/18/16	<0.0008	0.00351 J	0.0215	0.00167 J	<0.0003	<0.002	0.0304 J	0.298 J	<0.0003	0.165	<0.00008	<0.002	0.00567 J	<0.0005	0.169	1.18	1.35
	12/11/16	<0.0008	0.00875 J	0.0189	0.0197	<0.0003	0.00386 J	0.23 J	0.892	<0.0003	0.198	<0.00008	<0.002	0.0365	<0.0005	0.195	<0.754	0.95
	06/12/18	<0.0008	0.00532	0.0194	0.00545	<0.0003	0.003 J	0.236	0.646	<0.0003	0.214	<0.00008	<0.002	0.00475 J	<0.0005	<0.26	<0.597	<0.857
	09/07/18	NA	<0.002	0.0287	<0.0003	<0.0003	<0.002	0.00353 J	0.275 J	<0.0003	0.0187	NA	NA	0.00424 J	NA	<0.261	<0.567	<0.828
	05/14/19	<0.0008	0.00675	0.0163	0.00928	<0.0003	0.00315 J	0.389	0.96	<0.0003	0.219	<0.0004	<0.002	0.0261	<0.0005	2.62	<0.789	3.409
	09/10/19	NA	0.00845	0.0158	0.0312	<0.0003	0.00305 J	0.41	2.1	<0.0003	0.225	NA	NA	0.0642	NA	0.247	2.92	3.17
	05/13/20	<0.0008	0.011	0.0159	0.0331	<0.0003	0.00367 J	0.449	0.231 J	<0.0003	0.249	<0.00008	<0.002	0.0792	<0.0005	0.0808	1.7	1.78
	10/06/20	<0.000800	0.00440 J	0.0345	0.00923	<0.000300	<0.00200	0.208	0.494	<0.000300	0.120	<0.0000800	<0.00200	0.0313	<0.000500	0.000	0.992	0.992
	06/04/21	<0.000800	0.00756	0.0159	0.014	<0.000300	0.0021 J	0.427	0.806	<0.000300	0.225	<0.0000800	<0.00200	0.00423 J	<0.000500	0.248 J	0.808	1.06 J
	10/04/21	<0.000800	0.00819	0.0160	0.0260	<0.000300	<0.00200	0.483	<0.100	<0.000300	0.202	<0.0000800	<0.00200	0.0767	<0.000500	0.182 J	1.42	1.61
	05/25/22	<0.000800	0.00634	0.0143	0.0272	<0.000300	<0.00200	0.543	1.16	<0.000300	0.239	<0.0000800	<0.00200	0.00948	<0.000500	0.183 J	1.11	1.29
	09/20/22	<0.000800	0.0140	0.0112	0.0376	0.00110	0.00493 J	0.516	1.34	0.00370	0.204	<0.0000800	<0.00200	0.0163	<0.000500	0.155 J	0.891	1.05
	05/17/23	<0.000800	0.00917	0.0141	0.0386	<0.000300	0.00210 J	0.62	0.874	<0.000300	0.248	<0.0000800	<0.00200	0.0143	<0.000500	0.35	2.12	2.47
	08/14/23	<0.000800	<0.00200	0.0122	0.00585	0.000556 J	<0.00200	0.136	<0.100	0.001	0.160	<0.0000800	<0.00200	<0.00200	<0.000500	0.348	1.18	1.53

TABLE 4
APPENDIX IV GROUNDWATER ANALYTICAL DATA
MLSES ASH POND AREA

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb.^ (pCi/L)
H-32	10/20/15	<0.0008	0.0028 J	0.16	0.00266	<0.0003	<0.002	0.163	0.374 J	<0.0003	0.0788	<0.00008	<0.002	0.00303 J	<0.0005	1.05	<1.90	2.95
	12/14/15	<0.0008	0.0123	0.0384	0.00313	<0.0003	<0.002	0.155	0.619	<0.0003	0.0733	<0.00008	<0.002	<0.002	<0.0005	0.712	<2.21	2.92
	02/23/16	<0.0008	0.00712	0.0277	0.00452	<0.0003	<0.002	0.188	0.701	0.000326 J	0.0821	<0.00008	<0.002	<0.002	<0.0005	1.12	1.60	2.72
	04/05/16	<0.0008	0.00648	0.0237	0.00527	0.00128	<0.002	0.208	1.05	0.00182	0.0818	<0.00008	<0.002	<0.002	<0.0005	<0.364	<1.15	<1.514
	06/07/16	<0.0008	0.00446 J	0.0238	0.00583	0.000997 J	<0.002	0.207	0.858	0.00168	0.087	<0.00008	<0.002	0.00298 J	<0.0005	<0.165	0.613	0.778
	08/09/16	<0.0008	0.00344 J	0.0234	0.00548	0.000713 J	<0.002	0.19	0.68	0.00115	0.0774	<0.00008	<0.002	0.00281 J	<0.0005	2.56	<0.446	3.01
	10/18/16	<0.0008	0.00289 J	0.02	0.00567	0.00254	<0.002	0.204	0.904	0.00332	0.0834	<0.00008	<0.002	0.00267 J	<0.0005	<0.139	0.683	0.82
	12/11/16	<0.0008	0.00246 J	0.0205	0.00609	0.00108	<0.002	0.208	1	0.00137	0.0838	<0.00008	<0.002	0.00237 J	<0.0005	<0.163	<0.753	<0.916
	06/12/18	<0.0008	<0.002	0.0175	0.00681	0.000586 J	<0.002	0.215	1.02	0.000701 J	0.0957	<0.00008	<0.002	<0.002	<0.0005	<0.275	0.917	1.192
	09/07/18	NA	<0.002	0.0404	<0.0003	<0.0003	<0.002	0.00347 J	0.551	<0.0003	0.0195	NA	NA	0.0157	NA	0.343	1.25	1.593
	05/14/19	<0.0008	0.002 J	0.0162	0.00713	0.000366 J	<0.002	0.202	1.15	0.000574 J	0.0978	<0.00008	<0.002	0.00675	<0.0005	0.303	<0.546	<0.849
	09/10/19	NA	<0.002	0.016	0.00678	0.000467 J	<0.002	0.185	0.923	0.00056 J	0.0935	NA	NA	0.00492 J	NA	0.0404	4.74	4.78
	05/13/20	<0.0008	0.00214 J	0.0166	0.00725	0.000389 J	<0.00200	0.195	0.641	0.000743 J	0.0978	<0.00008	<0.002	0.00401 J	<0.0005	<0.304	1.15	1.15
	10/06/20	<0.000800	<0.00200	0.0160	0.00676	0.000380 J	<0.00200	0.179	0.814	0.000633	0.0946	<0.0000800	<0.00200	0.00378 J	<0.000500	0.0686	0.348	0.417
	06/04/21	<0.000800	<0.00200	0.0161	0.0067	0.000395 J	<0.00200	0.179	0.721 J	0.000591 J	0.09	<0.0000800	<0.00200	<0.00200	<0.000500	0.000	0.497 J	0.497 J
	10/04/21	<0.000800	<0.00200	0.0166	0.00667	0.000418 J	<0.00200	0.174	0.656	0.000709 J	0.0888	<0.0000800	<0.00200	0.00502	<0.000500	0.0968	1.770	1.860
	05/25/22	<0.000800	<0.00200	0.0159	0.00685	0.000338 J	<0.00200	0.184	0.758	0.000536 J	0.094	<0.0000800	<0.00200	<0.00200	<0.000500	0.0871 J	0.815	0.902
	09/20/22	<0.000800	<0.00200	0.0178	0.00642	0.000375 J	<0.00200	0.179	0.67	0.000938 J	0.0943	<0.0000800	<0.00200	0.00230 J	<0.000500	<0.0825	1.72	1.72
	9/20/22 DUP	<0.000800	<0.00200	0.017	0.00615	0.000362 J	<0.00200	0.176	0.638	0.000711 J	0.0949	<0.0000800	<0.00200	<0.00200	<0.000500	<0.120	0.398 J	0.418 J
	05/17/23	<0.000800	<0.00200	0.0162	0.00676	0.000349 J	<0.00200	0.174	0.502	0.000414 J	0.0969	<0.0000800	<0.00200	<0.00200	<0.000500	<0.158	<0.300	0.302 J
	08/14/23	<0.000800	<0.00200	0.0124	0.00501	0.000516 J	<0.00200	0.114	<0.100	0.000848 J	0.135	<0.0000800	<0.00200	<0.00200	<0.000500	0.143 J	1.23	1.37

Notes:
1. Abbreviations: mg/L - milligrams per liter; pCi/L - picocuries per liter.
2. ^ - Sum of Ra 226 and Ra 228 concentrations.
3. J - concentration is below method quantitation limit; result is an estimate.
4. NA = Not analyzed.

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
MW-17A	387.75	10/19/15	18.69	369.06
		12/14/15	17.14	370.61
		02/24/16	16.80	370.95
		04/05/16	16.46	371.29
		06/06/16	15.62	372.13
		08/09/16	16.14	371.61
		10/17/16	16.39	371.36
		12/11/16	18.17	369.58
		09/21/17	17.93	369.82
		06/13/18	17.62	370.13
		09/11/18	18.44	369.31
		05/13/19	15.09	372.66
		11/05/19	17.58	370.17
		05/19/20	15.96	371.79
		09/25/20	17.52	370.23
		06/03/21	15.41	372.34
		10/04/21	17.68	370.07
		05/24/22	18.09	369.66
		09/21/22	19.47	368.28
		05/17/23	16.51	371.24
		08/14/23	19.06	368.69
MW-18A	414.44	10/20/15	37.41	377.03
		12/14/15	35.92	378.52
		02/24/16	34.84	379.60
		04/05/16	33.88	380.56
		06/06/16	33.96	380.48
		08/09/16	33.04	381.40
		10/17/16	35.31	379.13
		12/11/16	37.46	376.98
		09/21/17	38.44	376.00
		06/13/18	37.81	376.63
		09/11/18	39.10	375.34
		05/13/19	32.21	382.23
		11/05/19	35.11	379.33
		05/19/20	33.68	380.76
		09/25/20	36.38	378.06
		06/03/21	33.48	380.96
		10/04/21	36.43	378.01
		05/24/22	37.62	376.82
		09/21/22	39.51	374.93
		05/17/23	37.13	377.31
		08/14/23	38.61	375.83

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
MW-19	371.33	10/20/15	12.60	358.73
		12/14/15	5.14	366.19
		02/24/16	5.56	365.77
		04/05/16	5.99	365.34
		06/06/16	5.31	366.02
		08/09/16	9.59	361.74
		10/17/16	6.81	364.52
		12/11/16	9.06	362.27
		09/21/17	6.17	365.16
		06/13/18	10.59	360.74
		09/11/18	14.24	357.09
		05/13/19	3.51	367.82
		11/05/19	7.29	364.04
		05/19/20	6.34	364.99
		09/25/20	11.74	359.59
		06/03/21	4.63	366.70
		10/04/21	12.47	358.86
		05/24/22	10.93	360.40
		09/21/22	14.46	356.87
		05/17/23	5.73	365.60
		08/14/23	13.04	358.29
MW-20A	398.98	10/20/15	25.17	373.81
		12/14/15	23.64	375.34
		02/24/16	23.44	375.54
		04/05/16	23.23	375.75
		06/06/16	22.39	376.59
		08/09/16	23.92	375.06
		10/17/16	24.47	374.51
		12/11/16	25.96	373.02
		09/21/17	25.86	373.12
		06/13/18	25.61	373.37
		09/11/18	26.80	372.18
		11/05/19	25.24	373.74
		05/13/19	21.64	377.34
		05/19/20	20.71	378.27
		09/25/20	24.61	374.37
		06/03/21	23.12	375.86
		10/4/2021	25.98	373.00
		5/24/2022	25.37	373.61
		9/21/2022	28.27	370.71
		05/17/23	25.06	373.92
		08/14/23	26.53	372.45

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-22	386.75	42297.00	34.17	352.58
		12/14/15	33.48	353.27
		02/24/16	33.09	353.66
		04/05/16	32.66	354.09
		06/06/16	33.49	353.26
		08/09/16	32.21	354.54
		10/17/16	32.59	354.16
		12/11/16	34.37	352.38
		09/21/17	33.14	353.61
		06/13/18	33.12	353.63
		09/11/18	33.86	352.89
		05/13/19	30.47	356.28
		11/05/19	32.78	353.97
		05/19/20	30.24	356.51
		09/25/20	30.87	355.88
		06/03/21	29.76	356.99
		10/4/2021	30.42	356.33
		5/24/2022	32.11	354.64
		9/21/2022	33.11	353.64
		05/17/23	32.11	354.64
		08/14/23	32.67	354.08
PDP-23	394.43	10/20/15	23.61	370.82
		12/14/15	22.34	372.09
		02/24/16	19.94	374.49
		04/05/16	19.29	375.14
		06/06/16	18.11	376.32
		08/09/16	21.41	373.02
		10/17/16	22.51	371.92
		12/11/16	23.04	371.39
		09/21/17	23.98	370.45
		06/13/18	22.89	371.54
		09/11/18	24.69	369.74
		05/13/19	17.92	376.51
		11/05/19	23.27	371.16
		05/19/20	18.82	375.61
		09/25/20	22.11	372.32
		06/03/21	18.49	375.94
		10/4/2021	22.42	372.01
		5/24/2022	22.44	371.99
		9/21/2022	24.61	369.82
		05/17/23	20.93	373.50
		08/14/23	24.31	370.12

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-24	389.73	10/20/15	25.62	364.11
		12/14/15	24.94	364.79
		02/24/16	24.76	364.97
		04/05/16	24.51	365.22
		06/06/16	23.87	365.86
		08/09/16	22.61	367.12
		10/17/16	22.08	367.65
		12/11/16	24.19	365.54
		09/21/17	23.29	366.44
		06/13/18	23.21	366.52
		09/11/18	23.62	366.11
		05/13/19	23.62	366.11
		11/05/19	25.29	364.44
		05/19/20	23.38	366.35
		09/25/20	24.68	365.05
		06/03/21	23.82	365.91
		10/04/21	24.71	365.02
		05/24/22	25.16	364.57
		09/21/22	25.81	363.92
		05/17/23	23.11	366.62
		08/14/23	25.46	364.27
PDP-25	387.97	10/20/15	13.49	374.48
		12/14/15	12.76	375.21
		02/24/16	26.84	361.13
		04/05/16	26.96	361.01
		06/06/16	26.17	361.80
		08/09/16	26.06	361.91
		10/17/16	27.83	360.14
		12/11/16	29.71	358.26
		09/21/17	28.21	359.76
		06/13/18	27.71	360.26
		09/11/18	28.94	359.03
		05/13/19	26.23	361.74
		11/05/19	25.06	362.91
		05/19/20	26.39	361.58
		09/25/20	27.93	360.04
		06/03/21	26.21	361.76
		10/04/21	27.82	360.15
		05/24/22	27.21	360.76
		09/21/22	28.64	359.33
		05/17/23	26.67	361.30
		08/14/23	28.98	358.99

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-26	397.68	10/20/15	31.24	366.44
		12/14/15	30.67	367.01
		02/24/16	30.11	367.57
		04/05/16	29.89	367.79
		06/06/16	29.06	368.62
		08/09/16	29.54	368.14
		10/17/16	30.57	367.11
		12/11/16	32.81	364.87
		09/21/17	32.22	365.46
		06/13/18	32.18	365.50
		09/11/18	32.90	364.78
		05/13/19	28.93	368.75
		11/05/19	32.83	364.85
		05/19/20	29.59	368.09
		09/25/20	30.56	367.12
		06/03/21	29.18	368.50
		10/04/21	30.11	367.57
		05/24/22	31.64	366.04
		09/21/22	33.06	364.62
		05/17/23	30.84	366.84
		08/14/23	31.77	365.91
PDP-27*	377.58	10/20/15	18.28	359.30
		12/14/15	7.61	369.97
		02/24/16	11.95	365.63
		04/05/16	10.27	367.31
		06/06/16	7.44	370.14
		08/09/16	17.46	360.12
		10/17/16	19.06	358.52
		12/11/16	19.78	357.80
		09/21/17	NM	NM
		06/13/18	NM	NM
		09/11/18	19.78	357.80
		11/05/19	NM	NM
		05/13/19	NM	NM
		05/19/20	NM	NM
		09/25/20	NM	NM
		06/04/21	NM	NM
		10/04/21	NM	NM
		05/24/22	NM	NM
		09/21/22	NM	NM
		05/17/23	NM	NM
		08/14/23	NM	NM

TABLE 5
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-28*	368.62	10/20/15	13.68	354.94
		12/14/15	13.68	354.94
		02/24/16	10.75	357.87
		04/05/16	9.61	359.01
		06/06/16	11.74	356.88
		08/09/16	10.91	357.71
		10/17/16	12.19	356.43
		12/11/16	13.09	355.53
		09/21/17	NM	NM
		06/13/18	NM	NM
		09/11/18	14.24	354.38
		05/13/19	NM	NM
		11/05/19	NM	NM
		05/19/20	NM	NM
		09/25/20	NM	NM
		06/04/21	NM	NM
		10/04/21	NM	NM
		05/24/22	NM	NM
		09/21/22	NM	NM
		05/17/23	NM	NM
		08/14/23	NM	NM
PDP-29*	383.05	10/20/15	14.12	368.93
		12/14/15	14.06	368.99
		02/24/16	12.45	370.60
		04/05/16	10.86	372.19
		06/06/16	12.62	370.43
		08/09/16	11.24	371.81
		10/17/16	13.09	369.96
		12/11/16	14.23	368.82
		9/21/17	NM	NM
		06/13/18	NM	NM
		09/11/18	16.01	367.04
		05/13/19	NM	NM
		11/05/19	NM	NM
		05/19/20	NM	NM
		09/25/20	NM	NM
		06/04/21	NM	NM
		10/04/21	NM	NM
		05/24/22	NM	NM
		09/21/22	NM	NM
		05/17/23	NM	NM
		08/14/23	NM	NM

Notes:
1. Abbreviations: ft - feet; amsl - above mean sea level; bgs - below ground surface
2. * - Non-CCR well used only to evaluate groundwater water elevations.

APPENDIX A

LABORATORY ANALYTICAL REPORTS

June 30, 2023

Jacob Jarvis
WSP-Golder
1601 S. Mopac Expy, Suite 325B
Austin, Texas 78746
TEL: (512) 671-3434
FAX

Order No.: 2305284

RE: Luminant - MLSES Ash Ponds CCR

Dear Jacob Jarvis:

DHL Analytical, Inc. received 8 sample(s) on 5/20/2023 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-23-29

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: **www.dhlanalytical.com**
Email: **login@dhlanalytical.com**

CHAIN-OF-CUSTODY

CLIENT: WSP
ADDRESS: AUSTIN, TX
PHONE: EMAIL:
DATA REPORTED TO: JACOB JARVIS
ADDITIONAL REPORT COPIES TO:

DATE: 5-18-23
PO#: 31404097.019

LAB USE ONLY
DHL WORKORDER #: 2305284

PROJECT LOCATION OR NAME: LUMINANT-MLSES ASH PONDS CCR
CLIENT PROJECT # 31404097.019 COLLECTOR: JOHN BRAYTON

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

Lab Use Only

W=WATER L=LIQUID S=SOIL SO=SOLID SE=SEDIMENT P=PAINT SL=SLUDGE

PRESERVATION

Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	HCL ☐	H_3PO_4 ☐	HNO_3	H_2SO_4	NaOH ☐	Zn Acetate ☐	ICE ☒	UNPRESERVED ☒	ANALYSES	BTEX ☐ MTBE ☐ [METHOD 8260]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO 8015 ☐ DRO 8015 ☐	VOC 8260 ☐ VOC 624.1 ☐	SVOC 8270 ☐ SVOC 625.1 ☐	PAH 8270 ☐ HOLD PAH ☐	PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐	PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐	HERB 8321 ☐ T PHOS ☐ AMMONIA ☐	METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐	RCRA 8 ☐ TX11 ☐ _____	pH☐ HEX CHROM☐ ALKALINITY☐ COD☐	ANIONS 300 ☐ 9056 ☐ _____	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐	TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐	APPENDIX III	APPENDIX IV		FIELD NOTES
H-28	01	5-17-23	0840	W	P	4			X				X																				X	X		
H-29	02	↓	0945	W	P	4			X				X																				X	X		
H-31	03		1050	W	P	4			X				X																				X	X		
H-32	04		1200	W	P	4			X				X																				X	X		
H-33	05		1310	W	P	4			X				X																				X	X		
DUP-1	06		1310	W	P	4			X				X																				X	X		
H-27	07		1405	W	P	4			X				X																				X	X		
H-26	08	↓	1515	W	P	4			X				X																				X	X		

Relinquished By: (Sign) DATE/TIME 5-19-23 1700 Received by: Foley

Relinquished By: (Sign) Foley DATE/TIME 5/20 1:00 p.m. Received by:

Relinquished By: (Sign) DATE/TIME Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY☐ RUSH-2 DAY☐
RUSH-3 DAY☐
NORMAL ☒ OTHER ☐
DUE DATE _____ ☐

LAB USE ONLY
THERMO #: 78
RECEIVING TEMP (°C): 3.2 / 4.4
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☐ INTACT ☐ NOT USED
CARRIER: ☐ LSO ☐ FEDEX ☐ UPS ☐ COURIER ☐ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

Eric Lau

From: John DuPont <dupont@dhlanalytical.com>
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau <login@dhlanalytical.com>
Subject: FW: CCR Analysis

Appendix III Parameters:
Metals (Ca and B)
Anions (Cl, F, and SO4)
TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)
Ra-226
Ra-228

CUSTODY SI

DATE 5-19-23

SIGNATURE

EAL

DHL ANALYTICAL

ardboard box!

ORIGIN ID:KIPA (214) 583-3422
JOHN BRAYTON
WSP USA INC.
3102 OAK LAWN AVENUE
SUITE 450
DALLAS, TX 75219
UNITED STATES US

SHIP DATE: 19MAY23
ACTWGT: 50.00 LB
CAD: 253052732/INET4610

BILL SENDER

TO LOGIN
DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 695-8609 REF: 0000
INV: 01.EXP
PO: 31404097.019 DEPT: JOHN BRAYTON

583J3/2BC3/FE2D

FedEx Express

J232023040501uv

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7722 0180 8140

78664
TX-US AUS

44 BSMA

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **WSP-Golder** Date Received: **5/20/2023**

Work Order Number: **2305284** Received by: **CF**

Checklist completed by: _____ 5/22/2023 Reviewed by: _____ 5/22/2023
Signature Date Initials Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? no		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Cooler #	1	2
Temp °C	3.2	4.4
Seal Intact	Y	Y

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: Luminant - MLSES Ash Ponds CCR	**LRC Date:** 6/30/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2305284
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
R1	OI	**1)** Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	**X**				**R1-01**
		2) Were all departures from standard conditions described in an exception report?			**X**		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	**X**				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	**X**				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	**X**				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	**X**				
		3) Were calculations checked by a peer or supervisor?	**X**				
		4) Were all analyte identifications checked by a peer or supervisor?	**X**				
		5) Were sample detection limits reported for all analytes not detected?	**X**				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			**X**		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			**X**		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			**X**		
		9) If required for the project, TICs reported?			**X**		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			**X**		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			**X**		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	**X**				
		2) Were blanks analyzed at the appropriate frequency?	**X**				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	**X**				
		4) Were blank concentrations < MDL?	**X**				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, **greater** than 10 times the concentration in the blank sample?			**X**		
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	**X**				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	**X**				
		3) Were LCSs analyzed at the required frequency?	**X**				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	**X**				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	**X**				
		6) Was the LCSD RPD within QC limits (if applicable)?	**X**				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	**X**				
		2) Were MS/MSD analyzed at the appropriate frequency?	**X**				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		**X**			**R7-03**
		4) Were MS/MSD RPDs within laboratory QC limits?	**X**				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	**X**				
		2) Were analytical duplicates analyzed at the appropriate frequency?	**X**				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?		**X**			**R8-03**
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	**X**				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	**X**				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	**X**				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	**X**				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	**X**				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	**X**				

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Luminant - MLSES Ash Ponds CCR	**LRC Date:** 6/30/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2305284
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?	X				
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods** (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC Chapter 5,
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) The amount of analyte measured in the duplicate,
  b) The calculated RPD, and
  c) The laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on February 23-26 2021. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager

Signature

06/30/23
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *30-Jun-23*

CLIENT: WSP-Golder
Project: Luminant - MLSES Ash Ponds CCR
Lab Order: 2305284

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M2540C - TDS Analysis
Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M. Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 5/20/23. A total of 8 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions analysis performed on 5/24/23 (batch 110321) the matrix spike and matrix spike duplicate recoveries (2305284-03 MS/MSD & 2305282-15 MSD) were out of control limits for Chloride and/or Sulfate. This was due to matrix effect. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate (2305284-03 MS/MSD) was from this work order. The sample selected for the matrix spike and matrix spike duplicate (2305282-15 MS) was not from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

Exception Report R8-03

For TDS analysis performed on 5/23/23 the sample and sample duplicate (2305282-15 and 2305282-15-DUP) had the RPD above control limits. This is flagged accordingly in the QC summary report. All remaining QC was within control limits. No further corrective actions were taken.

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT: WSP-Golder
Project: Luminant - MLSES Ash Ponds CCR
Lab Order: 2305284

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2305284-01	H-28		05/17/23 08:40 AM	05/20/2023
2305284-02	H-29		05/17/23 09:45 AM	05/20/2023
2305284-03	H-31		05/17/23 10:50 AM	05/20/2023
2305284-04	H-32		05/17/23 12:00 PM	05/20/2023
2305284-05	H-33		05/17/23 01:10 PM	05/20/2023
2305284-06	DUP-1		05/17/23 01:10 PM	05/20/2023
2305284-07	H-27		05/17/23 02:05 PM	05/20/2023
2305284-08	H-26		05/17/23 03:15 PM	05/20/2023

Lab Order: 2305284
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305284-01A	H-28	05/17/23 08:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-28	05/17/23 08:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-28	05/17/23 08:40 AM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386
2305284-01B	H-28	05/17/23 08:40 AM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-28	05/17/23 08:40 AM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-28	05/17/23 08:40 AM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298
2305284-02A	H-29	05/17/23 09:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-29	05/17/23 09:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-29	05/17/23 09:45 AM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386
2305284-02B	H-29	05/17/23 09:45 AM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-29	05/17/23 09:45 AM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-29	05/17/23 09:45 AM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298
2305284-03A	H-31	05/17/23 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-31	05/17/23 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-31	05/17/23 10:50 AM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386
2305284-03B	H-31	05/17/23 10:50 AM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-31	05/17/23 10:50 AM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-31	05/17/23 10:50 AM	Aqueous	E300	Anion Preparation	05/25/23 09:56 AM	110341
	H-31	05/17/23 10:50 AM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298
2305284-04A	H-32	05/17/23 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-32	05/17/23 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-32	05/17/23 12:00 PM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386
2305284-04B	H-32	05/17/23 12:00 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-32	05/17/23 12:00 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-32	05/17/23 12:00 PM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298
2305284-05A	H-33	05/17/23 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-33	05/17/23 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-33	05/17/23 01:10 PM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386

Lab Order: 2305284
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305284-05B	H-33	05/17/23 01:10 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-33	05/17/23 01:10 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-33	05/17/23 01:10 PM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298
2305284-06A	DUP-1	05/17/23 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	DUP-1	05/17/23 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	DUP-1	05/17/23 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	DUP-1	05/17/23 01:10 PM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386
2305284-06B	DUP-1	05/17/23 01:10 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	DUP-1	05/17/23 01:10 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	DUP-1	05/17/23 01:10 PM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298
2305284-07A	H-27	05/17/23 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-27	05/17/23 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-27	05/17/23 02:05 PM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386
2305284-07B	H-27	05/17/23 02:05 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-27	05/17/23 02:05 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-27	05/17/23 02:05 PM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298
2305284-08A	H-26	05/17/23 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-26	05/17/23 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/23 07:43 AM	110309
	H-26	05/17/23 03:15 PM	Aqueous	SW7470A	Mercury Aq Prep	05/26/23 01:46 PM	110386
2305284-08B	H-26	05/17/23 03:15 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-26	05/17/23 03:15 PM	Aqueous	E300	Anion Preparation	05/24/23 10:59 AM	110321
	H-26	05/17/23 03:15 PM	Aqueous	M2540C	TDS Preparation	05/23/23 10:50 AM	110298

Lab Order: 2305284
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305284-01A	H-28	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:04 AM	CETAC2_HG_230530C
	H-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	20	05/26/23 11:34 AM	ICP-MS4_230526A
	H-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:28 AM	ICP-MS5_230525A
2305284-01B	H-28	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 07:45 PM	IC2_230524B
	H-28	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 12:17 AM	IC2_230524B
	H-28	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A
2305284-02A	H-29	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:06 AM	CETAC2_HG_230530C
	H-29	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	10	05/26/23 11:36 AM	ICP-MS4_230526A
	H-29	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:31 AM	ICP-MS5_230525A
2305284-02B	H-29	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 08:02 PM	IC2_230524B
	H-29	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 12:34 AM	IC2_230524B
	H-29	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A
2305284-03A	H-31	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:13 AM	CETAC2_HG_230530C
	H-31	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:33 AM	ICP-MS5_230525A
	H-31	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	50	05/26/23 11:38 AM	ICP-MS4_230526A
2305284-03B	H-31	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 08:19 PM	IC2_230524B
	H-31	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 12:51 AM	IC2_230524B
	H-31	Aqueous	E300	Anions by IC method - Water	110341	100	05/25/23 09:16 PM	IC2_230525C
	H-31	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A
2305284-04A	H-32	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:15 AM	CETAC2_HG_230530C
	H-32	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	10	05/26/23 11:40 AM	ICP-MS4_230526A
	H-32	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:36 AM	ICP-MS5_230525A
2305284-04B	H-32	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 09:10 PM	IC2_230524B
	H-32	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 01:08 AM	IC2_230524B
	H-32	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A
2305284-05A	H-33	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:18 AM	CETAC2_HG_230530C

Lab Order: 2305284
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305284-05A	H-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	2	05/26/23 11:42 AM	ICP-MS4_230526A
	H-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:38 AM	ICP-MS5_230525A
2305284-05B	H-33	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 10:35 PM	IC2_230524B
	H-33	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 02:33 AM	IC2_230524B
	H-33	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A
2305284-06A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:20 AM	CETAC2_HG_230530C
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	5	05/26/23 11:44 AM	ICP-MS4_230526A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/26/23 11:57 AM	ICP-MS4_230526A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:41 AM	ICP-MS5_230525A
2305284-06B	DUP-1	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 02:50 AM	IC2_230524B
	DUP-1	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 10:52 PM	IC2_230524B
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A
2305284-07A	H-27	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:22 AM	CETAC2_HG_230530C
	H-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/26/23 11:59 AM	ICP-MS4_230526A
	H-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:44 AM	ICP-MS5_230525A
2305284-07B	H-27	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 11:09 PM	IC2_230524B
	H-27	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 03:07 AM	IC2_230524B
	H-27	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A
2305284-08A	H-26	Aqueous	SW7470A	Mercury Total: Aqueous	110386	1	05/30/23 11:24 AM	CETAC2_HG_230530C
	H-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	2	05/26/23 12:01 PM	ICP-MS4_230526A
	H-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110309	1	05/25/23 11:46 AM	ICP-MS5_230525A
2305284-08B	H-26	Aqueous	E300	Anions by IC method - Water	110321	10	05/24/23 11:26 PM	IC2_230524B
	H-26	Aqueous	E300	Anions by IC method - Water	110321	1	05/25/23 03:24 AM	IC2_230524B
	H-26	Aqueous	M2540C	Total Dissolved Solids	110298	1	05/23/23 03:30 PM	WC_230523A

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-28
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-01
Project No:	31404097.019	**Collection Date:**	05/17/23 08:40 AM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:28 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:28 AM
Barium	0.0132	0.00300	0.0100		mg/L	1	05/25/23 11:28 AM
Beryllium	0.00689	0.000300	0.00100		mg/L	1	05/25/23 11:28 AM
Boron	5.47	0.200	0.600		mg/L	20	05/26/23 11:34 AM
Cadmium	0.000786	0.000300	0.00100	J	mg/L	1	05/25/23 11:28 AM
Calcium	81.4	2.00	6.00		mg/L	20	05/26/23 11:34 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:28 AM
Cobalt	0.175	0.00300	0.00500		mg/L	1	05/25/23 11:28 AM
Lead	0.000770	0.000300	0.00100	J	mg/L	1	05/25/23 11:28 AM
Lithium	0.194	0.00500	0.0100		mg/L	1	05/25/23 11:28 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:28 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:28 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:28 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:04 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	99.2	3.00	10.0		mg/L	10	05/24/23 07:45 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/25/23 12:17 AM
Sulfate	719	10.0	30.0		mg/L	10	05/24/23 07:45 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1350	50.0	50.0		mg/L	1	05/23/23 03:30 PM

Qualifiers:

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N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-29
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-02
Project No:	31404097.019	**Collection Date:**	05/17/23 09:45 AM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:31 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:31 AM
Barium	0.0299	0.00300	0.0100		mg/L	1	05/25/23 11:31 AM
Beryllium	0.00520	0.000300	0.00100		mg/L	1	05/25/23 11:31 AM
Boron	4.39	0.100	0.300		mg/L	10	05/26/23 11:36 AM
Cadmium	0.000693	0.000300	0.00100	J	mg/L	1	05/25/23 11:31 AM
Calcium	64.7	1.00	3.00		mg/L	10	05/26/23 11:36 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:31 AM
Cobalt	0.134	0.00300	0.00500		mg/L	1	05/25/23 11:31 AM
Lead	0.000637	0.000300	0.00100	J	mg/L	1	05/25/23 11:31 AM
Lithium	0.147	0.00500	0.0100		mg/L	1	05/25/23 11:31 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:31 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:31 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:31 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:06 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	80.6	3.00	10.0		mg/L	10	05/24/23 08:02 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/25/23 12:34 AM
Sulfate	522	10.0	30.0		mg/L	10	05/24/23 08:02 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1010	10.0	10.0		mg/L	1	05/23/23 03:30 PM

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C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-31
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-03
Project No:	31404097.019	**Collection Date:**	05/17/23 10:50 AM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:33 AM
Arsenic	0.00917	0.00200	0.00500		mg/L	1	05/25/23 11:33 AM
Barium	0.0141	0.00300	0.0100		mg/L	1	05/25/23 11:33 AM
Beryllium	0.0386	0.000300	0.00100		mg/L	1	05/25/23 11:33 AM
Boron	19.4	0.500	1.50		mg/L	50	05/26/23 11:38 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:33 AM
Calcium	262	5.00	15.0		mg/L	50	05/26/23 11:38 AM
Chromium	0.00210	0.00200	0.00500	J	mg/L	1	05/25/23 11:33 AM
Cobalt	0.620	0.00300	0.00500		mg/L	1	05/25/23 11:33 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:33 AM
Lithium	0.248	0.00500	0.0100		mg/L	1	05/25/23 11:33 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:33 AM
Selenium	0.0143	0.00200	0.00500		mg/L	1	05/25/23 11:33 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:33 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:13 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	225	3.00	10.0		mg/L	10	05/24/23 08:19 PM
Fluoride	0.874	0.100	0.400		mg/L	1	05/25/23 12:51 AM
Sulfate	2400	100	300		mg/L	100	05/25/23 09:16 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	4060	50.0	50.0		mg/L	1	05/23/23 03:30 PM

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C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-32
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-04
Project No:	31404097.019	**Collection Date:**	05/17/23 12:00 PM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:36 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:36 AM
Barium	0.0162	0.00300	0.0100		mg/L	1	05/25/23 11:36 AM
Beryllium	0.00676	0.000300	0.00100		mg/L	1	05/25/23 11:36 AM
Boron	1.93	0.100	0.300		mg/L	10	05/26/23 11:40 AM
Cadmium	0.000349	0.000300	0.00100	J	mg/L	1	05/25/23 11:36 AM
Calcium	45.8	1.00	3.00		mg/L	10	05/26/23 11:40 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:36 AM
Cobalt	0.174	0.00300	0.00500		mg/L	1	05/25/23 11:36 AM
Lead	0.000414	0.000300	0.00100	J	mg/L	1	05/25/23 11:36 AM
Lithium	0.0969	0.00500	0.0100		mg/L	1	05/25/23 11:36 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:36 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:36 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:36 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:15 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	110	3.00	10.0		mg/L	10	05/24/23 09:10 PM
Fluoride	0.502	0.100	0.400		mg/L	1	05/25/23 01:08 AM
Sulfate	315	10.0	30.0		mg/L	10	05/24/23 09:10 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	759	10.0	10.0		mg/L	1	05/23/23 03:30 PM

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S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-33
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-05
Project No:	31404097.019	**Collection Date:**	05/17/23 01:10 PM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:38 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:38 AM
Barium	0.125	0.00300	0.0100		mg/L	1	05/25/23 11:38 AM
Beryllium	0.000538	0.000300	0.00100	J	mg/L	1	05/25/23 11:38 AM
Boron	0.0646	0.0200	0.0600		mg/L	2	05/26/23 11:42 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:38 AM
Calcium	41.6	0.200	0.600		mg/L	2	05/26/23 11:42 AM
Chromium	0.00360	0.00200	0.00500	J	mg/L	1	05/25/23 11:38 AM
Cobalt	0.0349	0.00300	0.00500		mg/L	1	05/25/23 11:38 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:38 AM
Lithium	0.156	0.00500	0.0100		mg/L	1	05/25/23 11:38 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:38 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:38 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:38 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:18 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	100	3.00	10.0		mg/L	10	05/24/23 10:35 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/25/23 02:33 AM
Sulfate	105	1.00	3.00		mg/L	1	05/25/23 02:33 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	493	10.0	10.0		mg/L	1	05/23/23 03:30 PM

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C - Sample Result or QC discussed in Case Narrative
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SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	DUP-1
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-06
Project No:	31404097.019	**Collection Date:**	05/17/23 01:10 PM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:41 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:41 AM
Barium	0.129	0.00300	0.0100		mg/L	1	05/25/23 11:41 AM
Beryllium	0.000525	0.000300	0.00100	J	mg/L	1	05/25/23 11:41 AM
Boron	0.0507	0.0100	0.0300		mg/L	1	05/26/23 11:57 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:41 AM
Calcium	41.9	0.500	1.50		mg/L	5	05/26/23 11:44 AM
Chromium	0.00381	0.00200	0.00500	J	mg/L	1	05/25/23 11:41 AM
Cobalt	0.0356	0.00300	0.00500		mg/L	1	05/25/23 11:41 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:41 AM
Lithium	0.160	0.00500	0.0100		mg/L	1	05/25/23 11:41 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:41 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:41 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:41 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:20 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	95.2	3.00	10.0		mg/L	10	05/24/23 10:52 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/25/23 02:50 AM
Sulfate	104	1.00	3.00		mg/L	1	05/25/23 02:50 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	486	10.0	10.0		mg/L	1	05/23/23 03:30 PM

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SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-27
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-07
Project No:	31404097.019	**Collection Date:**	05/17/23 02:05 PM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:44 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:44 AM
Barium	0.0911	0.00300	0.0100		mg/L	1	05/25/23 11:44 AM
Beryllium	0.000440	0.000300	0.00100	J	mg/L	1	05/25/23 11:44 AM
Boron	0.0478	0.0100	0.0300		mg/L	1	05/26/23 11:59 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:44 AM
Calcium	23.1	0.100	0.300		mg/L	1	05/25/23 11:44 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:44 AM
Cobalt	0.0246	0.00300	0.00500		mg/L	1	05/25/23 11:44 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:44 AM
Lithium	0.0958	0.00500	0.0100		mg/L	1	05/25/23 11:44 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:44 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:44 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:44 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:22 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	84.2	3.00	10.0		mg/L	10	05/24/23 11:09 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/25/23 03:07 AM
Sulfate	79.8	1.00	3.00		mg/L	1	05/25/23 03:07 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	379	10.0	10.0		mg/L	1	05/23/23 03:30 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-26
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2305284-08
Project No:	31404097.019	**Collection Date:**	05/17/23 03:15 PM
Lab Order:	2305284	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	05/25/23 11:46 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:46 AM
Barium	0.0990	0.00300	0.0100		mg/L	1	05/25/23 11:46 AM
Beryllium	0.00122	0.000300	0.00100		mg/L	1	05/25/23 11:46 AM
Boron	0.355	0.0200	0.0600		mg/L	2	05/26/23 12:01 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	05/25/23 11:46 AM
Calcium	16.5	0.100	0.300		mg/L	1	05/25/23 11:46 AM
Chromium	0.00298	0.00200	0.00500	J	mg/L	1	05/25/23 11:46 AM
Cobalt	0.0242	0.00300	0.00500		mg/L	1	05/25/23 11:46 AM
Lead	0.000615	0.000300	0.00100	J	mg/L	1	05/25/23 11:46 AM
Lithium	0.0211	0.00500	0.0100		mg/L	1	05/25/23 11:46 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	05/25/23 11:46 AM
Selenium	0.0138	0.00200	0.00500		mg/L	1	05/25/23 11:46 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	05/25/23 11:46 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	05/30/23 11:24 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	77.3	3.00	10.0		mg/L	10	05/24/23 11:26 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/25/23 03:24 AM
Sulfate	43.9	1.00	3.00		mg/L	1	05/25/23 03:24 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	302	10.0	10.0		mg/L	1	05/23/23 03:30 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230424B

Sample ID: **DCS-109838**	Batch ID: **109838**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **DCS**	Run ID: **CETAC2_HG_230424B**	Analysis Date: **4/24/2023 1:40:40 PM**	Prep Date: **4/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000189	0.000200	0.000200	0	94.5	82	119	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230530C

The QC data in batch 110386 applies to the following samples: 2305284-01A, 2305284-02A, 2305284-03A, 2305284-04A, 2305284-05A, 2305284-06A, 2305284-07A, 2305284-08A

Sample ID: **MB-110386**	Batch ID: **110386**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:21:22 AM**	Prep Date: **5/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-110386**	Batch ID: **110386**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:28:10 AM**	Prep Date: **5/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00202	0.000200	0.00200	0	101	85	115			

Sample ID: **LCSD-110386**	Batch ID: **110386**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:30:27 AM**	Prep Date: **5/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00203	0.000200	0.00200	0	102	85	115	0.494	15	

Sample ID: **2305225-01AMS**	Batch ID: **110386**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:34:57 AM**	Prep Date: **5/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0104	0.00100	0.0100	0	104	80	120			

Sample ID: **2305225-01AMSD**	Batch ID: **110386**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:37:13 AM**	Prep Date: **5/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0104	0.00100	0.0100	0	104	80	120	0.482	15	

Sample ID: **2305225-01ASD**	Batch ID: **110386**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:39:29 AM**	Prep Date: **5/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00200	0.00500	0	0				0	10	

Sample ID: **2305225-01APDS**	Batch ID: **110386**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:41:45 AM**	Prep Date: **5/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0124	0.00100	0.0125	0	98.8	85	115			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230530C

Sample ID: **ICV-230530**	Batch ID: **R127064**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 10:16:48 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00416	0.000200	0.00400	0	104	90	110			

Sample ID: **CCV1-230530**	Batch ID: **R127064**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 11:09:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Sample ID: **CCV2-230530**	Batch ID: **R127064**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230530C**	Analysis Date: **5/30/2023 11:36:21 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_230228A

Sample ID: **DCS2-109023**	Batch ID: **109023**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS4_230228A**	Analysis Date: **2/28/2023 10:47:00 AM**	Prep Date: **2/27/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.273	0.300	0.300	0	90.9	70	130	0	0	

Sample ID: **DCS4-109023**	Batch ID: **109023**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS4**	Run ID: **ICP-MS4_230228A**	Analysis Date: **2/28/2023 10:52:00 AM**	Prep Date: **2/27/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0320	0.0300	0.0300	0	107	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_230526A

Sample ID: **ICV-230526**	Batch ID: **R127050**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_230526A**	Analysis Date: **5/26/2023 10:59:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.102	0.0300	0.100	0	102	90	110			
Calcium	2.68	0.300	2.50	0	107	90	110			

Sample ID: **LCVL-230526**	Batch ID: **R127050**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_230526A**	Analysis Date: **5/26/2023 11:13:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0210	0.0300	0.0200	0	105	80	120			
Calcium	0.107	0.300	0.100	0	107	80	120			

Sample ID: **CCV1-230526**	Batch ID: **R127050**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_230526A**	Analysis Date: **5/26/2023 11:47:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.194	0.0300	0.200	0	96.9	90	110			
Calcium	5.05	0.300	5.00	0	101	90	110			

Sample ID: **CCV2-230526**	Batch ID: **R127050**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_230526A**	Analysis Date: **5/26/2023 12:04:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.186	0.0300	0.200	0	93.0	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230228B

Sample ID: **DCS1-109023** Batch ID: **109023** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS** Run ID: **ICP-MS5_230228B** Analysis Date: **2/28/2023 10:47:00 AM** Prep Date: **2/27/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.000950	0.00250	0.00100	0	95.0	70	130	0	0	
Beryllium	0.000563	0.00100	0.000500	0	113	70	130	0	0	
Cadmium	0.000453	0.00100	0.000500	0	90.6	70	130	0	0	
Lead	0.000454	0.00100	0.000500	0	90.8	70	130	0	0	
Thallium	0.000483	0.00150	0.000500	0	96.6	70	130	0	0	

Sample ID: **DCS2-109023** Batch ID: **109023** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS2** Run ID: **ICP-MS5_230228B** Analysis Date: **2/28/2023 10:51:00 AM** Prep Date: **2/27/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.275	0.300	0.300	0	91.6	70	130	0	0	

Sample ID: **DCS3-109023** Batch ID: **109023** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS3** Run ID: **ICP-MS5_230228B** Analysis Date: **2/28/2023 10:53:00 AM** Prep Date: **2/27/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00504	0.00500	0.00500	0	101	70	130	0	0	
Barium	0.00484	0.0100	0.00500	0	96.7	70	130	0	0	
Chromium	0.00492	0.00500	0.00500	0	98.5	70	130	0	0	
Cobalt	0.00509	0.00500	0.00500	0	102	70	130	0	0	
Lithium	0.00514	0.0100	0.00500	0	103	70	130	0	0	
Molybdenum	0.00484	0.00500	0.00500	0	96.8	70	130	0	0	
Selenium	0.00491	0.00500	0.00500	0	98.3	70	130	0	0	

Sample ID: **DCS4-109023** Batch ID: **109023** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS4** Run ID: **ICP-MS5_230228B** Analysis Date: **2/28/2023 10:56:00 AM** Prep Date: **2/27/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0350	0.0300	0.0300	0	117	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_230525A**

The QC data in batch 110309 applies to the following samples: 2305284-01A, 2305284-02A, 2305284-03A, 2305284-04A, 2305284-05A, 2305284-06A, 2305284-07A, 2305284-08A

Sample ID: **MB-110309** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 10:28:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Boron	<0.0100	0.0300								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: **LCS-110309** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 10:32:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	101	80	120			
Arsenic	0.207	0.00500	0.200	0	103	80	120			
Barium	0.203	0.0100	0.200	0	102	80	120			
Beryllium	0.203	0.00100	0.200	0	101	80	120			
Boron	0.191	0.0300	0.200	0	95.5	80	120			
Cadmium	0.203	0.00100	0.200	0	102	80	120			
Calcium	4.76	0.300	5.00	0	95.2	80	120			
Chromium	0.203	0.00500	0.200	0	101	80	120			
Cobalt	0.211	0.00500	0.200	0	106	80	120			
Lead	0.201	0.00100	0.200	0	101	80	120			
Lithium	0.206	0.0100	0.200	0	103	80	120			
Molybdenum	0.201	0.00500	0.200	0	100	80	120			
Selenium	0.205	0.00500	0.200	0	102	80	120			
Thallium	0.201	0.00150	0.200	0	100	80	120			

Sample ID: **LCSD-110309** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 10:35:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.7	80	120	0.885	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230525A

Sample ID: **LCSD-110309** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 10:35:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.200	0.00500	0.200	0	100	80	120	3.22	15	
Barium	0.201	0.0100	0.200	0	100	80	120	1.05	15	
Beryllium	0.203	0.00100	0.200	0	101	80	120	0.036	15	
Boron	0.201	0.0300	0.200	0	101	80	120	5.17	15	
Cadmium	0.201	0.00100	0.200	0	100	80	120	1.30	15	
Calcium	4.80	0.300	5.00	0	96.1	80	120	0.905	15	
Chromium	0.202	0.00500	0.200	0	101	80	120	0.162	15	
Cobalt	0.207	0.00500	0.200	0	103	80	120	2.12	15	
Lead	0.198	0.00100	0.200	0	99.0	80	120	1.55	15	
Lithium	0.207	0.0100	0.200	0	104	80	120	0.740	15	
Molybdenum	0.199	0.00500	0.200	0	99.4	80	120	0.951	15	
Selenium	0.202	0.00500	0.200	0	101	80	120	1.36	15	
Thallium	0.198	0.00150	0.200	0	98.8	80	120	1.70	15	

Sample ID: **2305281-05A SD** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 10:42:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	<0.0100	0.0250	0	0				0	20	
Barium	0.0393	0.0500	0	0.0397				0.835	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Boron	0.0645	0.150	0	0.0711				9.85	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Calcium	9.86	1.50	0	9.65				2.07	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	<0.0250	0.0500	0	0.0216				0	20	
Molybdenum	<0.0100	0.0250	0	0				0	20	
Selenium	<0.0100	0.0250	0	0.00344				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: **2305281-05A PDS** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:08:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.188	0.00250	0.200	0	94.0	75	125			
Arsenic	0.188	0.00500	0.200	0	94.1	75	125			
Barium	0.232	0.0100	0.200	0.0397	96.3	75	125			
Beryllium	0.198	0.00100	0.200	0	99.0	75	125			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230525A

Sample ID: **2305281-05A PDS** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:08:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.279	0.0300	0.200	0.0711	104	75	125			
Cadmium	0.197	0.00100	0.200	0	98.6	75	125			
Calcium	13.7	0.300	5.00	9.65	81.3	75	125			
Chromium	0.198	0.00500	0.200	0	99.1	75	125			
Cobalt	0.199	0.00500	0.200	0	99.4	75	125			
Lead	0.190	0.00100	0.200	0	95.1	75	125			
Lithium	0.222	0.0100	0.200	0.0216	100	75	125			
Molybdenum	0.188	0.00500	0.200	0	94.0	75	125			
Selenium	0.194	0.00500	0.200	0.00344	95.2	75	125			
Thallium	0.192	0.00150	0.200	0	96.1	75	125			

Sample ID: **2305281-05A MS** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:12:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.7	75	125			
Arsenic	0.196	0.00500	0.200	0	98.2	75	125			
Barium	0.238	0.0100	0.200	0.0397	99.3	75	125			
Beryllium	0.200	0.00100	0.200	0	99.8	75	125			
Boron	0.283	0.0300	0.200	0.0711	106	75	125			
Cadmium	0.198	0.00100	0.200	0	99.2	75	125			
Calcium	14.2	0.300	5.00	9.65	90.7	75	125			
Chromium	0.199	0.00500	0.200	0	99.4	75	125			
Cobalt	0.205	0.00500	0.200	0	103	75	125			
Lead	0.195	0.00100	0.200	0	97.4	75	125			
Lithium	0.226	0.0100	0.200	0.0216	102	75	125			
Molybdenum	0.197	0.00500	0.200	0	98.3	75	125			
Selenium	0.198	0.00500	0.200	0.00344	97.5	75	125			
Thallium	0.194	0.00150	0.200	0	97.0	75	125			

Sample ID: **2305281-05A MSD** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:15:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.7	75	125	0.064	15	
Arsenic	0.197	0.00500	0.200	0	98.6	75	125	0.435	15	
Barium	0.239	0.0100	0.200	0.0397	99.8	75	125	0.427	15	
Beryllium	0.200	0.00100	0.200	0	99.8	75	125	0.018	15	
Boron	0.287	0.0300	0.200	0.0711	108	75	125	1.65	15	
Cadmium	0.199	0.00100	0.200	0	99.6	75	125	0.416	15	
Calcium	14.4	0.300	5.00	9.65	94.1	75	125	1.20	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_230525A**

Sample ID: **2305281-05A MSD** Batch ID: **110309** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:15:00 AM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.201	0.00500	0.200	0	100	75	125	0.983	15	
Cobalt	0.206	0.00500	0.200	0	103	75	125	0.163	15	
Lead	0.198	0.00100	0.200	0	98.8	75	125	1.50	15	
Lithium	0.224	0.0100	0.200	0.0216	101	75	125	0.649	15	
Molybdenum	0.198	0.00500	0.200	0	98.8	75	125	0.449	15	
Selenium	0.200	0.00500	0.200	0.00344	98.1	75	125	0.589	15	
Thallium	0.198	0.00150	0.200	0	98.9	75	125	1.95	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230525A

Sample ID: **ICV-230525** Batch ID: **R126998** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 10:13:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.101	0.00250	0.100	0	101	90	110			
Arsenic	0.0972	0.00500	0.100	0	97.2	90	110			
Barium	0.0988	0.0100	0.100	0	98.8	90	110			
Beryllium	0.0973	0.00100	0.100	0	97.3	90	110			
Boron	0.0952	0.0300	0.100	0	95.2	90	110			
Cadmium	0.0998	0.00100	0.100	0	99.8	90	110			
Calcium	2.41	0.300	2.50	0	96.5	90	110			
Chromium	0.100	0.00500	0.100	0	100	90	110			
Cobalt	0.100	0.00500	0.100	0	100	90	110			
Lead	0.0978	0.00100	0.100	0	97.8	90	110			
Lithium	0.100	0.0100	0.100	0	100	90	110			
Molybdenum	0.0952	0.00500	0.100	0	95.2	90	110			
Selenium	0.0994	0.00500	0.100	0	99.4	90	110			
Thallium	0.0973	0.00150	0.100	0	97.3	90	110			

Sample ID: **LCVL-230525** Batch ID: **R126998** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 10:21:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00195	0.00250	0.00200	0	97.3	80	120			
Arsenic	0.00481	0.00500	0.00500	0	96.3	80	120			
Barium	0.00527	0.0100	0.00500	0	105	80	120			
Beryllium	0.00102	0.00100	0.00100	0	102	80	120			
Boron	0.0193	0.0300	0.0200	0	96.6	80	120			
Cadmium	0.00102	0.00100	0.00100	0	102	80	120			
Calcium	0.0885	0.300	0.100	0	88.5	80	120			
Chromium	0.00513	0.00500	0.00500	0	103	80	120			
Cobalt	0.00494	0.00500	0.00500	0	98.7	80	120			
Lead	0.000968	0.00100	0.00100	0	96.8	80	120			
Lithium	0.0100	0.0100	0.0100	0	100	80	120			
Molybdenum	0.00499	0.00500	0.00500	0	99.8	80	120			
Selenium	0.00505	0.00500	0.00500	0	101	80	120			
Thallium	0.00101	0.00150	0.00100	0	101	80	120			

Sample ID: **CCV1-230525** Batch ID: **R126998** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:17:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.196	0.00250	0.200	0	97.9	90	110			
Arsenic	0.196	0.00500	0.200	0	98.1	90	110			
Barium	0.198	0.0100	0.200	0	99.0	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230525A

Sample ID: **CCV1-230525** Batch ID: **R126998** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:17:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.194	0.00100	0.200	0	97.0	90	110			
Boron	0.207	0.0300	0.200	0	103	90	110			
Cadmium	0.196	0.00100	0.200	0	98.0	90	110			
Calcium	4.67	0.300	5.00	0	93.4	90	110			
Chromium	0.199	0.00500	0.200	0	99.6	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			
Lead	0.195	0.00100	0.200	0	97.7	90	110			
Lithium	0.197	0.0100	0.200	0	98.4	90	110			
Molybdenum	0.195	0.00500	0.200	0	97.7	90	110			
Selenium	0.198	0.00500	0.200	0	98.8	90	110			
Thallium	0.196	0.00150	0.200	0	97.8	90	110			

Sample ID: **CCV2-230525** Batch ID: **R126998** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230525A** Analysis Date: **5/25/2023 11:57:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	99.1	90	110			
Arsenic	0.199	0.00500	0.200	0	99.6	90	110			
Barium	0.201	0.0100	0.200	0	101	90	110			
Beryllium	0.195	0.00100	0.200	0	97.5	90	110			
Cadmium	0.199	0.00100	0.200	0	99.3	90	110			
Calcium	4.66	0.300	5.00	0	93.2	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Cobalt	0.204	0.00500	0.200	0	102	90	110			
Lead	0.195	0.00100	0.200	0	97.4	90	110			
Lithium	0.195	0.0100	0.200	0	97.6	90	110			
Molybdenum	0.197	0.00500	0.200	0	98.6	90	110			
Selenium	0.200	0.00500	0.200	0	100	90	110			
Thallium	0.195	0.00150	0.200	0	97.7	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230518A

Sample ID: **DCS3-110218** Batch ID: **110218** TestNo: **E300** Units: **mg/L**
SampType: **DCS3** Run ID: **IC2_230518A** Analysis Date: **5/18/2023 2:30:46 PM** Prep Date: **5/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.996	1.00	1.000	0	99.6	70	130	0	0	
Fluoride	0.396	0.400	0.4000	0	98.9	70	130	0	0	
Sulfate	2.90	3.00	3.000	0	96.7	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230524B

The QC data in batch 110321 applies to the following samples: 2305284-01B, 2305284-02B, 2305284-03B, 2305284-04B, 2305284-05B, 2305284-06B, 2305284-07B, 2305284-08B

Sample ID: **MB-110321** Batch ID: **110321** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_230524B** Analysis Date: **5/24/2023 4:04:14 PM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: **LCS-110321** Batch ID: **110321** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC2_230524B** Analysis Date: **5/24/2023 4:21:14 PM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.71	1.00	10.00	0	97.1	90	110			
Fluoride	4.01	0.400	4.000	0	100	90	110			
Sulfate	29.1	3.00	30.00	0	97.1	90	110			

Sample ID: **LCSD-110321** Batch ID: **110321** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_230524B** Analysis Date: **5/24/2023 4:38:14 PM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.41	1.00	10.00	0	94.1	90	110	3.13	20	
Fluoride	3.89	0.400	4.000	0	97.2	90	110	2.99	20	
Sulfate	28.1	3.00	30.00	0	93.8	90	110	3.39	20	

Sample ID: **2305282-15BMS** Batch ID: **110321** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_230524B** Analysis Date: **5/24/2023 7:11:14 PM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	308	10.0	200.0	118.1	94.8	90	110			
Fluoride	205	4.00	200.0	0	102	90	110			
Sulfate	820	30.0	200.0	640.6	89.9	90	110			

Sample ID: **2305282-15BMSD** Batch ID: **110321** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_230524B** Analysis Date: **5/24/2023 7:28:14 PM** Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	307	10.0	200.0	118.1	94.6	90	110	0.121	20	
Fluoride	206	4.00	200.0	0	103	90	110	0.511	20	
Sulfate	820	30.0	200.0	640.6	89.5	90	110	0.098	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230524B

Sample ID: **2305284-03BMS**	Batch ID: **110321**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_230524B**	Analysis Date: **5/24/2023 8:36:14 PM**	Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	389	10.0	200.0	224.5	82.2	90	110			S
Fluoride	213	4.00	200.0	1.053	106	90	110			
Sulfate	2190	30.0	200.0	2201	-7.20	90	110			S

Sample ID: **2305284-03BMSD**	Batch ID: **110321**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_230524B**	Analysis Date: **5/24/2023 8:53:14 PM**	Prep Date: **5/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	386	10.0	200.0	224.5	80.6	90	110	0.864	20	S
Fluoride	211	4.00	200.0	1.053	105	90	110	0.919	20	
Sulfate	2170	30.0	200.0	2201	-14.9	90	110	0.710	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230524B

Sample ID: **ICV-230524**	Batch ID: **R126991**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_230524B**	Analysis Date: **5/24/2023 3:30:14 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.7	90	110			
Fluoride	9.97	0.400	10.00	0	99.7	90	110			
Sulfate	74.0	3.00	75.00	0	98.7	90	110			

Sample ID: **CCV1-230524**	Batch ID: **R126991**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230524B**	Analysis Date: **5/24/2023 10:01:14 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.38	1.00	10.00	0	93.8	90	110			
Fluoride	3.91	0.400	4.000	0	97.7	90	110			
Sulfate	28.1	3.00	30.00	0	93.7	90	110			

Sample ID: **CCV2-230524**	Batch ID: **R126991**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230524B**	Analysis Date: **5/25/2023 1:59:14 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.42	1.00	10.00	0	94.2	90	110			
Fluoride	3.93	0.400	4.000	0	98.2	90	110			
Sulfate	28.3	3.00	30.00	0	94.3	90	110			

Sample ID: **CCV3-230524**	Batch ID: **R126991**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230524B**	Analysis Date: **5/25/2023 5:57:14 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.12	0.400	4.000	0	103	90	110			
Sulfate	29.4	3.00	30.00	0	97.9	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC2_230525C**

The QC data in batch 110341 applies to the following samples: 2305284-03B

Sample ID: **MB-110341**	Batch ID: **110341**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 11:31:41 AM**	Prep Date: **5/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	<1.00	3.00								

Sample ID: **LCS-110341**	Batch ID: **110341**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 11:48:41 AM**	Prep Date: **5/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.3	3.00	30.00	0	97.7	90	110			

Sample ID: **LCSD-110341**	Batch ID: **110341**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 12:05:41 PM**	Prep Date: **5/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.3	3.00	30.00	0	97.8	90	110	0.031	20	

Sample ID: **2305245-01AMS**	Batch ID: **110341**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 12:39:41 PM**	Prep Date: **5/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	18800	3000	20000	0	94.1	90	110			

Sample ID: **2305245-01AMSD**	Batch ID: **110341**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 12:56:41 PM**	Prep Date: **5/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	18000	3000	20000	0	89.8	90	110	4.62	20	

Sample ID: **2305284-03BMS**	Batch ID: **110341**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 9:33:16 PM**	Prep Date: **5/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	4190	300	2000	2396	89.7	90	110			

Sample ID: **2305284-03BMSD**	Batch ID: **110341**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 9:50:16 PM**	Prep Date: **5/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	4250	300	2000	2396	92.7	90	110	1.42	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230525C

Sample ID: **ICV-230525**	Batch ID: **R127018**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 10:57:41 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	75.3	3.00	75.00	0	100	90	110			

Sample ID: **CCV1-230525**	Batch ID: **R127018**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 2:55:41 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	28.7	3.00	30.00	0	95.7	90	110			

Sample ID: **CCV2-230525**	Batch ID: **R127018**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230525C**	Analysis Date: **5/25/2023 10:58:17 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.1	3.00	30.00	0	96.9	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL
DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_230523A

The QC data in batch 110298 applies to the following samples: 2305284-01B, 2305284-02B, 2305284-03B, 2305284-04B, 2305284-05B, 2305284-06B, 2305284-07B, 2305284-08B

Sample ID: **MB-110298** Batch ID: **110298** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_230523A** Analysis Date: **5/23/2023 3:30:00 PM** Prep Date: **5/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-110298** Batch ID: **110298** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_230523A** Analysis Date: **5/23/2023 3:30:00 PM** Prep Date: **5/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	742	10.0	745.6	0	99.5	90	113			

Sample ID: **2305282-15B-DUP** Batch ID: **110298** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230523A** Analysis Date: **5/23/2023 3:30:00 PM** Prep Date: **5/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1470	50.0	0	1295				12.7	5	R

Sample ID: **2305284-01B-DUP** Batch ID: **110298** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230523A** Analysis Date: **5/23/2023 3:30:00 PM** Prep Date: **5/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1380	50.0	0	1350				1.83	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2305284
Project: Luminant - MLSES Ash Ponds CCR

MQL SUMMARY REPORT

TestNo: E300	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

TestNo: SW6020B	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

TestNo: SW7470A	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Mercury	0.0000800	0.000200

TestNo: M2540C	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Total Dissolved Solids (Residue, Filt	10.0	10.0

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP

ANALYTICAL REPORT

June 30, 2023

DHL Analytical, Inc.

Sample Delivery Group:	L1619422
Samples Received:	05/24/2023
Project Number:	2305284
Description:	

Report To: John DuPont
2300 Double Creek Drive
Round Rock, TX 78664

Entire Report Reviewed By:

Donna Eidson
Project Manager

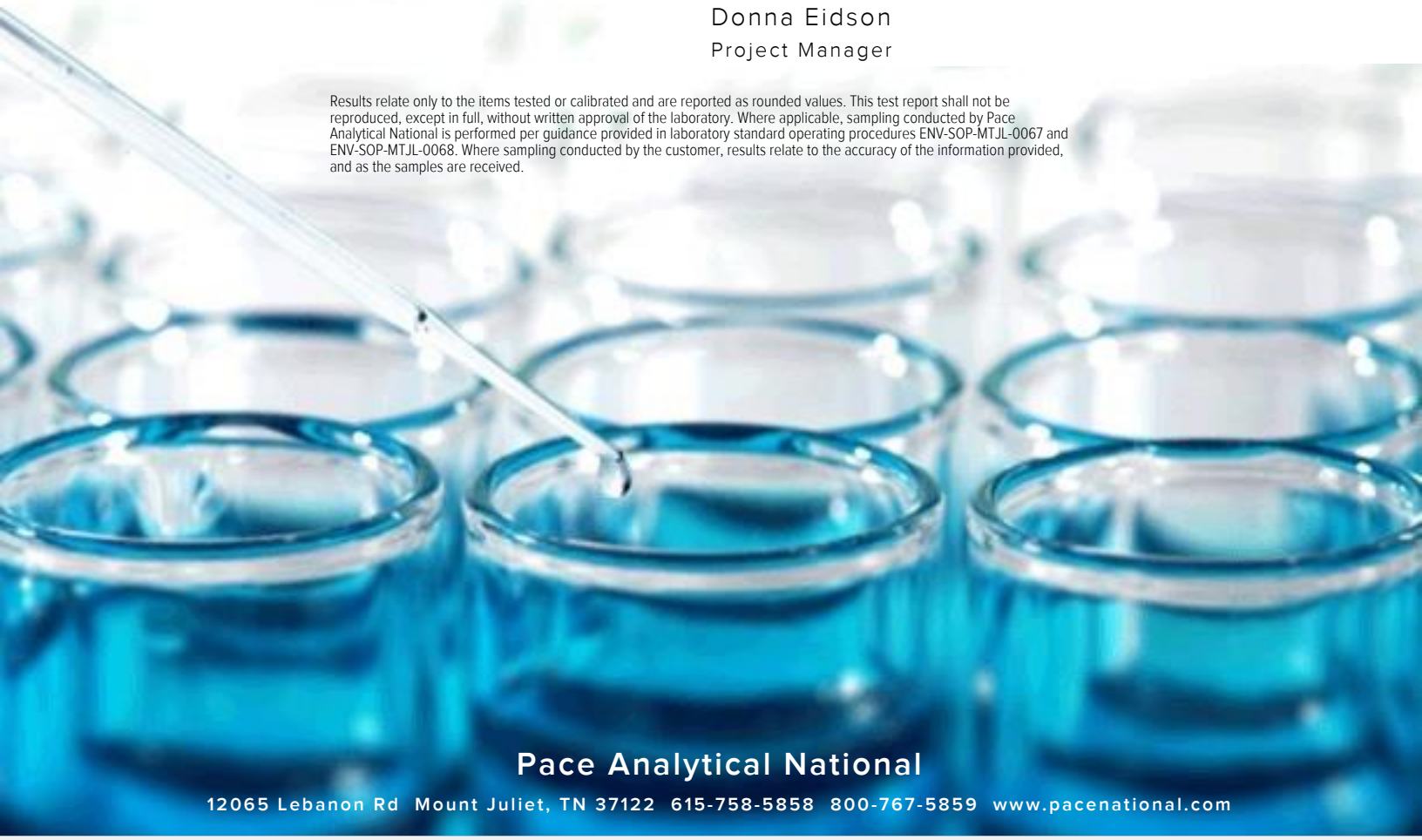

TABLE OF CONTENTS

H-28 L1619422-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 08:40	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

H-29 L1619422-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 09:45	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

H-31 L1619422-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 10:50	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

H-32 L1619422-04 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 12:00	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

H-33 L1619422-05 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 13:10	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

DUP-1 L1619422-06 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 13:10	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

H-27 L1619422-07 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 14:05	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

H-26 L1619422-08 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/17/23 15:15	05/24/23 10:25

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2078916	1	06/16/23 08:30	06/21/23 11:15	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2082917	1	06/28/23 12:32	06/30/23 00:24	RGT	Mt. Juliet, TN

CASE NARRATIVE

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

Donna Eidson
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.563		0.239	0.413	06/21/2023 11:15	WG2078916
(T) Barium	*95.6*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*121*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.753		0.354	0.563	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.189	J	0.261	0.382	06/30/2023 00:24	WG2082917
(T) Barium-133	*72.7*			*30.0-143*	*06/30/2023 00:24*	WG2082917

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.23		0.264	0.438	06/21/2023 11:15	WG2078916
(T) Barium	*92.8*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*115*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.81		0.455	0.575	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.581		0.371	0.373	06/30/2023 00:24	WG2082917
(T) Barium-133	*73.4*			*30.0-143*	*06/30/2023 00:24*	WG2082917

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	2.12		0.310	0.493	06/21/2023 11:15	WG2078916
(T) Barium	*92.3*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*103*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.47		0.386	0.529	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.350		0.230	0.192	06/30/2023 00:24	WG2082917
(T) Barium-133	*85.4*			*30.0-143*	*06/30/2023 00:24*	WG2082917

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.231	U	0.300	0.532	06/21/2023 11:15	WG2078916
(T) Barium	*93.3*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*95.4*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.302	J	0.339	0.598	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0706	U	0.158	0.273	06/30/2023 00:24	WG2082917
(T) Barium-133	*89.4*			*30.0-143*	*06/30/2023 00:24*	WG2082917

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.38		0.280	0.459	06/21/2023 11:15	WG2078916
(T) Barium	*112*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*91.9*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.85		0.381	0.504	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.472		0.259	0.207	06/30/2023 00:24	WG2082917
(T) Barium-133	*85.9*			*30.0-143*	*06/30/2023 00:24*	WG2082917

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.991		0.221	0.365	06/21/2023 11:15	WG2078916
(T) Barium	*106*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*116*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.40		0.383	0.506	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.411		0.313	0.350	06/30/2023 00:24	WG2082917
(T) Barium-133	*72.0*			*30.0-143*	*06/30/2023 00:24*	WG2082917

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.414	U	0.308	0.564	06/21/2023 11:15	WG2078916
(T) Barium	*105*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*109*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.714		0.503	0.678	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.714		0.398	0.377	06/30/2023 00:24	WG2082917
(T) Barium-133	*74.1*			*30.0-143*	*06/30/2023 00:24*	WG2082917

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.15		0.311	0.523	06/21/2023 11:15	WG2078916
(T) Barium	*112*			*30.0-143*	*06/21/2023 11:15*	WG2078916
(T) Yttrium	*91.9*			*30.0-136*	*06/21/2023 11:15*	WG2078916

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.72		0.467	0.635	06/30/2023 00:24	WG2082917

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.567		0.348	0.361	06/30/2023 00:24	WG2082917
(T) Barium-133	*94.8*			*30.0-143*	*06/30/2023 00:24*	WG2082917

QUALITY CONTROL SUMMARY

L1619422-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) R3940176-1 06/21/23 11:15

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.261		0.127	0.221
(T) Barium	*108*		*108*	
(T) Yttrium	*108*		*108*	

L1619309-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1619309-03 06/21/23 11:15 • (DUP) R3940176-5 06/21/23 11:15

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.602	0.237	0.408	0.327	0.354	0.408	1	59.2	0.645	J	20	3
(T) Barium	*91.1*			*114*	*114*							
(T) Yttrium	*112*			*123*	*123*							

Laboratory Control Sample (LCS)

(LCS) R3940176-2 06/21/23 11:15

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.15	103	80.0-120	
(T) Barium			*112*		
(T) Yttrium			*102*		

L1619306-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1619306-13 06/21/23 11:15 • (MS) R3940176-3 06/21/23 11:15 • (MSD) R3940176-4 06/21/23 11:15

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	-0.0106	16.1	14.2	96.5	85.0	1	70.0-130			12.7		20
(T) Barium		*112*			*117*	*113*							
(T) Yttrium		*118*			*112*	*115*							

Method Blank (MB)

(MB) R3943591-1 06/30/23 00:24

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.0173	U	0.0537	0.0930
(T) Barium-133	*88.3*		*88.3*	

L1619422-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1619422-03 06/30/23 00:24 • (DUP) R3943591-5 06/30/23 00:24

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.350	0.230	0.192	0.149	0.280	0.192	1	80.3	0.553	U	20	3
(T) Barium-133	*85.4*			*87.6*	*87.6*							

Laboratory Control Sample (LCS)

(LCS) R3943591-2 06/30/23 00:24

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.65	92.8	80.0-120	
(T) Barium-133			*81.0*		

L1621139-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621139-07 06/30/23 00:24 • (MS) R3943591-3 06/30/23 00:24 • (MSD) R3943591-4 06/30/23 00:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.172	20.1	19.6	99.5	96.9	1	75.0-125			2.57		20
(T) Barium-133		*96.6*			*94.3*	*87.2*							

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX:

CHAIN-OF-CUSTODY RECORD

Work Order: 2305284

A239

Subcontractor:
Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122
TEL: (615) 773-5923
FAX:
Acct #: DHLRRTX

L1619422
22-May-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228 E904.0	Ra-226 M7500 Ra B M				
H-28	Aqueous	01C	05/17/23 08:40 AM	1LHDPEHNO3		1	]-01			
H-28	Aqueous	01D	05/17/23 08:40 AM	1LHDPEHNO3	1					
H-29	Aqueous	02C	05/17/23 09:45 AM	1LHDPEHNO3		1	]-02			
H-29	Aqueous	02D	05/17/23 09:45 AM	1LHDPEHNO3	1					
H-31	Aqueous	03C	05/17/23 10:50 AM	1LHDPEHNO3		1	]-03			
H-31	Aqueous	03D	05/17/23 10:50 AM	1LHDPEHNO3	1					
H-32	Aqueous	04C	05/17/23 12:00 PM	1LHDPEHNO3		1	]-04			
H-32	Aqueous	04D	05/17/23 12:00 PM	1LHDPEHNO3	1					
H-33	Aqueous	05C	05/17/23 01:10 PM	1LHDPEHNO3		1	]-05			
H-33	Aqueous	05D	05/17/23 01:10 PM	1LHDPEHNO3	1					
DUP-1	Aqueous	06C	05/17/23 01:10 PM	1LHDPEHNO3		1	]-06			
DUP-1	Aqueous	06D	05/17/23 01:10 PM	1LHDPEHNO3	1					
H-27	Aqueous	07C	05/17/23 02:05 PM	1LHDPEHNO3		1	]-07			
H-27	Aqueous	07D	05/17/23 02:05 PM	1LHDPEHNO3	1					
H-26	Aqueous	08C	05/17/23 03:15 PM	1LHDPEHNO3		1	]-08			
H-26	Aqueous	08D	05/17/23 03:15 PM	1LHDPEHNO3	1					

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report Ra-226, Ra-228 & Combined per Specs.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

	Date/Time		Date/Time
Relinquished by:	5/22/23 1800	Received by:	5/24/23 1025
Relinquished by:		Received by:	

September 21, 2023

Jacob Jarvis
WSP-Golder
1601 S. Mopac Expy, Suite 325B
Austin, Texas 78746
TEL: (361) 877-5533
FAX:

Order No.: 2308215

RE: Luminant - MLSES Ash Ponds CCR

Dear Jacob Jarvis:

DHL Analytical, Inc. received 8 sample(s) on 8/16/2023 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-23-29

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: **www.dhlanalytical.com**
Email: **login@dhlanalytical.com**

CHAIN-OF-CUSTODY

CLIENT: WSP
ADDRESS: AUSTIN, TX
PHONE: 512-695-8609 EMAIL:
DATA REPORTED TO: JACOB JARVIS
ADDITIONAL REPORT COPIES TO:

DATE: 8-15-23
PO#: 314D4097.019

LAB USE ONLY
DHL WORKORDER #: 230825

PROJECT LOCATION OR NAME: LUMINANT - MLSES ASH PONDS CCR
CLIENT PROJECT # 314D4097.019 COLLECTOR: JOHN BRAYTON

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

W=WATER L=LIQUID S=SOIL SO=SOLID SE=SEDIMENT P=PAINT SL=SLUDGE

Field Sample I.D.	Lab Use Only DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	PRESERVATION: HCL ☐ H_3PO_4 ☐	HNO_3	H_2SO_4	NaOH ☐ Zn Acetate ☐	ICE ☒ UNPRESERVED ☐	ANALYSES	APPENDIX III	APPENDIX IV	FIELD NOTES
H-28	01	8-14-23	0745	W	P	4		X			X		X	X	
H-32	02		0840	W	P	4		X			X		X	X	
H-29	03		0935	W	P	4		X			X		X	X	
H-31	04		1025	W	P	4		X			X		X	X	
H-33	05		1125	W	P	4		X			X		X	X	
DUP-1	06		1125	W	P	4		X			X		X	X	
H-26	07		1220	W	P	4		X			X		X	X	
H-27	08	↓	1325	W	P	4		X			X		X	X	

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8260] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO 8015 ☐ DRO 8015 ☐ | VOC 8260 ☐ VOC 624.1 ☐ | SVOC 8270 ☐ SVOC 625.1 ☐ | PAH 8270 ☐ HOLD PAH ☐ | PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐ | PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐ | HERB 8321 ☐ T PHOS ☐ AMMONIA ☐ | METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐ | RCRA 8 ☐ TX11 ☐ _____ | pH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | ANIONS 300 ☐ 9056 ☐ _____ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐ | TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐

Relinquished By: (Sign) — DATE/TIME: 8-15-23 1830 — Received by: Fedex
Relinquished By: (Sign) Fedex — DATE/TIME: 8/16/23 0845 — Received by:
Relinquished By: (Sign) — DATE/TIME — Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY☐ RUSH-2 DAY☐ RUSH-3 DAY☐
NORMAL ☒ OTHER ☐
DUE DATE _____ ☐

LAB USE ONLY
THERMO #: 78
RECEIVING TEMP (°C): 22.1 / 1.4 c
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☒ INTACT ☐ NOT USED
CARRIER: ☐ LSO ☒ FEDEX ☐ UPS ☐ COURIER ☐ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

Eric Lau

From: John DuPont <dupont@dhlanalytical.com>
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau <login@dhlanalytical.com>
Subject: FW: CCR Analysis

Appendix III Parameters:
Metals (Ca and B)
Anions (Cl, F, and SO4)
TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)
Ra-226
Ra-228

ORIGIN ID:GGGA (512) 988-8222
WSP
3102 OAK LAWN AVE
DALLAS, TX 75219
UNITED STATES US

SHIP DATE: 15AUG23
ACTWGT: 44.95 LB
CAD: 6994167/SSFE2422
DIMS: 23x12x14 IN
BILL THIRD PARTY

TO
DHL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 388-8222
INV:
PO:
REF:
DEPT:

FedEx Express

1 of 6
TRK# 0201 7825 3764 5116
MASTER
A8 BSMA

WED - 16 AUG 10:30A
PRIORITY OVERNIGHT
78664
TX-US AUS

CUSTODY SEAL
DATE 8-15-23
SIGNATURE

DHL ANALYTICAL

ORIGIN ID:GGGA (512) 988-8222
WSP
3102 OAK LAWN AVE

DALLAS, TX 75219
UNITED STATES US

SHIP DATE: 15AUG23
ACTWGT: 41.10 LB
CAD: 6994187/SSFE2422
DIMS: 23x12x14 IN

BILL THIRD PARTY

TO

DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222
INV:
PO:
REF:
DEPT:

FedEx
Express

E

J233123072501uv

2 of 6
MPS# 0263 **7825 3764 5127**
Mstr# 7825 3764 5116
0201

WED - 16 AUG 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

CUSTODY SEAL
DATE 8-15-23
SIGNATURE [signature]

512
DHL
ANALYTICAL

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **WSP-Golder**

Date Received: **8/16/2023**

Work Order Number: **2308215**

Received by: **GLK**

Checklist completed by:  8/16/2023
Signature | Date

Reviewed by: 8/16/2023
Initials | Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Cooler #	1	2
Temp °C	1.4	22.1
Seal Intact	Y	Y

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: Cooler received at 22.1°C contained only Ra226 & Ra228 bottles.

Corrective Action: Proceed with sample analysis.

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: Luminant - MLSES Ash Ponds CCR	**LRC Date:** 9/21/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2308215
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
R1	OI	**1)** Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	**X**				**R1-01**
		2) Were all departures from standard conditions described in an exception report?			**X**		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	**X**				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	**X**				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	**X**				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	**X**				
		3) Were calculations checked by a peer or supervisor?	**X**				
		4) Were all analyte identifications checked by a peer or supervisor?	**X**				
		5) Were sample detection limits reported for all analytes not detected?	**X**				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			**X**		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			**X**		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			**X**		
		9) If required for the project, TICs reported?			**X**		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			**X**		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			**X**		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	**X**				
		2) Were blanks analyzed at the appropriate frequency?	**X**				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	**X**				
		4) Were blank concentrations < MDL?	**X**				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, **greater** than 10 times the concentration in the blank sample?			**X**		
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	**X**				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	**X**				
		3) Were LCSs analyzed at the required frequency?	**X**				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	**X**				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	**X**				
		6) Was the LCSD RPD within QC limits (if applicable)?	**X**				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	**X**				
		2) Were MS/MSD analyzed at the appropriate frequency?	**X**				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		**X**			**R7-03**
		4) Were MS/MSD RPDs within laboratory QC limits?	**X**				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	**X**				
		2) Were analytical duplicates analyzed at the appropriate frequency?	**X**				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	**X**				
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	**X**				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	**X**				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	**X**				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	**X**				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	**X**				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	**X**				

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Luminant - MLSES Ash Ponds CCR	**LRC Date:** 9/21/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2308215
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?	X				
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			**S9-01**
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods** (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC Chapter 5,
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) The amount of analyte measured in the duplicate,
  b) The calculated RPD, and
  c) The laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager

Signature

09/21/23
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *21-Sep-23*

CLIENT: WSP-Golder
Project: Luminant - MLSES Ash Ponds CCR
Lab Order: 2308215

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M2540C - TDS Analysis
Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM7500 Ra B M. Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 8/16/23. A total of 8 samples were received. For further login notes please refer to the Sample Receipt Checklist. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Metals analysis performed on 8/25/23 the matrix spike and matrix spike duplicate recoveries were out of control limits for Boron. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

Exception Report S9-01

For Metals analysis performed on 8/24/23 the PDS recovery was below control limits for Barium and Lithium. These are flagged accordingly in the QC summary report. The serial dilution was within control limits for these analytes. No further corrective actions were taken.

For Mercury analysis performed on 8/22/23 the PDS recovery was slightly below control limits. This was due to matrix effect. This is flagged accordingly. The serial dilution was within control limits. No further corrective actions were taken.

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT: WSP-Golder
Project: Luminant - MLSES Ash Ponds CCR
Lab Order: 2308215

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2308215-01	H-28		08/14/23 07:45 AM	08/16/2023
2308215-02	H-32		08/14/23 08:40 AM	08/16/2023
2308215-03	H-29		08/14/23 09:35 AM	08/16/2023
2308215-04	H-31		08/14/23 10:25 AM	08/16/2023
2308215-05	H-33		08/14/23 11:25 AM	08/16/2023
2308215-06	DUP-1		08/14/23 11:25 AM	08/16/2023
2308215-07	H-26		08/14/23 12:20 PM	08/16/2023
2308215-08	H-27		08/14/23 01:25 PM	08/16/2023

Lab Order: 2308215
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308215-01A	H-28	08/14/23 07:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-28	08/14/23 07:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-28	08/14/23 07:45 AM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-01B	H-28	08/14/23 07:45 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-28	08/14/23 07:45 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-28	08/14/23 07:45 AM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742
2308215-02A	H-32	08/14/23 08:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-32	08/14/23 08:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-32	08/14/23 08:40 AM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-02B	H-32	08/14/23 08:40 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-32	08/14/23 08:40 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-32	08/14/23 08:40 AM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742
2308215-03A	H-29	08/14/23 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-29	08/14/23 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-29	08/14/23 09:35 AM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-03B	H-29	08/14/23 09:35 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-29	08/14/23 09:35 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-29	08/14/23 09:35 AM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742
2308215-04A	H-31	08/14/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-31	08/14/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-31	08/14/23 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-04B	H-31	08/14/23 10:25 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-31	08/14/23 10:25 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-31	08/14/23 10:25 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-31	08/14/23 10:25 AM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742
2308215-05A	H-33	08/14/23 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-33	08/14/23 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-33	08/14/23 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753

Lab Order: 2308215
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308215-05A	H-33	08/14/23 11:25 AM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-05B	H-33	08/14/23 11:25 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-33	08/14/23 11:25 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-33	08/14/23 11:25 AM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742
2308215-06A	DUP-1	08/14/23 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	DUP-1	08/14/23 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	DUP-1	08/14/23 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	DUP-1	08/14/23 11:25 AM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-06B	DUP-1	08/14/23 11:25 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	DUP-1	08/14/23 11:25 AM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	DUP-1	08/14/23 11:25 AM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742
2308215-07A	H-26	08/14/23 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-26	08/14/23 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-26	08/14/23 12:20 PM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-07B	H-26	08/14/23 12:20 PM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-26	08/14/23 12:20 PM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-26	08/14/23 12:20 PM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742
2308215-08A	H-27	08/14/23 01:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-27	08/14/23 01:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/18/23 07:36 AM	111753
	H-27	08/14/23 01:25 PM	Aqueous	SW7470A	Mercury Aq Prep	08/21/23 01:15 PM	111807
2308215-08B	H-27	08/14/23 01:25 PM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-27	08/14/23 01:25 PM	Aqueous	E300	Anion Preparation	08/16/23 10:27 AM	111705
	H-27	08/14/23 01:25 PM	Aqueous	M2540C	TDS Preparation	08/17/23 01:19 PM	111742

Lab Order: 2308215
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308215-01A	H-28	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:03 AM	CETAC2_HG_230822B
	H-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	20	08/25/23 10:50 AM	ICP-MS4_230825B
	H-28	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 03:49 PM	ICP-MS5_230824B
2308215-01B	H-28	Aqueous	E300	Anions by IC method - Water	111705	10	08/16/23 10:04 PM	IC2_230816B
	H-28	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 01:04 AM	IC2_230816B
	H-28	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D
2308215-02A	H-32	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:05 AM	CETAC2_HG_230822B
	H-32	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	10	08/25/23 10:52 AM	ICP-MS4_230825B
	H-32	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 03:52 PM	ICP-MS5_230824B
2308215-02B	H-32	Aqueous	E300	Anions by IC method - Water	111705	10	08/16/23 10:22 PM	IC2_230816B
	H-32	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 02:34 AM	IC2_230816B
	H-32	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D
2308215-03A	H-29	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:17 AM	CETAC2_HG_230822B
	H-29	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 03:54 PM	ICP-MS5_230824B
	H-29	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	10	08/25/23 10:54 AM	ICP-MS4_230825B
2308215-03B	H-29	Aqueous	E300	Anions by IC method - Water	111705	10	08/16/23 10:40 PM	IC2_230816B
	H-29	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 02:52 AM	IC2_230816B
	H-29	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D
2308215-04A	H-31	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:19 AM	CETAC2_HG_230822B
	H-31	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	20	08/25/23 10:56 AM	ICP-MS4_230825B
	H-31	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 03:57 PM	ICP-MS5_230824B
2308215-04B	H-31	Aqueous	E300	Anions by IC method - Water	111705	100	08/16/23 06:28 PM	IC2_230816B
	H-31	Aqueous	E300	Anions by IC method - Water	111705	10	08/16/23 10:58 PM	IC2_230816B
	H-31	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 03:10 AM	IC2_230816B
	H-31	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D
2308215-05A	H-33	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:26 AM	CETAC2_HG_230822B

Lab Order: 2308215
Client: WSP-Golder
Project: Luminant - MLSES Ash Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308215-05A	H-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	10	08/25/23 10:58 AM	ICP-MS4_230825B
	H-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/25/23 11:00 AM	ICP-MS4_230825B
	H-33	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 03:59 PM	ICP-MS5_230824B
2308215-05B	H-33	Aqueous	E300	Anions by IC method - Water	111705	10	08/16/23 11:16 PM	IC2_230816B
	H-33	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 03:28 AM	IC2_230816B
	H-33	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D
2308215-06A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:28 AM	CETAC2_HG_230822B
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	10	08/25/23 11:02 AM	ICP-MS4_230825B
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/25/23 11:04 AM	ICP-MS4_230825B
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 04:02 PM	ICP-MS5_230824B
2308215-06B	DUP-1	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 03:46 AM	IC2_230816B
	DUP-1	Aqueous	E300	Anions by IC method - Water	111705	10	08/16/23 11:34 PM	IC2_230816B
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D
2308215-07A	H-26	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:33 AM	CETAC2_HG_230822B
	H-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	2	08/25/23 11:06 AM	ICP-MS4_230825B
	H-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 04:04 PM	ICP-MS5_230824B
2308215-07B	H-26	Aqueous	E300	Anions by IC method - Water	111705	10	08/16/23 11:52 PM	IC2_230816B
	H-26	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 04:04 AM	IC2_230816B
	H-26	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D
2308215-08A	H-27	Aqueous	SW7470A	Mercury Total: Aqueous	111807	1	08/22/23 10:36 AM	CETAC2_HG_230822B
	H-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	2	08/25/23 11:20 AM	ICP-MS4_230825B
	H-27	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111753	1	08/24/23 04:07 PM	ICP-MS5_230824B
2308215-08B	H-27	Aqueous	E300	Anions by IC method - Water	111705	10	08/17/23 12:46 AM	IC2_230816B
	H-27	Aqueous	E300	Anions by IC method - Water	111705	1	08/17/23 04:22 AM	IC2_230816B
	H-27	Aqueous	M2540C	Total Dissolved Solids	111742	1	08/17/23 05:10 PM	WC_230817D

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-28
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-01
Project No:	31404097.019	**Collection Date:**	08/14/23 07:45 AM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 03:49 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:49 PM
Barium	0.0134	0.00300	0.0100		mg/L	1	08/24/23 03:49 PM
Beryllium	0.00736	0.000300	0.00100		mg/L	1	08/24/23 03:49 PM
Boron	5.79	0.200	0.600		mg/L	20	08/25/23 10:50 AM
Cadmium	0.000842	0.000300	0.00100	J	mg/L	1	08/24/23 03:49 PM
Calcium	73.5	2.00	6.00		mg/L	20	08/25/23 10:50 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:49 PM
Cobalt	0.172	0.00300	0.00500		mg/L	1	08/24/23 03:49 PM
Lead	0.00124	0.000300	0.00100		mg/L	1	08/24/23 03:49 PM
Lithium	0.210	0.00500	0.0100		mg/L	1	08/24/23 03:49 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:49 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:49 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 03:49 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/22/23 10:03 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	94.7	3.00	10.0		mg/L	10	08/16/23 10:04 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 01:04 AM
Sulfate	662	10.0	30.0		mg/L	10	08/16/23 10:04 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1310	50.0	50.0		mg/L	1	08/17/23 05:10 PM

Qualifiers:

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N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-32
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-02
Project No:	31404097.019	**Collection Date:**	08/14/23 08:40 AM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 03:52 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:52 PM
Barium	0.0124	0.00300	0.0100		mg/L	1	08/24/23 03:52 PM
Beryllium	0.00501	0.000300	0.00100		mg/L	1	08/24/23 03:52 PM
Boron	3.74	0.100	0.300		mg/L	10	08/25/23 10:52 AM
Cadmium	0.000516	0.000300	0.00100	J	mg/L	1	08/24/23 03:52 PM
Calcium	48.0	1.00	3.00		mg/L	10	08/25/23 10:52 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:52 PM
Cobalt	0.114	0.00300	0.00500		mg/L	1	08/24/23 03:52 PM
Lead	0.000848	0.000300	0.00100	J	mg/L	1	08/24/23 03:52 PM
Lithium	0.135	0.00500	0.0100		mg/L	1	08/24/23 03:52 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:52 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:52 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 03:52 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/22/23 10:05 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	61.3	3.00	10.0		mg/L	10	08/16/23 10:22 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 02:34 AM
Sulfate	416	10.0	30.0		mg/L	10	08/16/23 10:22 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	849	10.0	10.0		mg/L	1	08/17/23 05:10 PM

Qualifiers:

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S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-29
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-03
Project No:	31404097.019	**Collection Date:**	08/14/23 09:35 AM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 03:54 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:54 PM
Barium	0.0122	0.00300	0.0100		mg/L	1	08/24/23 03:54 PM
Beryllium	0.00492	0.000300	0.00100		mg/L	1	08/24/23 03:54 PM
Boron	3.70	0.100	0.300		mg/L	10	08/25/23 10:54 AM
Cadmium	0.000540	0.000300	0.00100	J	mg/L	1	08/24/23 03:54 PM
Calcium	48.5	1.00	3.00		mg/L	10	08/25/23 10:54 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:54 PM
Cobalt	0.115	0.00300	0.00500		mg/L	1	08/24/23 03:54 PM
Lead	0.000886	0.000300	0.00100	J	mg/L	1	08/24/23 03:54 PM
Lithium	0.135	0.00500	0.0100		mg/L	1	08/24/23 03:54 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:54 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:54 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 03:54 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/22/23 10:17 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	63.8	3.00	10.0		mg/L	10	08/16/23 10:40 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 02:52 AM
Sulfate	435	10.0	30.0		mg/L	10	08/16/23 10:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	865	10.0	10.0		mg/L	1	08/17/23 05:10 PM

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S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-31
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-04
Project No:	31404097.019	**Collection Date:**	08/14/23 10:25 AM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 03:57 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:57 PM
Barium	0.0122	0.00300	0.0100		mg/L	1	08/24/23 03:57 PM
Beryllium	0.00585	0.000300	0.00100		mg/L	1	08/24/23 03:57 PM
Boron	4.61	0.200	0.600		mg/L	20	08/25/23 10:56 AM
Cadmium	0.000556	0.000300	0.00100	J	mg/L	1	08/24/23 03:57 PM
Calcium	57.8	2.00	6.00		mg/L	20	08/25/23 10:56 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:57 PM
Cobalt	0.136	0.00300	0.00500		mg/L	1	08/24/23 03:57 PM
Lead	0.00100	0.000300	0.00100		mg/L	1	08/24/23 03:57 PM
Lithium	0.160	0.00500	0.0100		mg/L	1	08/24/23 03:57 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:57 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:57 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 03:57 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/22/23 10:19 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	66.7	3.00	10.0		mg/L	10	08/16/23 10:58 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 03:10 AM
Sulfate	455	10.0	30.0		mg/L	10	08/16/23 10:58 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	918	10.0	10.0		mg/L	1	08/17/23 05:10 PM

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C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-33
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-05
Project No:	31404097.019	**Collection Date:**	08/14/23 11:25 AM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 03:59 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:59 PM
Barium	0.157	0.00300	0.0100		mg/L	1	08/24/23 03:59 PM
Beryllium	0.000863	0.000300	0.00100	J	mg/L	1	08/24/23 03:59 PM
Boron	0.0629	0.0100	0.0300		mg/L	1	08/25/23 11:00 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/24/23 03:59 PM
Calcium	52.0	1.00	3.00		mg/L	10	08/25/23 10:58 AM
Chromium	0.0157	0.00200	0.00500		mg/L	1	08/24/23 03:59 PM
Cobalt	0.0377	0.00300	0.00500		mg/L	1	08/24/23 03:59 PM
Lead	0.00128	0.000300	0.00100		mg/L	1	08/24/23 03:59 PM
Lithium	0.153	0.00500	0.0100		mg/L	1	08/24/23 03:59 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:59 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 03:59 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 03:59 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/22/23 10:26 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	102	3.00	10.0		mg/L	10	08/16/23 11:16 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 03:28 AM
Sulfate	104	1.00	3.00		mg/L	1	08/17/23 03:28 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	511	10.0	10.0		mg/L	1	08/17/23 05:10 PM

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C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	DUP-1
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-06
Project No:	31404097.019	**Collection Date:**	08/14/23 11:25 AM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 04:02 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 04:02 PM
Barium	0.135	0.00300	0.0100		mg/L	1	08/24/23 04:02 PM
Beryllium	0.000777	0.000300	0.00100	J	mg/L	1	08/24/23 04:02 PM
Boron	0.0634	0.0100	0.0300		mg/L	1	08/25/23 11:04 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/24/23 04:02 PM
Calcium	43.6	1.00	3.00		mg/L	10	08/25/23 11:02 AM
Chromium	0.0114	0.00200	0.00500		mg/L	1	08/24/23 04:02 PM
Cobalt	0.0368	0.00300	0.00500		mg/L	1	08/24/23 04:02 PM
Lead	0.000999	0.000300	0.00100	J	mg/L	1	08/24/23 04:02 PM
Lithium	0.153	0.00500	0.0100		mg/L	1	08/24/23 04:02 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 04:02 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 04:02 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 04:02 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/22/23 10:28 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	101	3.00	10.0		mg/L	10	08/16/23 11:34 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 03:46 AM
Sulfate	104	1.00	3.00		mg/L	1	08/17/23 03:46 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	518	10.0	10.0		mg/L	1	08/17/23 05:10 PM

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SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-26
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-07
Project No:	31404097.019	**Collection Date:**	08/14/23 12:20 PM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 04:04 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 04:04 PM
Barium	0.0890	0.00300	0.0100		mg/L	1	08/24/23 04:04 PM
Beryllium	0.00150	0.000300	0.00100		mg/L	1	08/24/23 04:04 PM
Boron	0.421	0.0200	0.0600		mg/L	2	08/25/23 11:06 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/24/23 04:04 PM
Calcium	16.1	0.100	0.300		mg/L	1	08/24/23 04:04 PM
Chromium	0.00216	0.00200	0.00500	J	mg/L	1	08/24/23 04:04 PM
Cobalt	0.0244	0.00300	0.00500		mg/L	1	08/24/23 04:04 PM
Lead	0.000518	0.000300	0.00100	J	mg/L	1	08/24/23 04:04 PM
Lithium	0.0201	0.00500	0.0100		mg/L	1	08/24/23 04:04 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 04:04 PM
Selenium	0.0140	0.00200	0.00500		mg/L	1	08/24/23 04:04 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 04:04 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	0.0000824	0.0000800	0.000200	J	mg/L	1	08/22/23 10:33 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	78.5	3.00	10.0		mg/L	10	08/16/23 11:52 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 04:04 AM
Sulfate	48.9	1.00	3.00		mg/L	1	08/17/23 04:04 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	296	10.0	10.0		mg/L	1	08/17/23 05:10 PM

Qualifiers:

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- J - Analyte detected between SDL and RL
- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *21-Sep-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	H-27
Project:	Luminant - MLSES Ash Ponds CCR	**Lab ID:**	2308215-08
Project No:	31404097.019	**Collection Date:**	08/14/23 01:25 PM
Lab Order:	2308215	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/24/23 04:07 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 04:07 PM
Barium	0.0836	0.00300	0.0100		mg/L	1	08/24/23 04:07 PM
Beryllium	0.00123	0.000300	0.00100		mg/L	1	08/24/23 04:07 PM
Boron	0.362	0.0200	0.0600		mg/L	2	08/25/23 11:20 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/24/23 04:07 PM
Calcium	15.4	0.100	0.300		mg/L	1	08/24/23 04:07 PM
Chromium	0.00318	0.00200	0.00500	J	mg/L	1	08/24/23 04:07 PM
Cobalt	0.0216	0.00300	0.00500		mg/L	1	08/24/23 04:07 PM
Lead	0.00149	0.000300	0.00100		mg/L	1	08/24/23 04:07 PM
Lithium	0.0182	0.00500	0.0100		mg/L	1	08/24/23 04:07 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/24/23 04:07 PM
Selenium	0.0136	0.00200	0.00500		mg/L	1	08/24/23 04:07 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/24/23 04:07 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	0.000113	0.0000800	0.000200	J	mg/L	1	08/22/23 10:36 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	64.0	3.00	10.0		mg/L	10	08/17/23 12:46 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/17/23 04:22 AM
Sulfate	40.0	1.00	3.00		mg/L	1	08/17/23 04:22 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	254	10.0	10.0		mg/L	1	08/17/23 05:10 PM

Qualifiers:

- ND - Not Detected at the SDL
- J - Analyte detected between SDL and RL
- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230726B

Sample ID: **DCS-111365** Batch ID: **111365** TestNo: **SW7470A** Units: **mg/L**
SampType: **DCS** Run ID: **CETAC2_HG_230726B** Analysis Date: **7/26/2023 3:37:35 PM** Prep Date: **7/26/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000185	0.000200	0.000200	0	92.5	82	119	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230822B

The QC data in batch 111807 applies to the following samples: 2308215-01A, 2308215-02A, 2308215-03A, 2308215-04A, 2308215-05A, 2308215-06A, 2308215-07A, 2308215-08A

Sample ID: **MB-111807** Batch ID: **111807** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_230822B** Analysis Date: **8/22/2023 9:36:16 AM** Prep Date: **8/21/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: **LCS-111807** Batch ID: **111807** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCS** Run ID: **CETAC2_HG_230822B** Analysis Date: **8/22/2023 9:38:32 AM** Prep Date: **8/21/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00183	0.000200	0.00200	0	91.5	85	115			

Sample ID: **LCSD-111807** Batch ID: **111807** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCSD** Run ID: **CETAC2_HG_230822B** Analysis Date: **8/22/2023 9:40:48 AM** Prep Date: **8/21/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00189	0.000200	0.00200	0	94.5	85	115	3.23	15	

Sample ID: **2308215-02AMS** Batch ID: **111807** TestNo: **SW7470A** Units: **mg/L**
SampType: **MS** Run ID: **CETAC2_HG_230822B** Analysis Date: **8/22/2023 10:08:01 AM** Prep Date: **8/21/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00160	0.000200	0.00200	0	80.0	80	120			

Sample ID: **2308215-02AMSD** Batch ID: **111807** TestNo: **SW7470A** Units: **mg/L**
SampType: **MSD** Run ID: **CETAC2_HG_230822B** Analysis Date: **8/22/2023 10:10:17 AM** Prep Date: **8/21/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00159	0.000200	0.00200	0	79.5	80	120	0.627	15	

Sample ID: **2308215-02ASD** Batch ID: **111807** TestNo: **SW7470A** Units: **mg/L**
SampType: **SD** Run ID: **CETAC2_HG_230822B** Analysis Date: **8/22/2023 10:12:33 AM** Prep Date: **8/21/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000400	0.00100	0	0				0	10	

Sample ID: **2308215-02APDS** Batch ID: **111807** TestNo: **SW7470A** Units: **mg/L**
SampType: **PDS** Run ID: **CETAC2_HG_230822B** Analysis Date: **8/22/2023 10:14:49 AM** Prep Date: **8/21/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00204	0.000200	0.00250	0	81.6	85	115			S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230822B

Sample ID: **ICV-230822**	Batch ID: **R128738**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_230822B**	Analysis Date: **8/22/2023 9:31:42 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00399	0.000200	0.00400	0	99.8	90	110			

Sample ID: **CCV1-230822**	Batch ID: **R128738**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230822B**	Analysis Date: **8/22/2023 10:21:39 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00195	0.000200	0.00200	0	97.5	90	110			

Sample ID: **CCV2-230822**	Batch ID: **R128738**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230822B**	Analysis Date: **8/22/2023 10:52:08 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00195	0.000200	0.00200	0	97.5	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_230606B

Sample ID: **DCS2-110475**	Batch ID: **110475**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS4_230606B**	Analysis Date: **6/6/2023 10:20:00 AM**	Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.315	0.300	0.300	0	105	70	130	0	0	

Sample ID: **DCS4-110475**	Batch ID: **110475**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS4**	Run ID: **ICP-MS4_230606B**	Analysis Date: **6/6/2023 10:25:00 AM**	Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0291	0.0300	0.0300	0	97.1	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS4_230825B**

The QC data in batch 111753 applies to the following samples: 2308215-01A, 2308215-02A, 2308215-03A, 2308215-04A, 2308215-05A, 2308215-06A, 2308215-07A, 2308215-08A

Sample ID: **MB-111753** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_230825B** Analysis Date: **8/25/2023 10:38:00 AM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								

Sample ID: **LCS-111753** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_230825B** Analysis Date: **8/25/2023 10:40:00 AM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.212	0.0300	0.200	0	106	80	120			

Sample ID: **LCSD-111753** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_230825B** Analysis Date: **8/25/2023 10:42:00 AM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.210	0.0300	0.200	0	105	80	120	0.825	15	

Sample ID: **2308251-01D SD** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_230825B** Analysis Date: **8/25/2023 10:48:00 AM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	6.49	15.0	0	5.43				17.8	20	

Sample ID: **2308251-01D PDS** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_230825B** Analysis Date: **8/25/2023 11:08:00 AM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	24.9	3.00	20.0	5.43	97.1	75	125			

Sample ID: **2308251-01D MS** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_230825B** Analysis Date: **8/25/2023 11:11:00 AM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	5.41	3.00	0.200	5.43	-11.0	75	125			S

Sample ID: **2308251-01D MSD** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_230825B** Analysis Date: **8/25/2023 11:13:00 AM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	5.03	3.00	0.200	5.43	-197	75	125	7.13	15	S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_230825B

Sample ID: **ICV-230825**	Batch ID: **R128828**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_230825B**	Analysis Date: **8/25/2023 9:30:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.101	0.0300	0.100	0	101	90	110			
Calcium	2.50	0.300	2.50	0	100	90	110			

Sample ID: **LCVL-230825**	Batch ID: **R128828**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_230825B**	Analysis Date: **8/25/2023 9:36:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0222	0.0300	0.0200	0	111	80	120			
Calcium	0.0962	0.300	0.100	0	96.2	80	120			

Sample ID: **CCV1-230825**	Batch ID: **R128828**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_230825B**	Analysis Date: **8/25/2023 10:28:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.204	0.0300	0.200	0	102	90	110			
Calcium	4.95	0.300	5.00	0	99.0	90	110			

Sample ID: **CCV2-230825**	Batch ID: **R128828**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_230825B**	Analysis Date: **8/25/2023 11:15:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.208	0.0300	0.200	0	104	90	110			
Calcium	4.89	0.300	5.00	0	97.8	90	110			

Sample ID: **CCV3-230825**	Batch ID: **R128828**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_230825B**	Analysis Date: **8/25/2023 11:29:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.202	0.0300	0.200	0	101	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230606A

Sample ID: **DCS1-110475**	Batch ID: **110475**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS**	Run ID: **ICP-MS5_230606A**	Analysis Date: **6/6/2023 4:31:00 PM**	Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00108	0.00250	0.00100	0	108	70	130	0	0	
Beryllium	0.000502	0.00100	0.000500	0	100	70	130	0	0	
Cadmium	0.000524	0.00100	0.000500	0	105	70	130	0	0	
Lead	0.000497	0.00100	0.000500	0	99.4	70	130	0	0	
Thallium	0.000516	0.00150	0.000500	0	103	70	130	0	0	

Sample ID: **DCS2-110475**	Batch ID: **110475**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS5_230606A**	Analysis Date: **6/6/2023 4:34:00 PM**	Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.259	0.300	0.300	0	86.2	70	130	0	0	

Sample ID: **DCS3-110475**	Batch ID: **110475**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS3**	Run ID: **ICP-MS5_230606A**	Analysis Date: **6/6/2023 4:36:00 PM**	Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00499	0.00500	0.00500	0	99.9	70	130	0	0	
Barium	0.00525	0.0100	0.00500	0	105	70	130	0	0	
Chromium	0.00520	0.00500	0.00500	0	104	70	130	0	0	
Cobalt	0.00524	0.00500	0.00500	0	105	70	130	0	0	
Lithium	0.00519	0.0100	0.00500	0	104	70	130	0	0	
Molybdenum	0.00526	0.00500	0.00500	0	105	70	130	0	0	
Selenium	0.00545	0.00500	0.00500	0	109	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_230824B**

The QC data in batch 111753 applies to the following samples: 2308215-01A, 2308215-02A, 2308215-03A, 2308215-04A, 2308215-05A, 2308215-06A, 2308215-07A, 2308215-08A

Sample ID: **MB-111753** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 3:34:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: **LCS-111753** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 3:36:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	80	120			
Arsenic	0.198	0.00500	0.200	0	99.2	80	120			
Barium	0.199	0.0100	0.200	0	99.3	80	120			
Beryllium	0.197	0.00100	0.200	0	98.3	80	120			
Cadmium	0.199	0.00100	0.200	0	99.4	80	120			
Calcium	4.82	0.300	5.00	0	96.4	80	120			
Chromium	0.191	0.00500	0.200	0	95.5	80	120			
Cobalt	0.204	0.00500	0.200	0	102	80	120			
Lead	0.196	0.00100	0.200	0	98.0	80	120			
Lithium	0.212	0.0100	0.200	0	106	80	120			
Molybdenum	0.197	0.00500	0.200	0	98.3	80	120			
Selenium	0.207	0.00500	0.200	0	103	80	120			
Thallium	0.193	0.00150	0.200	0	96.6	80	120			

Sample ID: **LCSD-111753** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 3:39:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	80	120	0.138	15	
Arsenic	0.196	0.00500	0.200	0	97.8	80	120	1.45	15	
Barium	0.199	0.0100	0.200	0	99.4	80	120	0.118	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230824B

Sample ID: **LCSD-111753** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 3:39:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.194	0.00100	0.200	0	96.8	80	120	1.53	15	
Cadmium	0.198	0.00100	0.200	0	98.8	80	120	0.656	15	
Calcium	4.79	0.300	5.00	0	95.7	80	120	0.727	15	
Chromium	0.191	0.00500	0.200	0	95.7	80	120	0.221	15	
Cobalt	0.203	0.00500	0.200	0	102	80	120	0.225	15	
Lead	0.196	0.00100	0.200	0	97.8	80	120	0.244	15	
Lithium	0.210	0.0100	0.200	0	105	80	120	0.880	15	
Molybdenum	0.195	0.00500	0.200	0	97.7	80	120	0.641	15	
Selenium	0.205	0.00500	0.200	0	102	80	120	0.984	15	
Thallium	0.193	0.00150	0.200	0	96.6	80	120	0.040	15	

Sample ID: **2308251-01D SD** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 3:46:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	<0.0100	0.0250	0	0				0	20	
Barium	1.46	0.0500	0	1.48				0.964	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Calcium	4.44	1.50	0	4.50				1.41	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	0.341	0.0500	0	0.337				1.33	20	
Molybdenum	<0.0100	0.0250	0	0				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: **2308251-01D PDS** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 4:12:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.196	0.00250	0.200	0	98.0	75	125			
Arsenic	0.186	0.00500	0.200	0	93.1	75	125			
Barium	1.61	0.0100	0.200	1.48	64.1	75	125			S
Beryllium	0.179	0.00100	0.200	0	89.6	75	125			
Cadmium	0.195	0.00100	0.200	0	97.5	75	125			
Calcium	9.03	0.300	5.00	4.50	90.6	75	125			
Chromium	0.191	0.00500	0.200	0	95.6	75	125			
Cobalt	0.187	0.00500	0.200	0	93.7	75	125			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230824B

Sample ID: **2308251-01D PDS** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 4:12:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.195	0.00100	0.200	0	97.3	75	125			
Lithium	0.480	0.0100	0.200	0.337	71.8	75	125			S
Molybdenum	0.199	0.00500	0.200	0	99.6	75	125			
Selenium	0.171	0.00500	0.200	0	85.5	75	125			
Thallium	0.194	0.00150	0.200	0	96.8	75	125			

Sample ID: **2308251-01D MS** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 4:15:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.202	0.00250	0.200	0	101	75	125			
Arsenic	0.191	0.00500	0.200	0	95.3	75	125			
Barium	1.69	0.0100	0.200	1.48	105	75	125			
Beryllium	0.178	0.00100	0.200	0	89.2	75	125			
Cadmium	0.192	0.00100	0.200	0	95.8	75	125			
Calcium	9.10	0.300	5.00	4.50	91.8	75	125			
Chromium	0.186	0.00500	0.200	0	93.0	75	125			
Cobalt	0.189	0.00500	0.200	0	94.4	75	125			
Lead	0.195	0.00100	0.200	0	97.3	75	125			
Lithium	0.494	0.0100	0.200	0.337	78.6	75	125			
Molybdenum	0.201	0.00500	0.200	0	100	75	125			
Selenium	0.173	0.00500	0.200	0	86.4	75	125			
Thallium	0.191	0.00150	0.200	0	95.7	75	125			

Sample ID: **2308251-01D MSD** Batch ID: **111753** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 4:17:00 PM** Prep Date: **8/18/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	75	125	0.823	15	
Arsenic	0.190	0.00500	0.200	0	94.9	75	125	0.384	15	
Barium	1.70	0.0100	0.200	1.48	109	75	125	0.416	15	
Beryllium	0.181	0.00100	0.200	0	90.5	75	125	1.45	15	
Cadmium	0.192	0.00100	0.200	0	96.1	75	125	0.359	15	
Calcium	9.28	0.300	5.00	4.50	95.5	75	125	1.98	15	
Chromium	0.186	0.00500	0.200	0	93.2	75	125	0.131	15	
Cobalt	0.189	0.00500	0.200	0	94.6	75	125	0.151	15	
Lead	0.196	0.00100	0.200	0	98.0	75	125	0.678	15	
Lithium	0.503	0.0100	0.200	0.337	82.9	75	125	1.74	15	
Molybdenum	0.201	0.00500	0.200	0	100	75	125	0.105	15	
Selenium	0.173	0.00500	0.200	0	86.5	75	125	0.170	15	
Thallium	0.193	0.00150	0.200	0	96.5	75	125	0.777	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230824B

Sample ID: **ICV-230824** Batch ID: **R128816** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 1:11:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0982	0.00250	0.100	0	98.2	90	110			
Arsenic	0.0957	0.00500	0.100	0	95.7	90	110			
Barium	0.0964	0.0100	0.100	0	96.4	90	110			
Beryllium	0.0960	0.00100	0.100	0	96.0	90	110			
Cadmium	0.0988	0.00100	0.100	0	98.8	90	110			
Calcium	2.50	0.300	2.50	0	99.9	90	110			
Chromium	0.0972	0.00500	0.100	0	97.2	90	110			
Cobalt	0.0980	0.00500	0.100	0	98.0	90	110			
Lead	0.0971	0.00100	0.100	0	97.1	90	110			
Lithium	0.0982	0.0100	0.100	0	98.2	90	110			
Molybdenum	0.0936	0.00500	0.100	0	93.6	90	110			
Selenium	0.0979	0.00500	0.100	0	97.9	90	110			
Thallium	0.0956	0.00150	0.100	0	95.6	90	110			

Sample ID: **LCVL-230824** Batch ID: **R128816** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 1:16:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00201	0.00250	0.00200	0	100	80	120			
Arsenic	0.00502	0.00500	0.00500	0	100	80	120			
Barium	0.00499	0.0100	0.00500	0	99.7	80	120			
Beryllium	0.00101	0.00100	0.00100	0	101	80	120			
Cadmium	0.00115	0.00100	0.00100	0	115	80	120			
Calcium	0.106	0.300	0.100	0	106	80	120			
Chromium	0.00495	0.00500	0.00500	0	99.1	80	120			
Cobalt	0.00511	0.00500	0.00500	0	102	80	120			
Lead	0.00101	0.00100	0.00100	0	101	80	120			
Lithium	0.0102	0.0100	0.0100	0	102	80	120			
Molybdenum	0.00508	0.00500	0.00500	0	102	80	120			
Selenium	0.00525	0.00500	0.00500	0	105	80	120			
Thallium	0.00104	0.00150	0.00100	0	104	80	120			

Sample ID: **CCV3-230824** Batch ID: **R128816** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 3:26:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	90	110			
Arsenic	0.193	0.00500	0.200	0	96.6	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.196	0.00100	0.200	0	98.2	90	110			
Cadmium	0.195	0.00100	0.200	0	97.4	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230824B

Sample ID: **CCV3-230824** Batch ID: **R128816** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 3:26:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.79	0.300	5.00	0	95.8	90	110			
Chromium	0.187	0.00500	0.200	0	93.5	90	110			
Cobalt	0.197	0.00500	0.200	0	98.4	90	110			
Lead	0.195	0.00100	0.200	0	97.6	90	110			
Lithium	0.210	0.0100	0.200	0	105	90	110			
Molybdenum	0.192	0.00500	0.200	0	96.0	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			
Thallium	0.192	0.00150	0.200	0	96.2	90	110			

Sample ID: **CCV4-230824** Batch ID: **R128816** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230824B** Analysis Date: **8/24/2023 4:20:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	90	110			
Arsenic	0.193	0.00500	0.200	0	96.3	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.187	0.00100	0.200	0	93.7	90	110			
Cadmium	0.197	0.00100	0.200	0	98.5	90	110			
Calcium	4.75	0.300	5.00	0	95.1	90	110			
Chromium	0.191	0.00500	0.200	0	95.4	90	110			
Cobalt	0.199	0.00500	0.200	0	99.5	90	110			
Lead	0.196	0.00100	0.200	0	98.0	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			
Molybdenum	0.195	0.00500	0.200	0	97.5	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			
Thallium	0.194	0.00150	0.200	0	97.2	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230811B

Sample ID: **DCS3-111623** Batch ID: **111623** TestNo: **E300** Units: **mg/L**
SampType: **DCS3** Run ID: **IC2_230811B** Analysis Date: **8/11/2023 2:30:22 PM** Prep Date: **8/11/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1.04	1.00	1.000	0	104	70	130	0	0	
Fluoride	0.419	0.400	0.4000	0	105	70	130	0	0	
Sulfate	2.86	3.00	3.000	0	95.5	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230816B

The QC data in batch 111705 applies to the following samples: 2308215-01B, 2308215-02B, 2308215-03B, 2308215-04B, 2308215-05B, 2308215-06B, 2308215-07B, 2308215-08B

Sample ID: **MB-111705** Batch ID: **111705** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_230816B** Analysis Date: **8/16/2023 1:22:24 PM** Prep Date: **8/16/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: **LCS-111705** Batch ID: **111705** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC2_230816B** Analysis Date: **8/16/2023 1:40:24 PM** Prep Date: **8/16/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.93	1.00	10.00	0	99.3	90	110			
Fluoride	3.97	0.400	4.000	0	99.3	90	110			
Sulfate	28.6	3.00	30.00	0	95.4	90	110			

Sample ID: **LCSD-111705** Batch ID: **111705** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_230816B** Analysis Date: **8/16/2023 1:58:24 PM** Prep Date: **8/16/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.96	1.00	10.00	0	99.6	90	110	0.239	20	
Fluoride	3.99	0.400	4.000	0	99.7	90	110	0.458	20	
Sulfate	28.7	3.00	30.00	0	95.7	90	110	0.319	20	

Sample ID: **2308215-04BMS** Batch ID: **111705** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_230816B** Analysis Date: **8/16/2023 6:46:39 PM** Prep Date: **8/16/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2030	100	2000	78.98	97.6	90	110			
Fluoride	2040	40.0	2000	0	102	90	110			
Sulfate	2280	300	2000	451.7	91.3	90	110			

Sample ID: **2308215-04BMSD** Batch ID: **111705** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_230816B** Analysis Date: **8/16/2023 7:04:39 PM** Prep Date: **8/16/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2060	100	2000	78.98	98.9	90	110	1.31	20	
Fluoride	2070	40.0	2000	0	104	90	110	1.51	20	
Sulfate	2310	300	2000	451.7	92.8	90	110	1.26	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230816B

Sample ID: **2308215-07BMS** Batch ID: **111705** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_230816B** Analysis Date: **8/17/2023 12:10:39 AM** Prep Date: **8/16/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	268	10.0	200.0	78.48	94.9	90	110			
Fluoride	195	4.00	200.0	0	97.6	90	110			
Sulfate	233	30.0	200.0	49.36	92.0	90	110			

Sample ID: **2308215-07BMSD** Batch ID: **111705** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_230816B** Analysis Date: **8/17/2023 12:28:39 AM** Prep Date: **8/16/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	265	10.0	200.0	78.48	93.3	90	110	1.16	20	
Fluoride	193	4.00	200.0	0	96.6	90	110	1.07	20	
Sulfate	230	30.0	200.0	49.36	90.5	90	110	1.31	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230816B

Sample ID: **ICV-230816**	Batch ID: **R128627**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_230816B**	Analysis Date: **8/16/2023 12:46:24 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.0	1.00	25.00	0	99.9	90	110			
Fluoride	10.1	0.400	10.00	0	101	90	110			
Sulfate	72.5	3.00	75.00	0	96.7	90	110			

Sample ID: **CCV1-230816**	Batch ID: **R128627**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230816B**	Analysis Date: **8/16/2023 9:10:39 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.91	1.00	10.00	0	99.1	90	110			
Fluoride	4.04	0.400	4.000	0	101	90	110			
Sulfate	28.5	3.00	30.00	0	95.1	90	110			

Sample ID: **CCV2-230816**	Batch ID: **R128627**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230816B**	Analysis Date: **8/17/2023 1:58:39 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.90	1.00	10.00	0	99.0	90	110			
Fluoride	4.00	0.400	4.000	0	99.9	90	110			
Sulfate	28.6	3.00	30.00	0	95.2	90	110			

Sample ID: **CCV3-230816**	Batch ID: **R128627**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230816B**	Analysis Date: **8/17/2023 6:10:39 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.07	0.400	4.000	0	102	90	110			
Sulfate	29.0	3.00	30.00	0	96.5	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_230817D

The QC data in batch 111742 applies to the following samples: 2308215-01B, 2308215-02B, 2308215-03B, 2308215-04B, 2308215-05B, 2308215-06B, 2308215-07B, 2308215-08B

Sample ID: **MB-111742** Batch ID: **111742** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_230817D** Analysis Date: **8/17/2023 5:10:00 PM** Prep Date: **8/17/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-111742** Batch ID: **111742** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_230817D** Analysis Date: **8/17/2023 5:10:00 PM** Prep Date: **8/17/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	726	10.0	745.6	0	97.4	90	113			

Sample ID: **2308202-02A-DUP** Batch ID: **111742** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230817D** Analysis Date: **8/17/2023 5:10:00 PM** Prep Date: **8/17/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1080	50.0	0	1045				2.83	5	

Sample ID: **2308202-03A-DUP** Batch ID: **111742** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230817D** Analysis Date: **8/17/2023 5:10:00 PM** Prep Date: **8/17/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1180	50.0	0	1170				0.426	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder
Work Order: 2308215
Project: Luminant - MLSES Ash Ponds CCR

MQL SUMMARY REPORT

TestNo: E300	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

TestNo: SW6020B	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

TestNo: SW7470A	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Mercury	0.0000800	0.000200

TestNo: M2540C	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Total Dissolved Solids (Residue, Filt	10.0	10.0

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP

ANALYTICAL REPORT

September 21, 2023

DHL Analytical, Inc.

Sample Delivery Group:	L1647911
Samples Received:	08/18/2023
Project Number:	
Description:	

Report To: John DuPont
2300 Double Creek Drive
Round Rock, TX 78664

Entire Report Reviewed By:

Donna Eidson
Project Manager

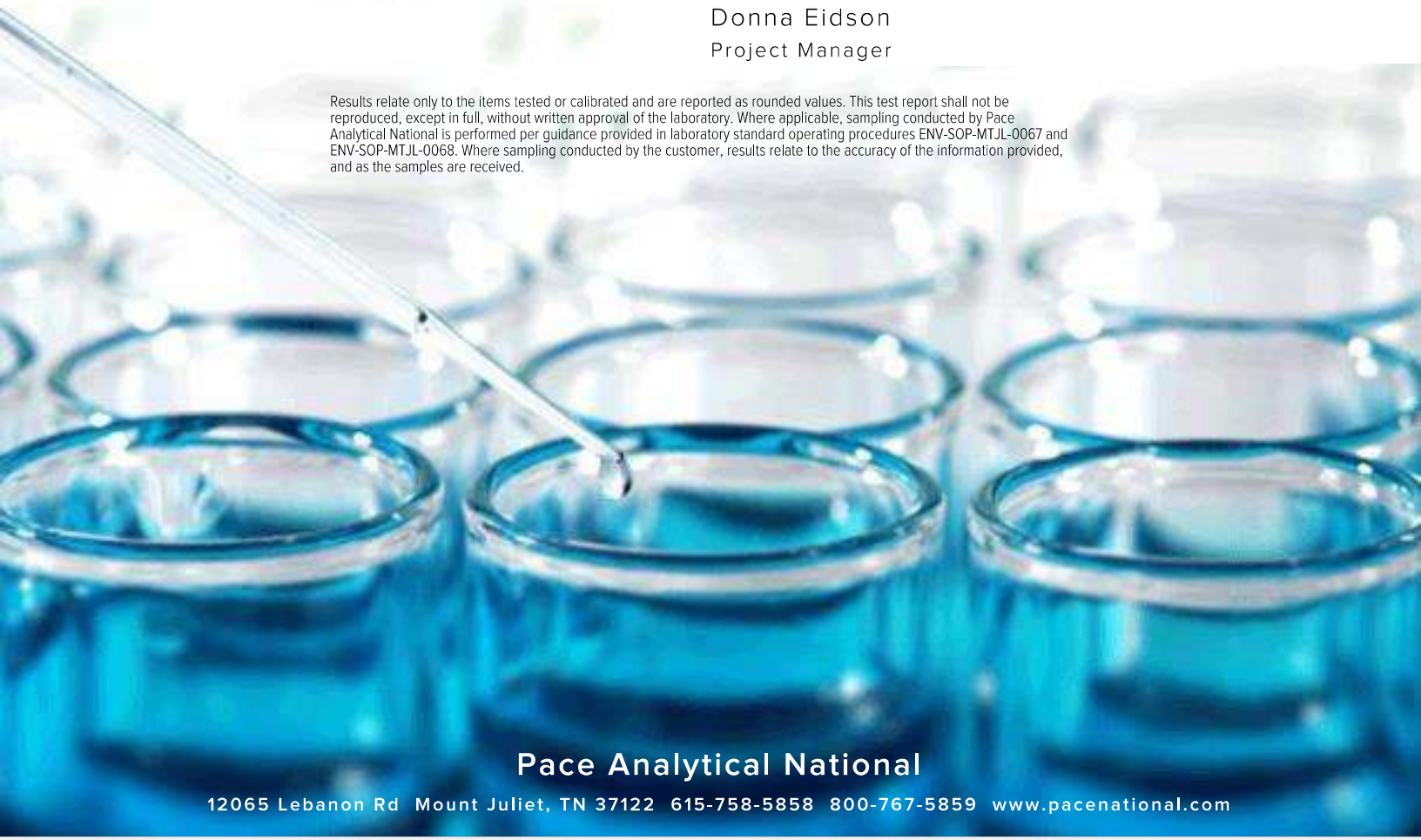


TABLE OF CONTENTS

H-28 L1647911-01 Non-Potable Water

Collected by | Collected date/time 08/14/23 07:45 | Received date/time 08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

H-32 L1647911-02 Non-Potable Water

Collected by | Collected date/time 08/14/23 08:40 | Received date/time 08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

H-29 L1647911-03 Non-Potable Water

Collected by | Collected date/time 08/14/23 09:35 | Received date/time 08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

H-31 L1647911-04 Non-Potable Water

Collected by | Collected date/time 08/14/23 10:25 | Received date/time 08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

H-33 L1647911-05 Non-Potable Water

Collected by | Collected date/time 08/14/23 11:25 | Received date/time 08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

DUP-1 L1647911-06 Non-Potable Water

Collected by | Collected date/time 08/14/23 11:25 | Received date/time 08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

H-26 L1647911-07 Non-Potable Water

Collected by | Collected date/time 08/14/23 12:20 | Received date/time 08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

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

H-27 L1647911-08 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/14/23 13:25	08/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2120275	1	08/24/23 11:48	09/15/23 20:01	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2119526	1	08/25/23 08:38	09/05/23 11:25	RGT	Mt. Juliet, TN

CASE NARRATIVE

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

Donna Eidson
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.179	U	0.368	0.666	09/15/2023 20:01	WG2120275
(T) Barium	*75.7*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*124*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0574	U	0.147	0.261	09/05/2023 11:25	WG2119526
(T) Barium-133	*99.7*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.23		0.241	0.397	09/15/2023 20:01	WG2120275
(T) Barium	*120*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*83.3*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.143	J	0.228	0.355	09/05/2023 11:25	WG2119526
(T) Barium-133	*62.7*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.671		0.273	0.479	09/15/2023 20:01	WG2120275
(T) Barium	*87.5*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*99.4*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.487		0.304	0.242	09/05/2023 11:25	WG2119526
(T) Barium-133	*76.4*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.18		0.262	0.442	09/15/2023 20:01	WG2120275
(T) Barium	*89.6*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*112*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.348		0.229	0.191	09/05/2023 11:25	WG2119526
(T) Barium-133	*86.6*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.69		0.298	0.482	09/15/2023 20:01	WG2120275
(T) Barium	*83.6*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*76.6*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.314		0.252	0.280	09/05/2023 11:25	WG2119526
(T) Barium-133	*87.8*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.785		0.225	0.387	09/15/2023 20:01	WG2120275
(T) Barium	*92.0*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*108*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.402		0.251	0.236	09/05/2023 11:25	WG2119526
(T) Barium-133	*94.8*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.62		0.266	0.428	09/15/2023 20:01	WG2120275
(T) Barium	*79.2*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*134*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.375		0.234	0.208	09/05/2023 11:25	WG2119526
(T) Barium-133	*116*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.896		0.248	0.426	09/15/2023 20:01	WG2120275
(T) Barium	*86.9*			*30.0-143*	*09/15/2023 20:01*	WG2120275
(T) Yttrium	*108*			*30.0-136*	*09/15/2023 20:01*	WG2120275

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.619		0.328	0.285	09/05/2023 11:25	WG2119526
(T) Barium-133	*102*			*30.0-143*	*09/05/2023 11:25*	WG2119526

Method Blank (MB)

(MB) R3975676-1 09/15/23 20:01

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.658		0.242	0.422
(T) Barium	*70.9*		*70.9*	
(T) Yttrium	*111*		*111*	

L1648948-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1648948-02 09/15/23 20:01 • (DUP) R3975676-5 09/15/23 20:01

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.304	0.315	0.570	0.924	0.354	0.570	1	101	1.31		20	3
(T) Barium	*102*			*88.7*	*88.7*							
(T) Yttrium	*104*			*115*	*115*							

Laboratory Control Sample (LCS)

(LCS) R3975676-2 09/15/23 20:01

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.06	81.3	80.0-120	
(T) Barium			*91.6*		
(T) Yttrium			*117*		

L1648948-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1648948-01 09/15/23 20:01 • (MS) R3975676-3 09/15/23 20:01 • (MSD) R3975676-4 09/15/23 20:01

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.765	16.9	19.0	96.6	109	1	70.0-130			11.6		20
(T) Barium		*112*			*87.9*	*76.4*							
(T) Yttrium		*94.4*			*116*	*93.8*							

Method Blank (MB)

(MB) R3972820-1 09/05/23 11:25

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	-0.0102	U	0.0547	0.115
(T) Barium-133	*67.9*		*67.9*	

L1648531-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1648531-01 09/05/23 11:25 • (DUP) R3972820-5 09/05/23 11:25

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	1.33	0.430	0.238	1.04	0.411	0.238	1	24.4	0.486		20	3
(T) Barium-133	*84.2*			*88.1*	*88.1*							

Laboratory Control Sample (LCS)

(LCS) R3972820-2 09/05/23 11:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.96	99.0	80.0-120	
(T) Barium-133			*70.0*		

L1647911-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1647911-04 09/05/23 11:25 • (MS) R3972820-3 09/05/23 11:25 • (MSD) R3972820-4 09/05/23 11:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.348	19.9	19.8	97.7	97.5	1	75.0-125			0.201		20
(T) Barium-133		*86.6*			*83.6*	*76.2*							

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX:

CHAIN-OF-CUSTODY RECORD

C151

Work Order: 2308215

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

TEL: (615) 773-5923
FAX:
Acct #: DHLRRTX

L1647911

16-Aug-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228 E904.0	Ra-226 M7500 Ra B M				
H-28	Aqueous	01C	08/14/23 07:45 AM	1LHDPEHNO3		1				-01
H-28	Aqueous	01D	08/14/23 07:45 AM	1LHDPEHNO3	1					
H-32	Aqueous	02C	08/14/23 08:40 AM	1LHDPEHNO3		1				-02
H-32	Aqueous	02D	08/14/23 08:40 AM	1LHDPEHNO3	1					
H-29	Aqueous	03C	08/14/23 09:35 AM	1LHDPEHNO3		1				-03
H-29	Aqueous	03D	08/14/23 09:35 AM	1LHDPEHNO3	1					
H-31	Aqueous	04C	08/14/23 10:25 AM	1LHDPEHNO3		1				-04
H-31	Aqueous	04D	08/14/23 10:25 AM	1LHDPEHNO3	1					
H-33	Aqueous	05C	08/14/23 11:25 AM	1LHDPEHNO3		1				-05
H-33	Aqueous	05D	08/14/23 11:25 AM	1LHDPEHNO3	1					
DUP-1	Aqueous	06C	08/14/23 11:25 AM	1LHDPEHNO3		1				-06
DUP-1	Aqueous	06D	08/14/23 11:25 AM	1LHDPEHNO3	1					
H-26	Aqueous	07C	08/14/23 12:20 PM	1LHDPEHNO3		1				-07
H-26	Aqueous	07D	08/14/23 12:20 PM	1LHDPEHNO3	1					
H-27	Aqueous	08C	08/14/23 01:25 PM	1LHDPEHNO3		1				-08
H-27	Aqueous	08D	08/14/23 01:25 PM	1LHDPEHNO3	1					

General Comments:

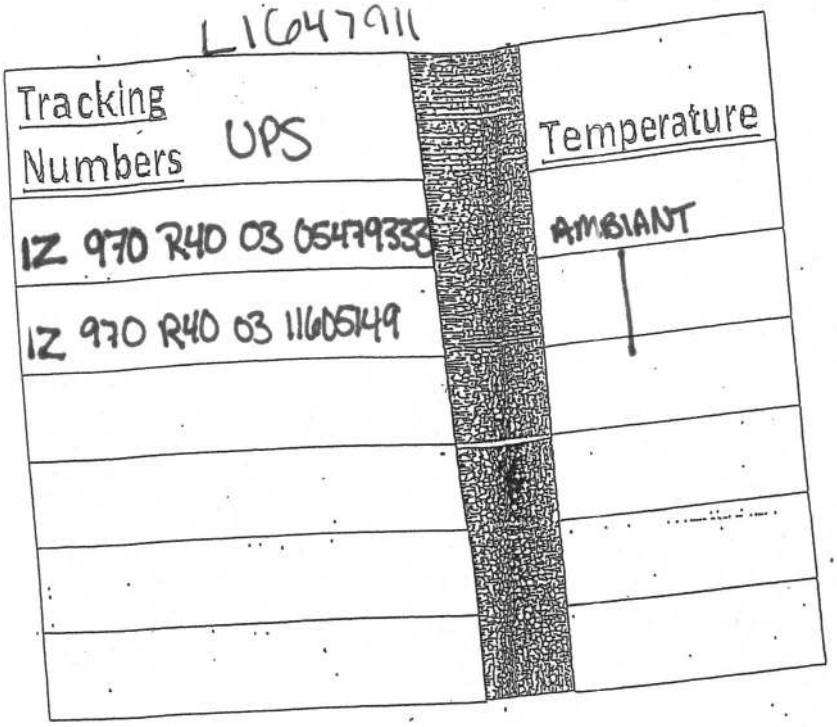
Please analyze these samples with Normal Turnaround Time.
Report Ra-226, Ra-228 & Combined per Specs.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Sample Receipt Checklist

COC Seal Present/Intact:	Y X N	If Applicable	
COC Signed/Accurate:	✓ Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	✓ Y N	Pres.Correct/Check:	✓ Y N
Correct bottles used:	✓ Y N		
Sufficient volume sent:	✓ Y N		
RAD Screen <0.5 mR/hr:	X Y N		

		Date/Time			Date/Time
Relinquished by:		8/16/23 1800	**Received by:**	GRACE BARRON	8.18.23 0950
Relinquished by:			**Received by:**		

L1647911


Tracking Numbers UPS
Temperature
1Z 970 R40 03 05479338
AMBIANT
1Z 970 R40 03 11605149

APPENDIX B

APPENDIX IV CONFIDENCE INTERVAL GRAPHS

EXPLANATION

95% Upper confidence limit

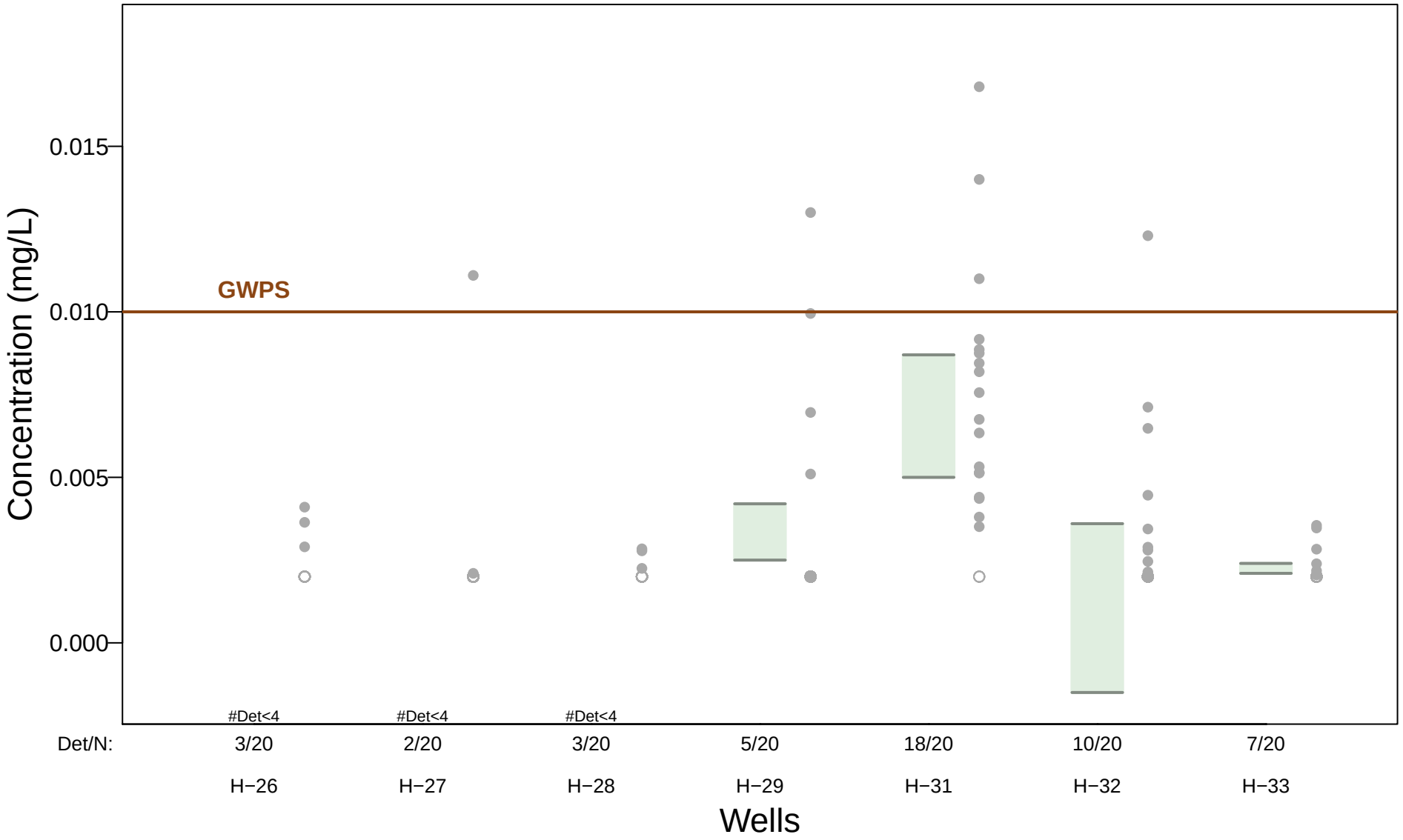
95% Lower confidence limit

Detected sample concentration

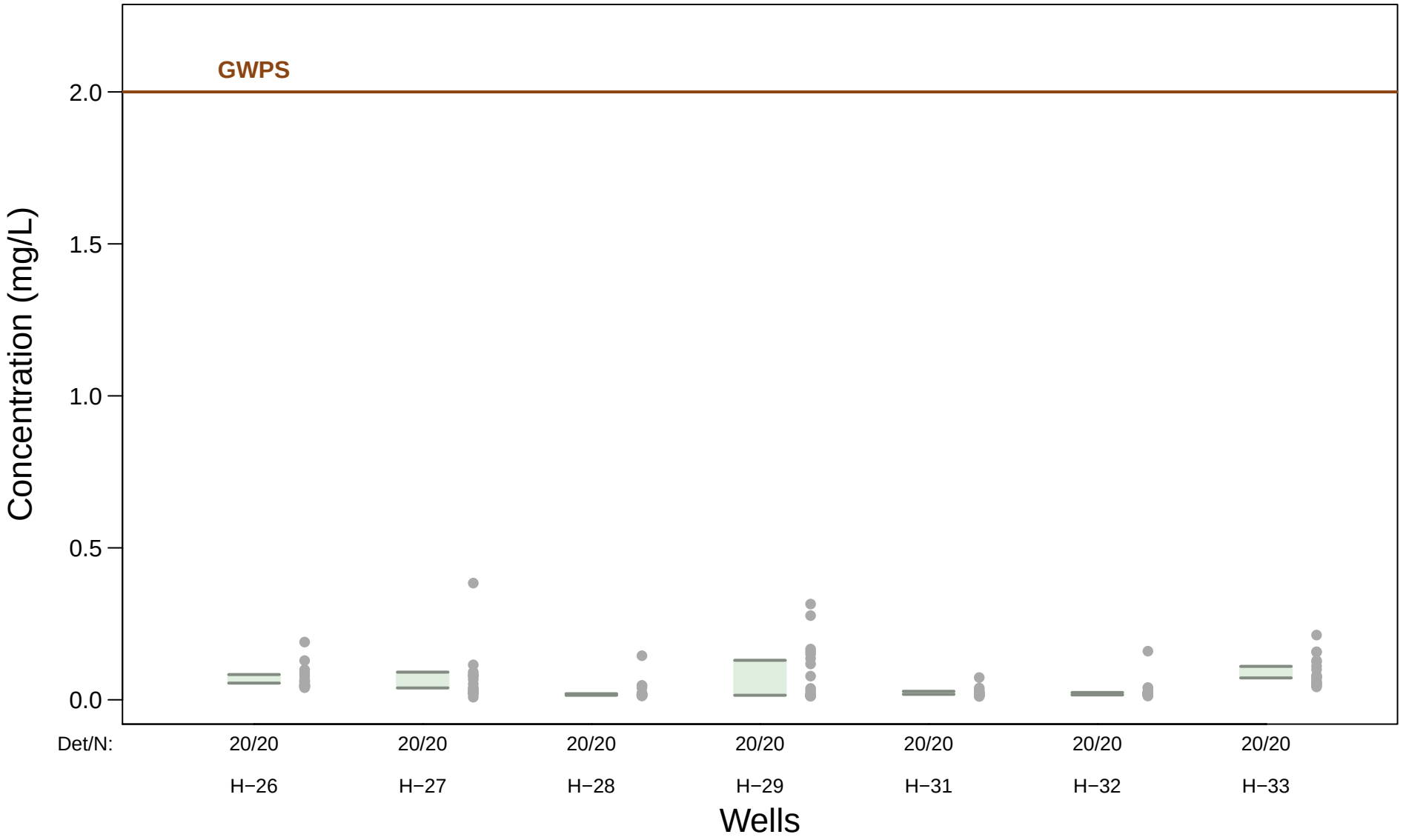
Non-detect sample result (concentration set to laboratory reporting limit)

Note: An SSL is indicated if the lower confidence limit exceeds the GWPS. SSLs above the GWPS are highlighted in red.

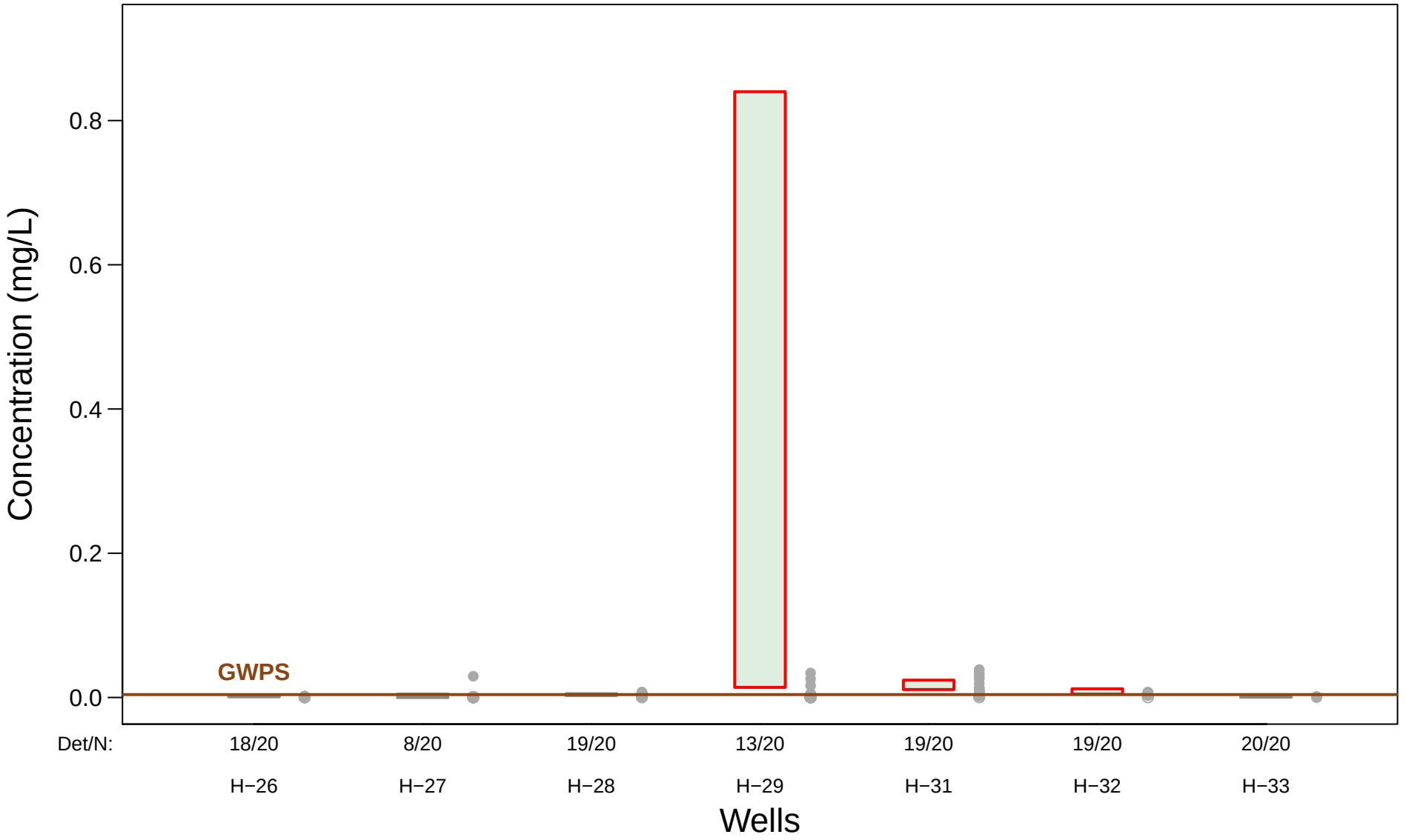
Arsenic − 95% Confidence Intervals



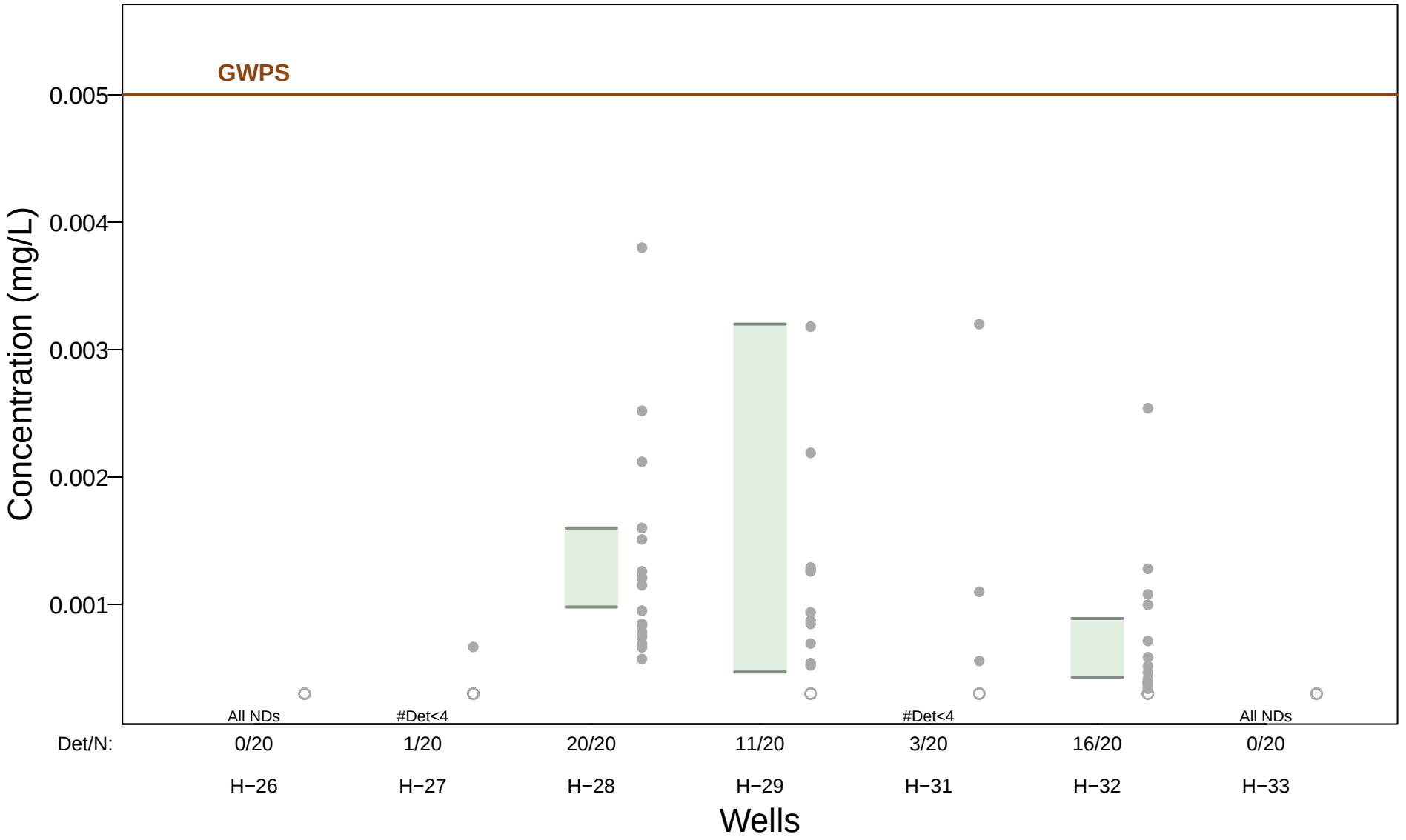
Barium – 95% Confidence Intervals



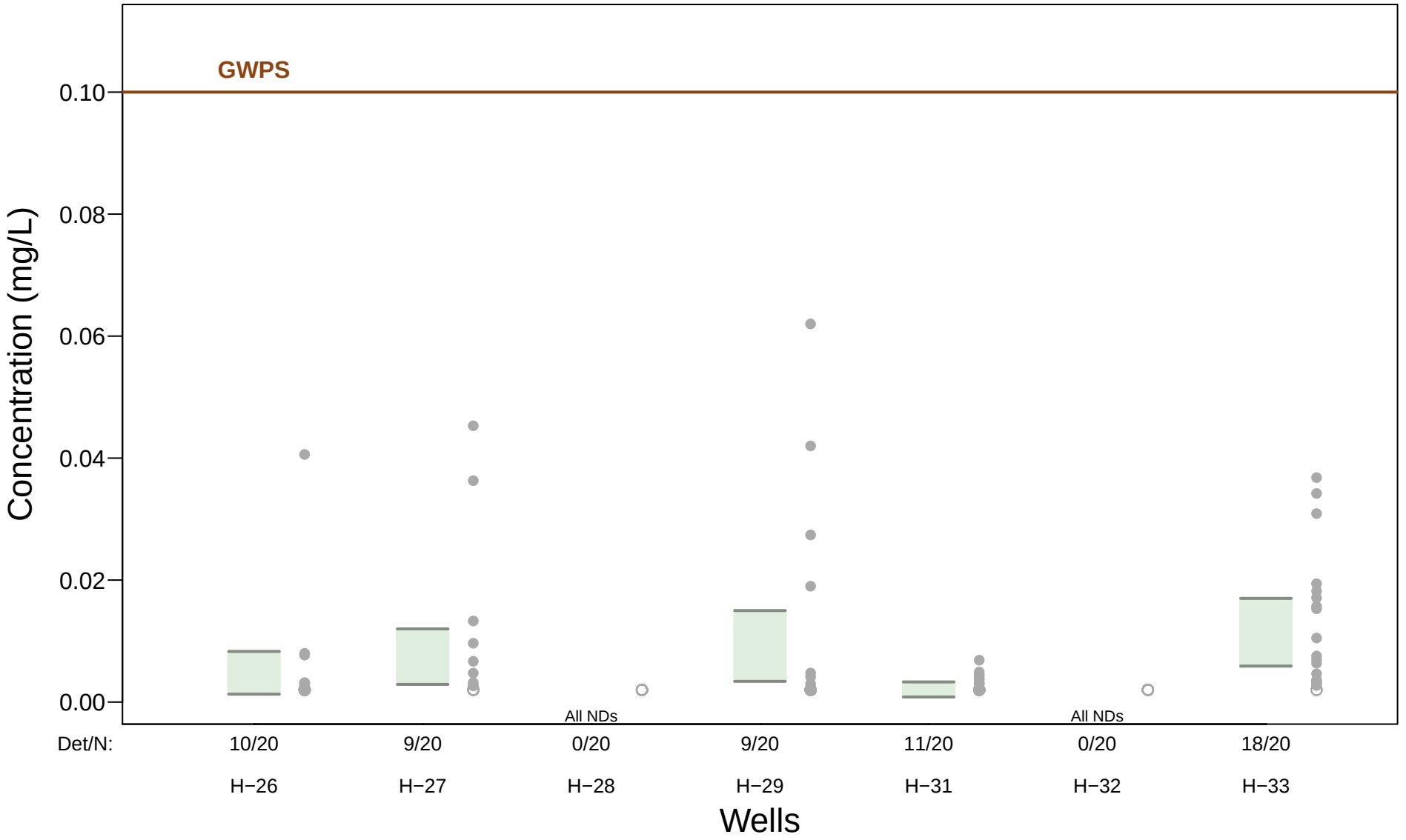
Beryllium – 95% Confidence Intervals



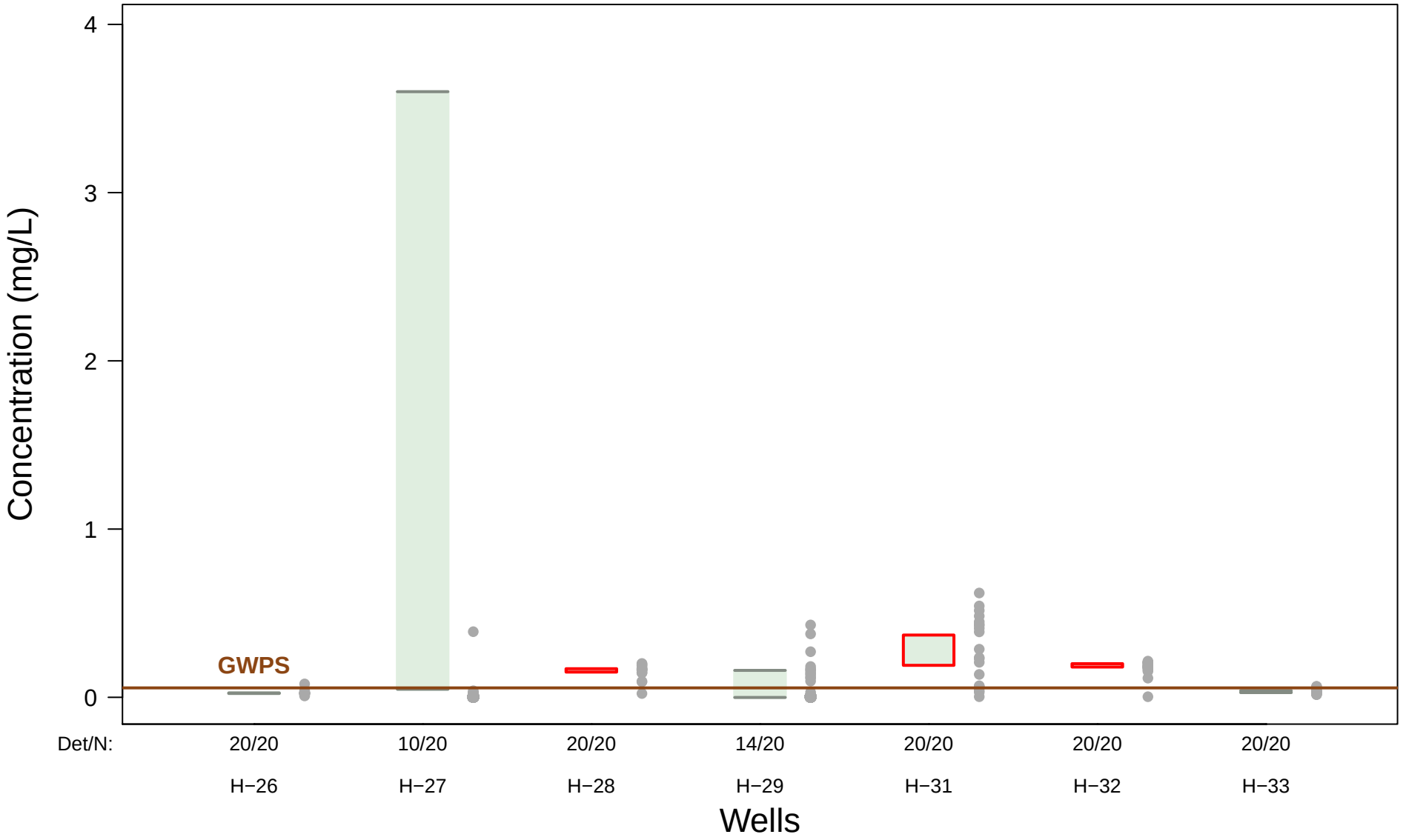
Cadmium – 95% Confidence Intervals



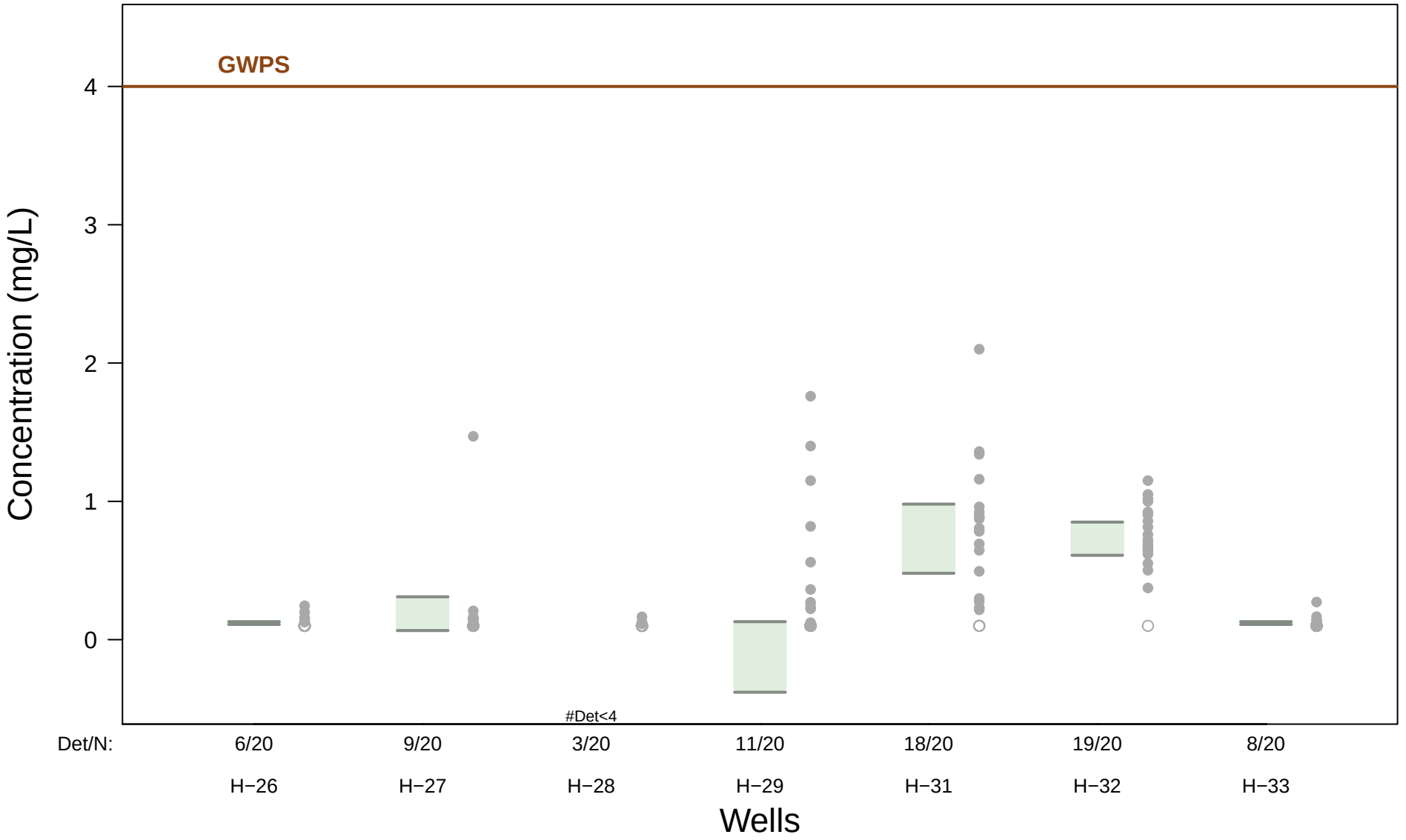
Chromium – 95% Confidence Intervals



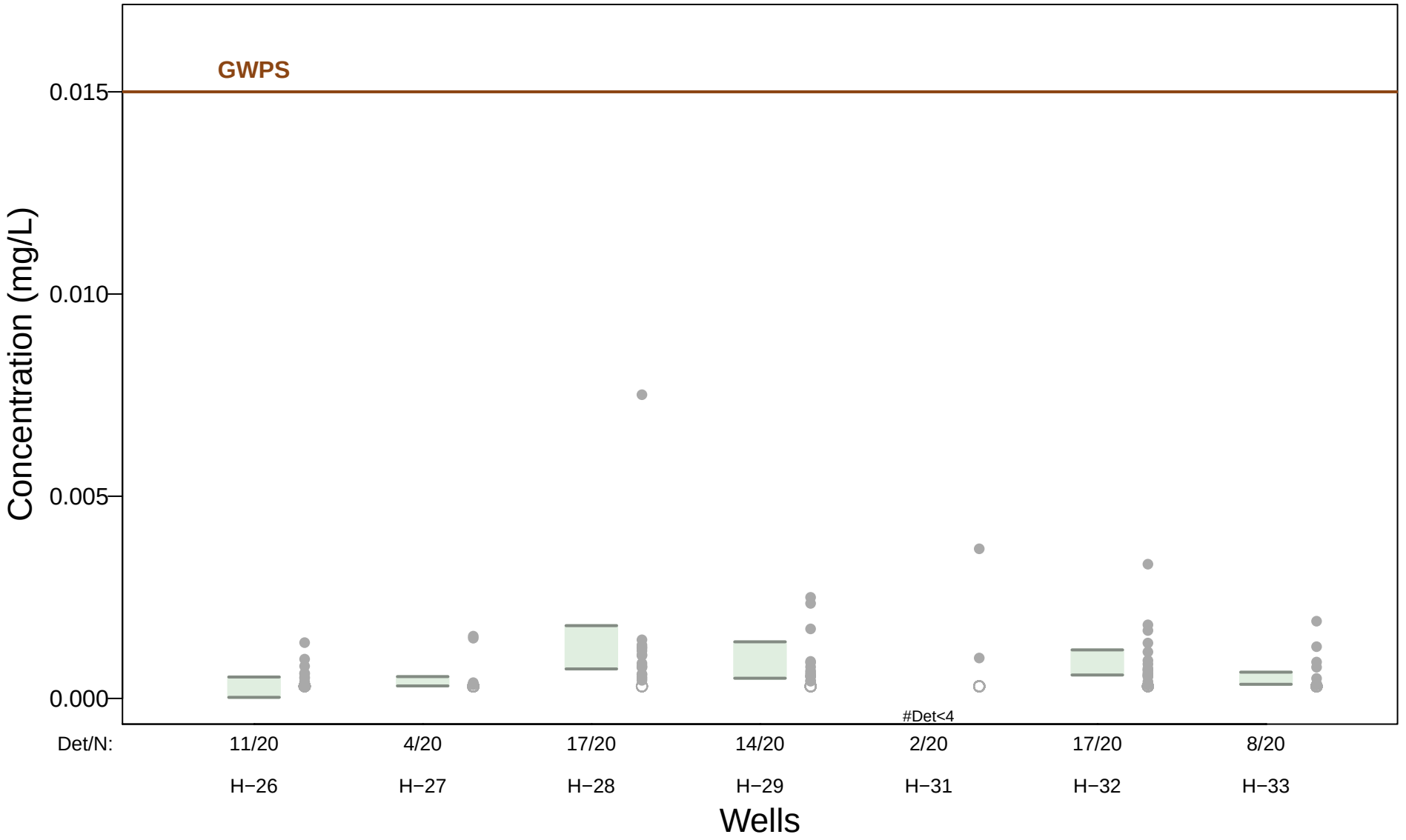
Cobalt – 95% Confidence Intervals



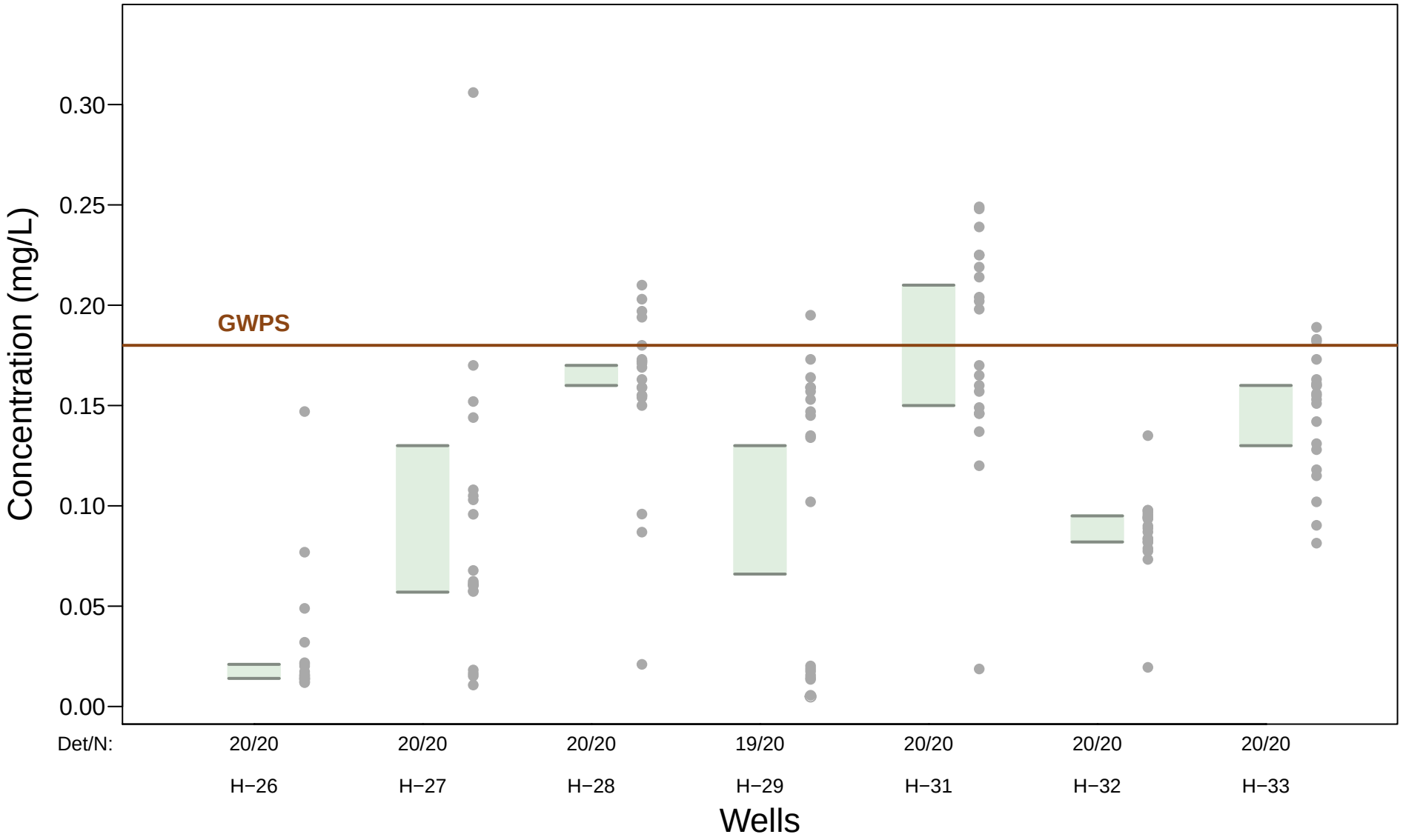
Fluoride (Appendix IV) – 95% Confidence Intervals



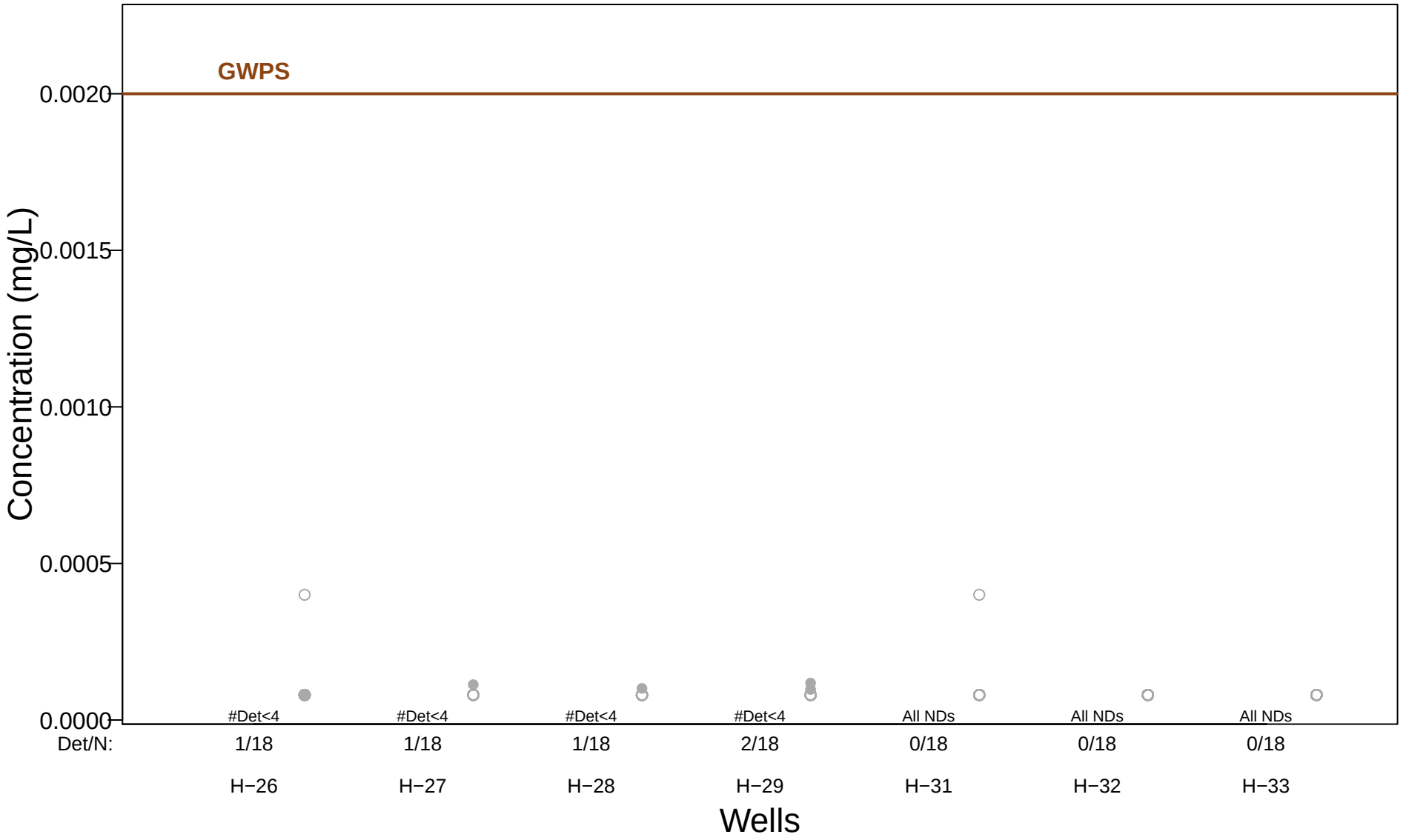
Lead − 95% Confidence Intervals



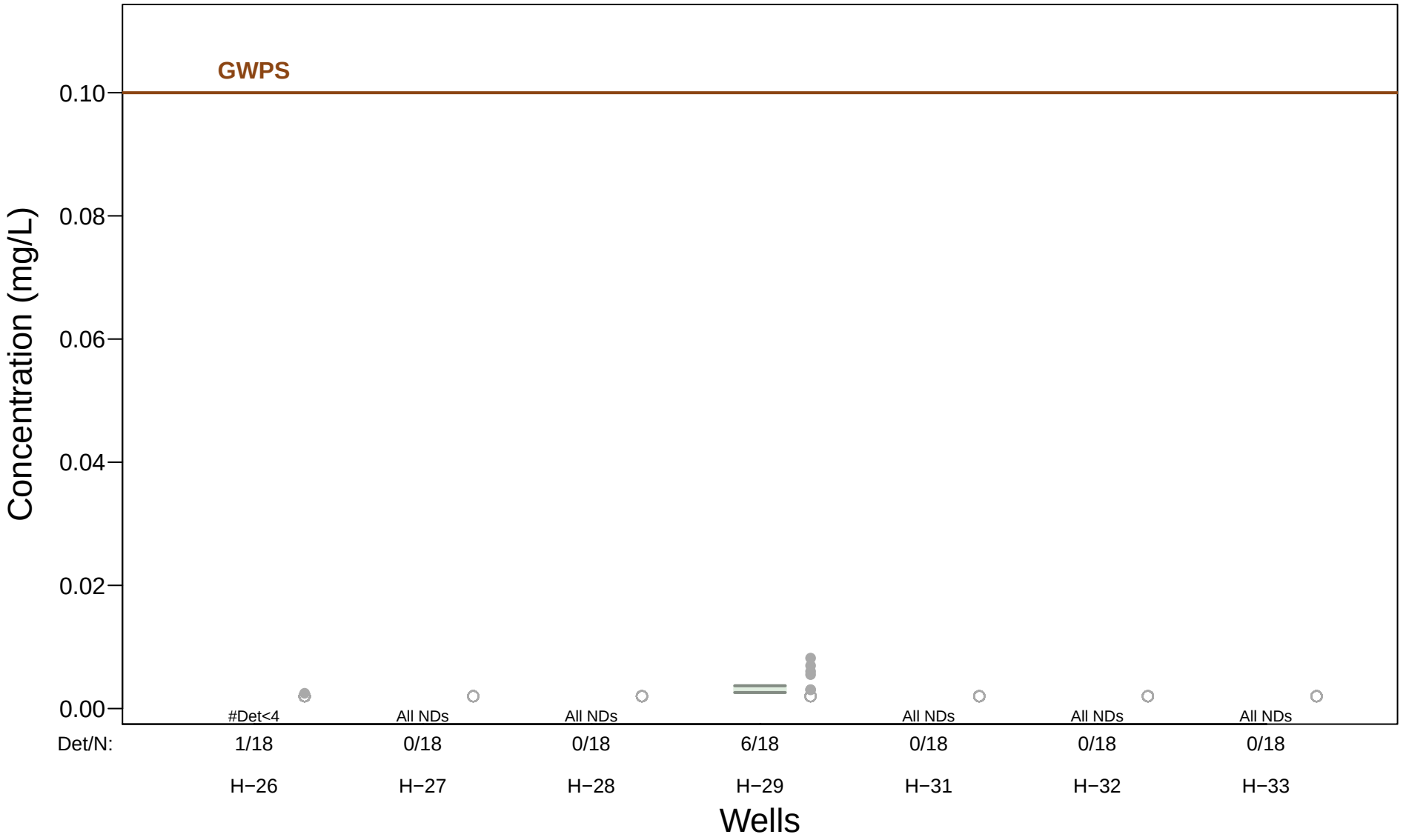
Lithium – 95% Confidence Intervals



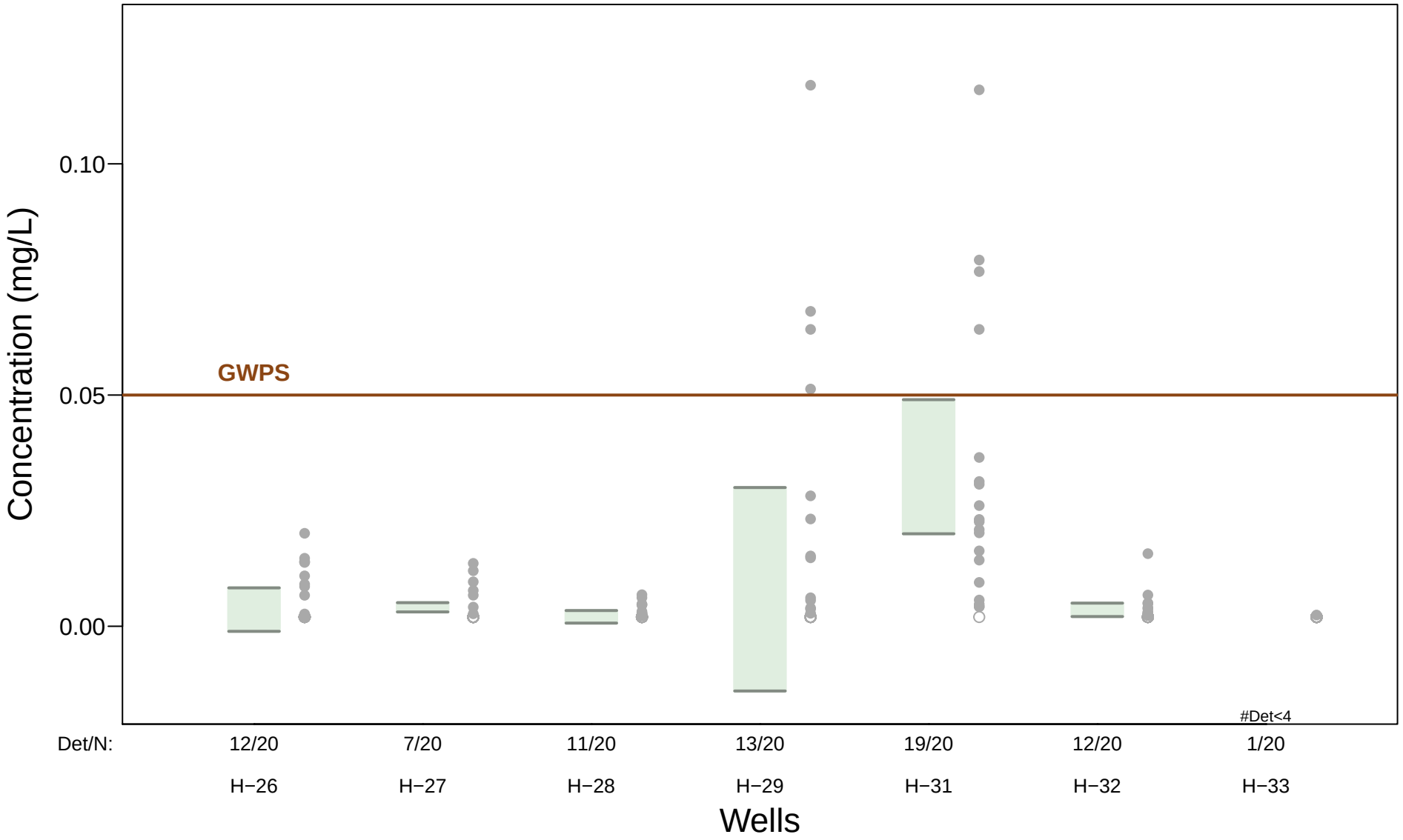
Mercury – 95% Confidence Intervals



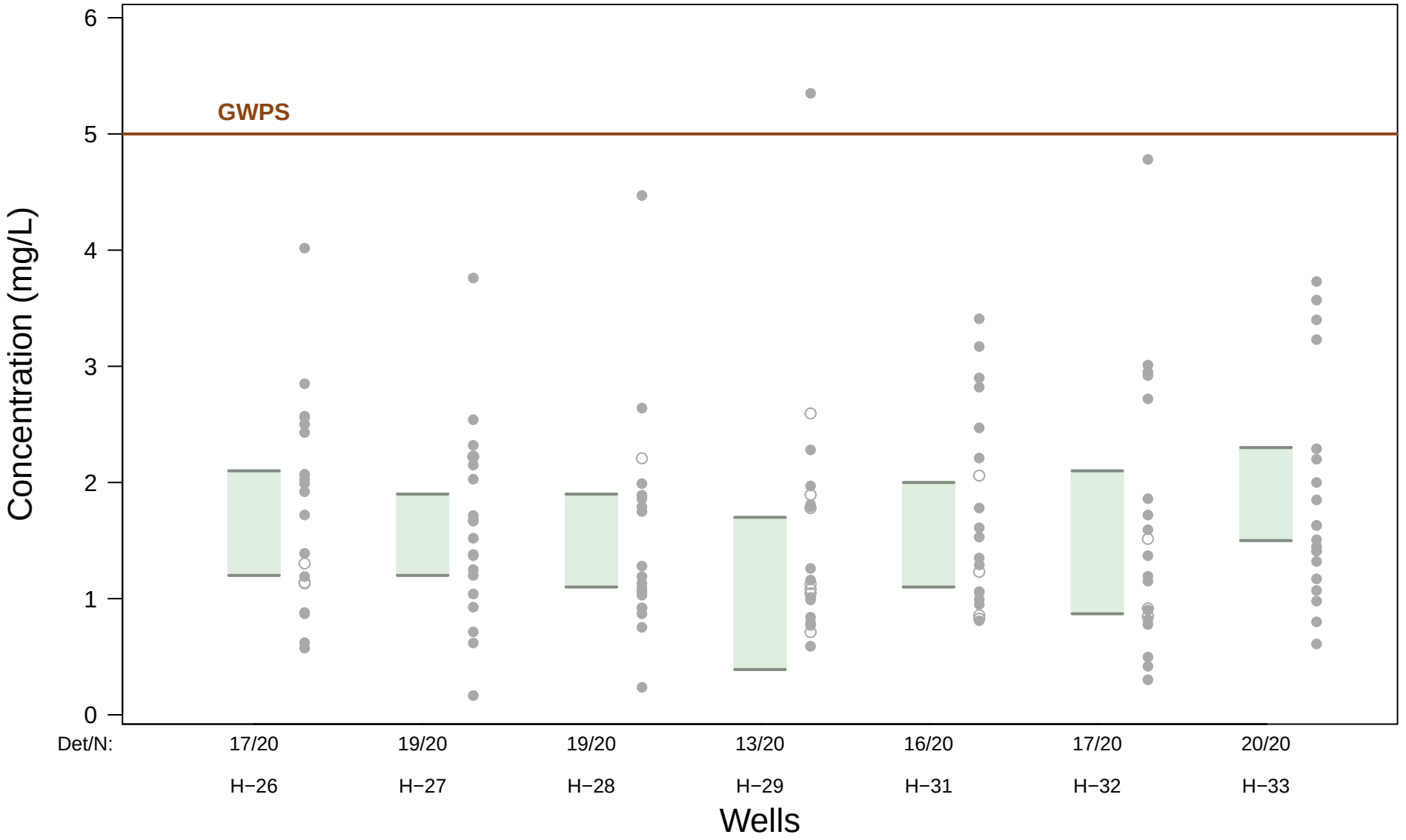
Molybdenum – 95% Confidence Intervals



Selenium − 95% Confidence Intervals

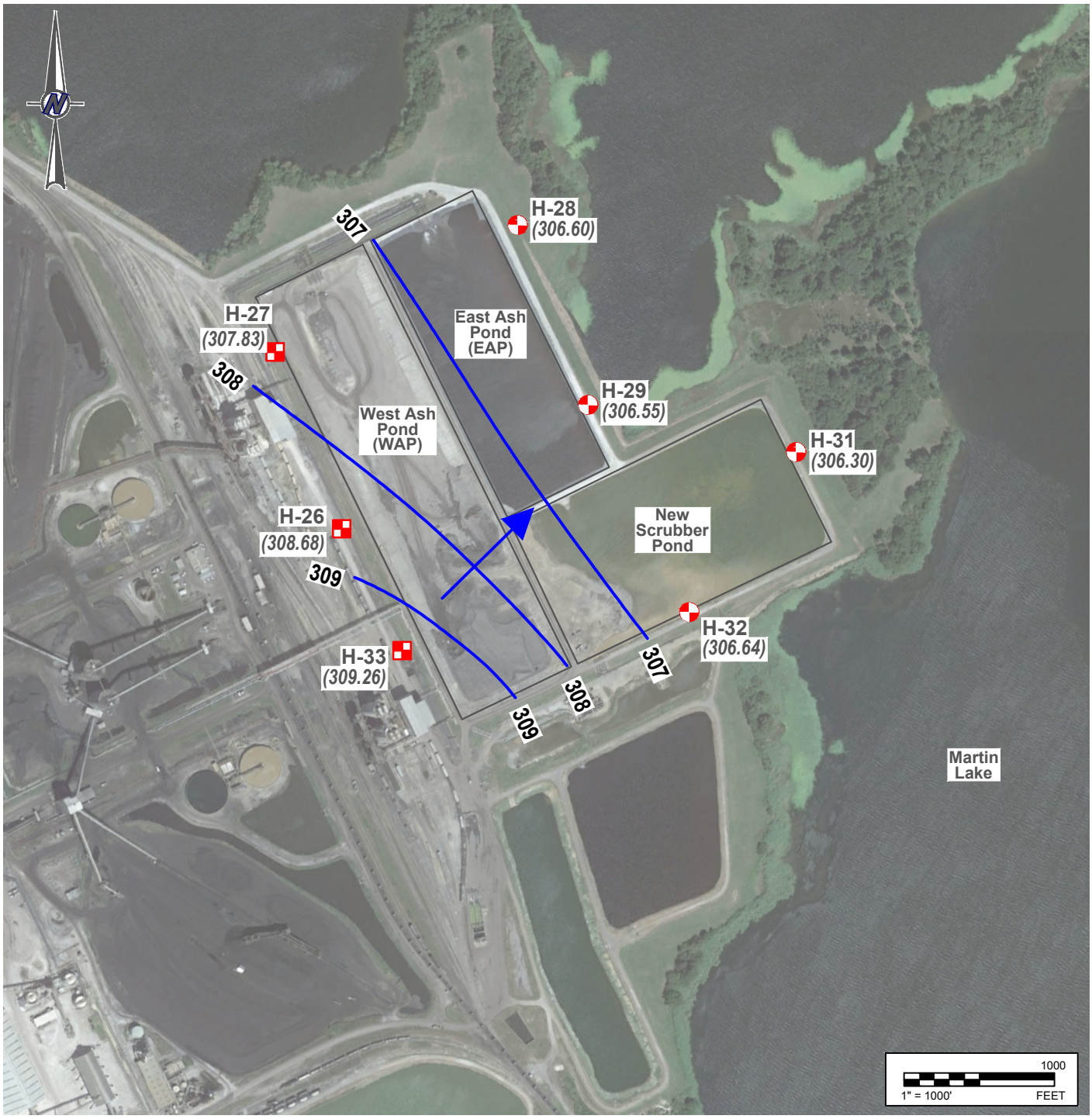


Radium−226/228 combined − 95% Confidence Intervals



APPENDIX C

GROUNDWATER POTENTIOMETRIC SURFACE MAPS



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL
- (308.70) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 308 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 1 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
01/31/2024

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED JANUARY 2021

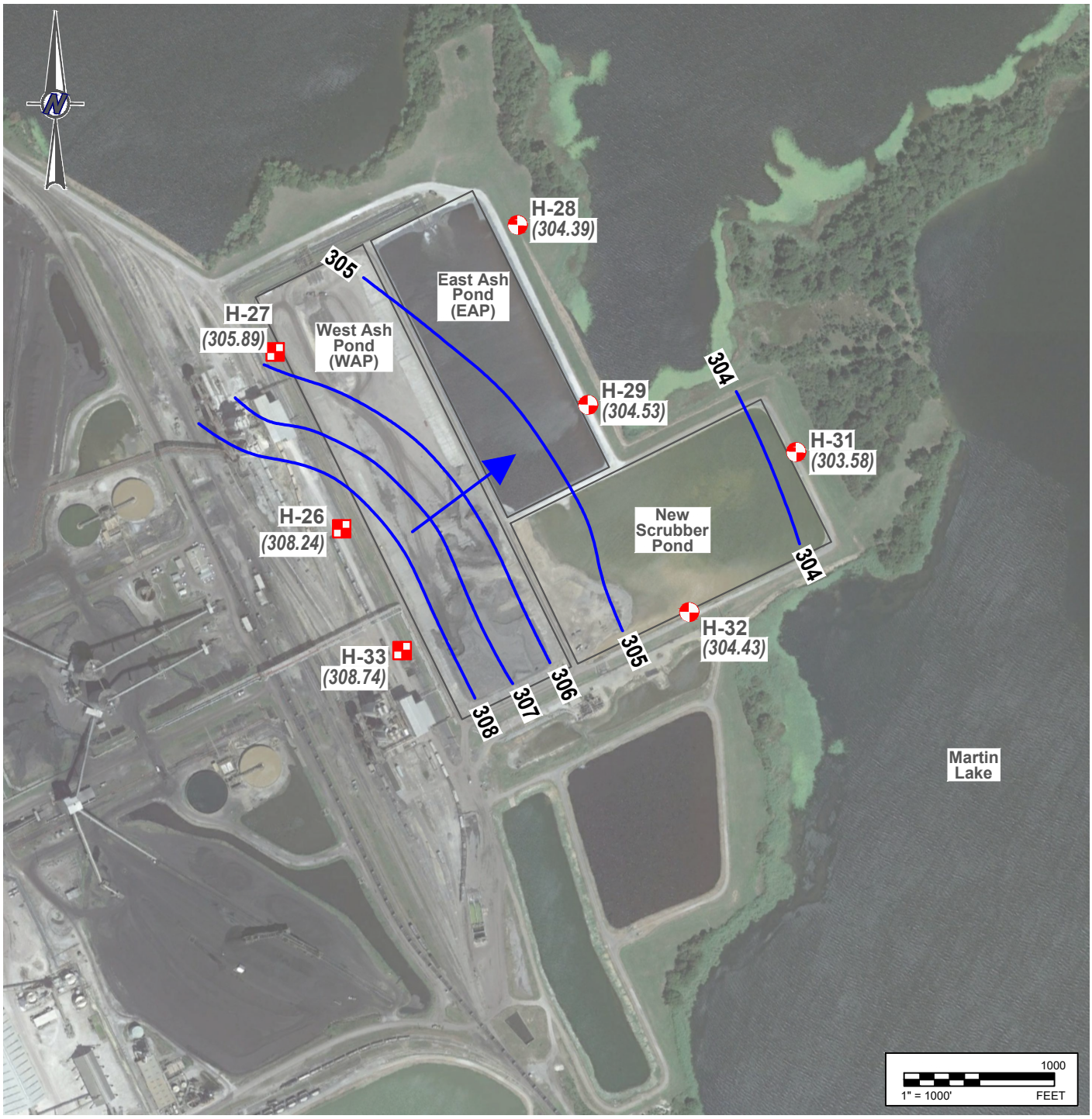
LUMINANT

MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

ASH POND AREA
POTENTIOMETRIC SURFACE MAP
MAY 2023

PROJECT: 23643.03	BY: SLB	DATE: 12/14/2023	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL
- (308.70) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 308 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 1 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
01/31/2024

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED JANUARY 2021

LUMINANT

MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

ASH POND AREA
POTENTIOMETRIC SURFACE MAP
AUGUST 2023

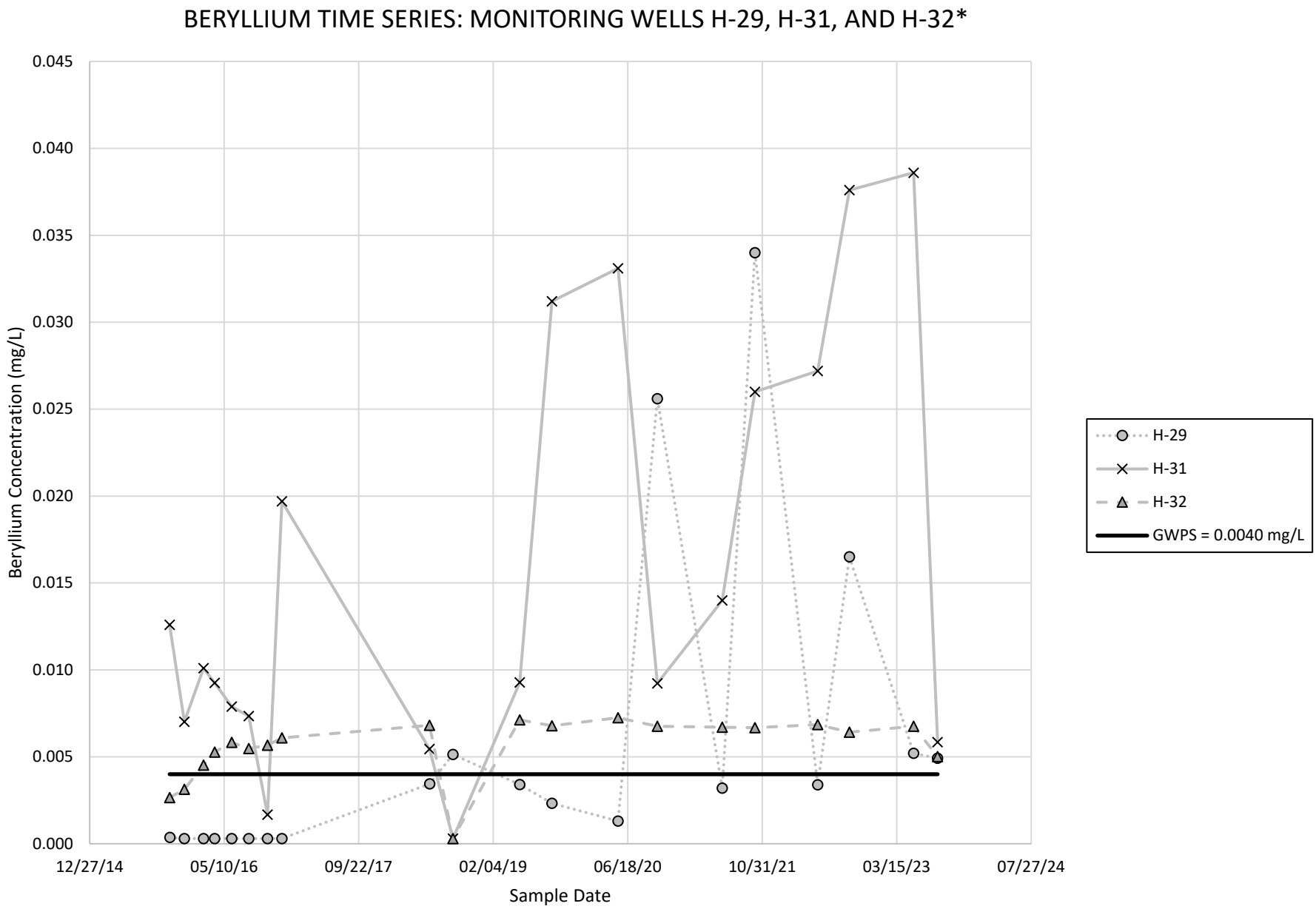
PROJECT: 23643.03	BY: SLB	DATE: 12/14/2023	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

APPENDIX D

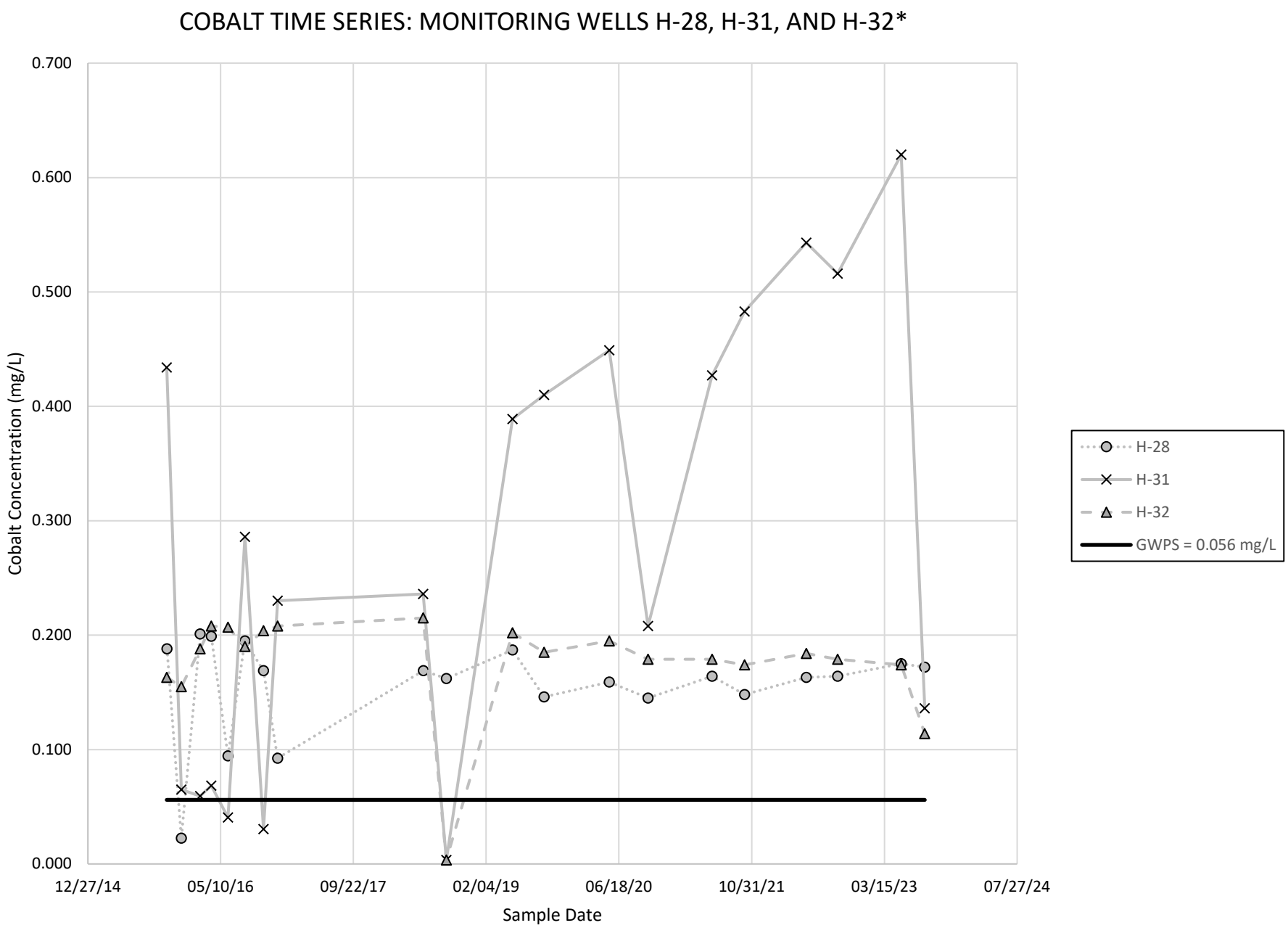
BERYLLIUM AND COBALT

TIME SERIES PLOTS



Notes:

*Graph includes data for monitoring wells where statistically significant levels (SSLs) over the groundwater protection standard (GWPS) have been observed.



Notes:

*Graph includes data for monitoring wells where statistically significant levels (SSLs) over the groundwater protection standard (GWPS) have been observed.