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

FGD PONDS
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

January 31, 2024

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ACRONYMS AND ABBREVIATIONS

BBA	Bullock, Bennett & Associates, LLC
CCR	Coal Combustion Residuals
C.F.R.	Code of Federal Regulations
GWPS	Groundwater Protection Standard
MCL	Maximum Concentration Level
mg/L	Milligrams per Liter
NA	Not Applicable
OGSES	Oak Grove Steam Electric Station
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
T.A.C.	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality United
USEPA	States Environmental Protection Agency

EXECUTIVE SUMMARY

Bullock, Bennett & Associates, LLC (BBA) has prepared this report on behalf of Oak Grove Management 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 FGD Ponds at the Oak Grove Steam Electric Station (OGSES) in Robertson County, Texas. 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 initially identified in January 2019 for 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 Assessment of Corrective Measures (ACM) was initiated on April 8, 2019 pursuant to §257.95(g) and was completed on September 5, 2019. A public meeting was held on October 29, 2019 at the Pridgeon Center in Franklin, Texas to discuss the results of the ACM in accordance with § 257.96(e). The ACM evaluated various source control and groundwater response technologies to address the cobalt and lithium SSLs. An Alternate Source Demonstration (ASD) was completed in accordance with § 257.95(g)(3)(ii) in October 2020 (Golder 2020), which indicated that a source other than the FGD Ponds caused the SSLs for lithium. The ACM was updated in May 2021 (Golder 2021a) to remove lithium from the list of constituents evaluated in the ACM. In addition, updated statistical analyses for cobalt that incorporated assessment monitoring data collected from 2019 to 2023 indicate that cobalt is no longer present at SSLs above the GWPS; however, for the purposes of the ACM and remedy selection, Luminant continued to evaluate potential groundwater remedies for cobalt based on the 2018 SSL to address potential cobalt SSLs that may occur in the future.

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 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.

A subsequent ACM was initiated on January 26, 2023, due to the detection of a release of impounded water from the FGD-A Pond. Luminant has determined that the release was caused by a malfunction of the crossover pipeline in FGD-A, which is used to transfer water via gravity flow from FGD-A to the adjacent pond, FGD-B. On January 26, 2023, a portion of the crossover pipeline floated upward where it enters the FGD-A embankment. This was the first time the crossover pipeline was utilized since FGD-A was returned to service following a liner retrofit that was completed in March 2022. The pipe displacement caused a tear in the FGD-A liner, which allowed water to migrate from FGD-A along the outside of the crossover pipeline and flow to the ground surface where the pipe exits the FGD-A dike on the western side of the unit. The water that was released was captured in FGD-B. Subsequent permanent caps and liner boots were placed on two drain pipes that pass through the dike, the crossover and drain pipelines, on May 10, 2023, and May 30, 2023, respectively. An ACM Report (WSP 2023) was completed in accordance with 40 C.F.R. § 257.96 that assessed corrective measures to address potential environmental impacts due to the release of water from FGD-A.

SSLs above GWPSs were not identified for any of the Appendix IV constituents in monitoring wells downgradient of FGD-A during the groundwater assessments conducted in 2023. As such, there is no indication that groundwater at the Site has been affected by the release from FGD-A. Appendix IV constituent concentrations in groundwater will continue to be monitored in accordance with the CCR Rule to confirm that the SSLs above GWPSs are not detected in the future. The effectiveness of the completed source control measure will continue to be evaluated to determine if further measures are necessary.

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 FGD Ponds CCR monitoring well network in October 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
October 3, 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 FGD Pond 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.

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. Laboratory analytical reports for groundwater samples collected in 2023 are provided in Appendix A. The initial assessment monitoring event was conducted in June 2018 and the second semi-annual assessment monitoring event was conducted in September 2018 in accordance with §257.95(a) and §257.95(d). Using the Appendix IV data collected during the assessment monitoring period through September 2018, SSLs above GWPSs were initially identified in January 2019 for 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 during the 2018 Assessment Monitoring period (cobalt and lithium), pursuant to §257.96.

Subsequent semi-annual Assessment Monitoring events were conducted in 2019 through 2023. Statistical analysis of the 2019 through 2023 data was performed in accordance with the USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-Unified Guidance (USEPA 2009) and Statistical Analysis Plan for the site (Golder 2022b). The statistical analysis included an evaluation of confidence intervals for each of the Appendix IV parameters to evaluate whether constituent concentrations were present at concentrations above GWPSs. 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.

There were no Appendix IV parameters identified at SSLs above GWPSs during the 2019 Assessment Monitoring period; however, an SSL for lithium was identified at one well (FGD-5) from 2020 to 2022. An ASD for lithium was completed in October 2020, which indicated that a source other than the CCR units caused the lithium SSLs at FGD-5. A copy of the ASD is presented in Appendix B.

An SSL was not identified for lithium at any wells during the 2023 monitoring period and an SSL for cobalt has not been identified since 2018. The LCLs for each Appendix IV constituent at each well are compared to GWPSs in Appendix C. Based on the statistical analysis, none of the Appendix IV parameters are present at SSLs above GWPSs. The following table provides a summary of the Assessment Monitoring Program sampling events:

Assessment Monitoring Program Summary

Sampling Dates	Analytical Data Receipt Date	Parameters Collected	SSL(s)	SSL(s) Determination Date	Alternate Source Demonstration	Corrective Measures Assessment Initiated
June 2018	July 11, 2018	Appendix III Appendix IV	NA	NA	NA	NA
September 2018	October 11, 2018	Appendix III Appendix IV	Co and Li	January 7, 2019	No	April 8, 2019
May 2019	June 5, 2019	Appendix III Appendix IV	None	NA	NA	NA
August 2019	September 25, 2019	Appendix III Appendix IV	None	NA	NA	NA
May 2020	June 12, 2020	Appendix III Appendix IV	Li	July 22, 2020	October 20, 2020	NA
September 2020	October 12, 2020	Appendix III Appendix IV	Li	December 7, 2020	Previous ASD applies	NA
June 2021	July 22, 2021	Appendix III Appendix IV	Li	July 22, 2021	Previous ASD applies	NA
October 2021	November 19, 2021	Appendix III Appendix IV	Li	January 10, 2022	Previous ASD applies	NA
May 2022	June 28, 2022	Appendix III Appendix IV	Li	August 1, 2022	Previous ASD applies	NA
September 2022	November 14, 2022	Appendix III Appendix IV	Li	December 24, 2022	Previous ASD applies	NA
May 2023	June 30, 2023	Appendix III Appendix IV	None	NA	NA	NA
August 2023	October 6, 2023	Appendix III Appendix IV	None	NA	NA	NA

Notes:
NA: Not Applicable

3.0 KEY ACTIONS COMPLETED IN 2023

Two semi-annual Assessment Monitoring Program groundwater monitoring events were performed in 2023. The number of groundwater samples that were collected for analysis from 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).

Water elevations measured in the CCR wells during the semi-annual groundwater monitoring events are summarized in Table 5 and groundwater potentiometric surface maps are presented in Appendix D. The inferred direction and magnitude of groundwater flow during the semi-annual monitoring events was generally to the east-northeast at about 2 feet per year, which is similar to previously observed conditions at the site.

No CCR wells were installed or decommissioned in 2023.

4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

An ACM was initiated on January 26, 2023, due to the detection of a release of impounded water from the FGD-A Pond. Luminant has determined that the release was caused by a malfunction of the crossover pipeline in FGD-A, which is used to transfer water via gravity flow from FGD-A to the adjacent pond, FGD-B. On January 26, 2023, a portion of the crossover pipeline floated, causing a tear in the FGD-A liner, which allowed water to migrate from FGD-A along the outside of the crossover pipeline and flow to the ground surface, where it was captured in FGD-B. Subsequent permanent caps and liner boots were placed on two drain pipes that pass through the dike, the crossover and drain pipelines, on May 10, 2023 and May 30, 2023, respectively. An ACM Report (WSP Golder 2023) was completed in June 2023 in accordance with 40 C.F.R. § 257.96 to assess corrective measures to address potential environmental impacts due to the release of water from FGD-A.

SSLs above GWPSs were not identified for any of the Appendix IV constituents in monitoring wells downgradient of FGD-A during the groundwater assessments conducted in 2023. As such, there is no indication that groundwater at the Site has been affected by the release from FGD-A. Appendix IV constituent concentrations in groundwater will continue to be monitored in accordance with the CCR Rule to confirm that the SSLs above GWPSs are not detected in the future. The effectiveness of the completed source control measure will continue to be evaluated to determine if further measures are necessary.

No other 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, Oak Grove Steam Electric Station – FGD Ponds, Robertson County, Texas. September.

Golder, 2021. CCR Assessment of Corrective Measures, Revision 1, Oak Grove Steam Electric Station – FGD Ponds, Robertson County, Texas. May.

Golder, 2022a. Remedy Selection Report, Oak Grove Steam Electric Station – FGD Ponds, Robertson County, Texas. January 18.

Golder, 2022b. Coal Combustion Residual Rule Statistical Analysis Plan – Revision No. 1, Oak Grove Steam Electric Station, FGD Pond Area, Robertson 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.

WSP, 2023. CCR Assessment of Corrective Measures – FGD-A Pond. Oak Grove Steam Electric Station – FGD Ponds, Robertson County, Texas. June.

SIGNATURE PAGE

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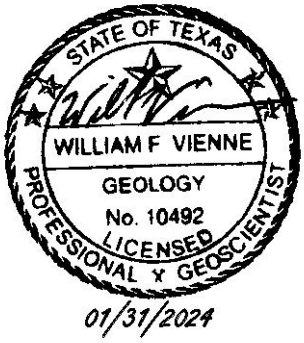
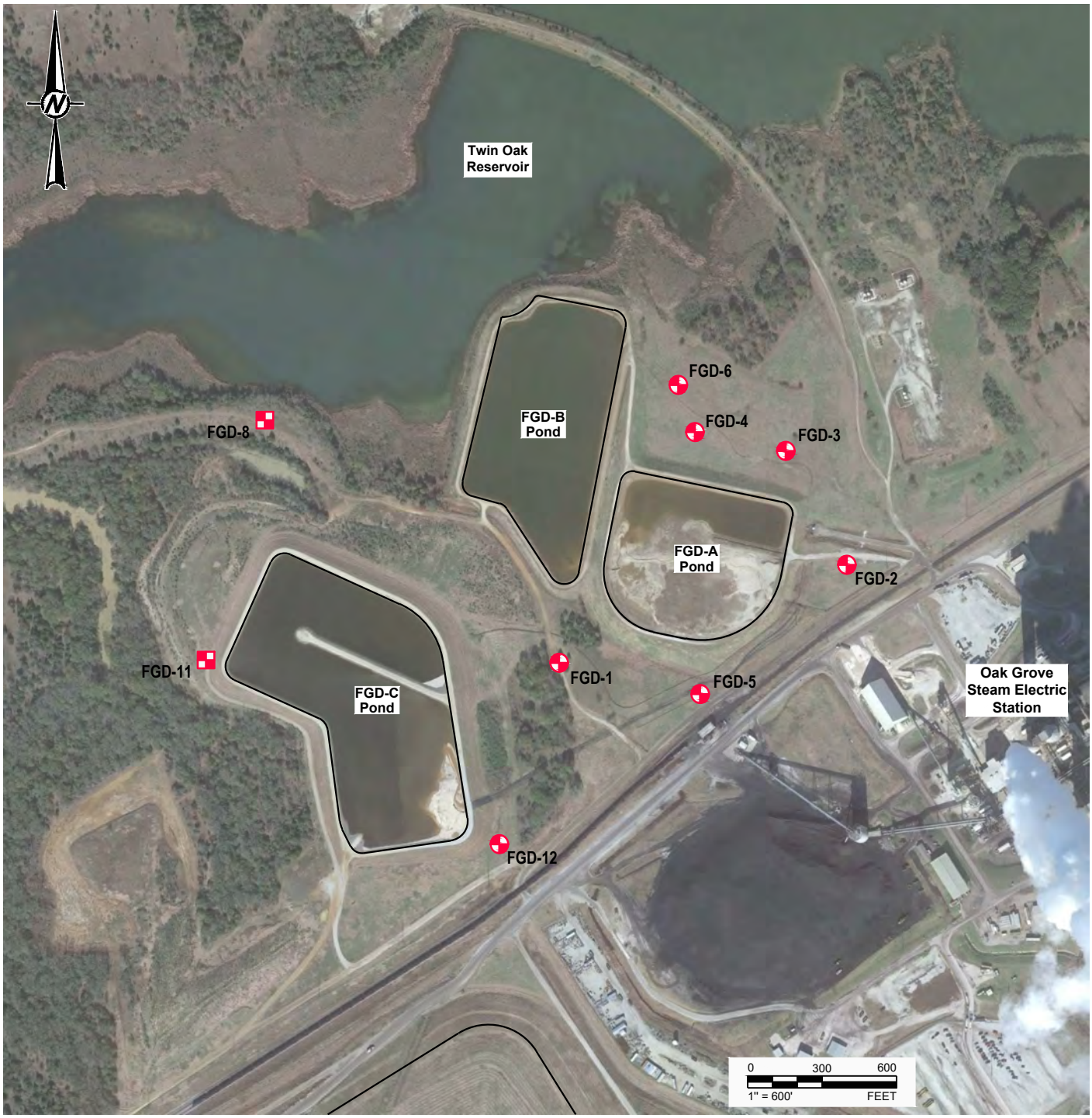


FIGURES



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- BACKGROUND CCR MONITORING WELL

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 12/9/18.

LUMINANT
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

Figure 1
FGD PONDS SITE PLAN

PROJECT: 23643.05	BY: SLB	DATE: 12/5/2023	CHECKED: WV

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

TABLES

Table 1
Statistical Background Values
OGSES FGD Ponds

Parameter	Statistical Background Value
Boron (mg/L)	0.14
Calcium (mg/L)	470
Chloride (mg/L)	6,300
Fluoride (mg/L)	0.78
field pH (s.u.)	6.1 7.2
Sulfate (mg/L)	410
Total Dissolved Solids (mg/L)	13,000

Table 2
Groundwater Protection Standards
OGSES FGD Ponds

Parameter	Groundwater Protection Standard
Antimony (mg/L)	0.0060
Arsenic (mg/L)	0.015
Barium (mg/L)	2.0
Beryllium (mg/L)	0.0040
Cadmium (mg/L)	0.0050
Chromium (mg/L)	0.1
Cobalt (mg/L)	0.016
Fluoride (mg/L)	4.0
Lead (mg/L)	0.015
Lithium (mg/L)	0.150
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)	11

TABLE 3
APPENDIX III ANALYTICAL DATA
OGSES FGD PONDS

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								
FGD-8	11/04/15	0.0843	69.2	271	0.173 J	6.92	24.4	803
	12/17/15	0.0791	65.2	248	0.361 J	6.67	50.1	721
	02/09/16	0.0721	296	1,910	0.331 J	6.14	110	5,100
	04/14/16	0.0805	323	1,920	0.218	6.39	68	6,210
	06/14/16	0.0869	336	2,070	<0.100	6.57	476	6,130
	08/24/16	0.119	21.1	107	0.186 J	6.92	41.6	400
	10/05/16	0.0794	394	1,890	0.413	6.68	184	4,470
	12/23/16	0.069	340	1,990	<0.100	6.83	144	4,330
	10/03/17	0.1	378	1,140	<0.100	6.83	9.72	2,550
	06/05/18	0.0826	409	2,180	<0.100	6.12	538	4,450
	09/06/18	0.635	395	2,330	0.362 J	5.93	670	4,910
	05/16/19	0.0687	314	2,040	<0.100	6.67	173	3,970
	08/19/19	0.0756	427	2,260	<0.100	6.89	452	4,600
	05/11/20	0.129	381	2,240	<0.100	6.69	188	4,090
	09/09/20	0.101	329	2,220	<0.100	6.87	58.9	3,890
	06/17/21	0.0816	353	2,230	<0.100	6.82	310	4,870
	10/11/21	0.0779	362	2,040	<0.100	6.49	63.9	3,790
	05/10/22	0.0983	377	1,880	0.112	6.87	65	3,790
	09/27/22	0.104	393	2170	<0.100	6.83	195	4440
	05/26/23	0.0894	373	2150	0.36	6.53	154	4350
	08/22/23	0.0938	388	2240	<0.100	6.65	206	4300
FGD-11	11/04/15	0.048	9.57	15	<0.100	6.58	9.96	145
	12/17/15	0.0544	10.7	9.85	0.13 J	6.74	11	115
	02/09/16	0.0912	71.5	438	0.548	6.9	37.5	1,160
	04/14/16	0.0963	72.5	393	0.671	6.34	32.9	1,120
	06/15/16	0.0979	55.1	356	0.331 J	6.57	32.4	900
	08/25/16	0.103	154	759	0.128 J	6.76	68.8	1,960
	10/04/16	0.127	181	894	0.579	6.78	71.8	2,130
	12/22/16	0.125	201	1,150	0.127 J	6.85	89.5	2,870
	10/03/17	0.155	254	1,830	<0.100	6.85	142	4,010
	06/05/18	0.162	170	954	0.836	6.28	82.2	2,240
	09/06/18	0.149	194	1,140	1.09	6.43	93.9	2,770
	05/16/19	0.108	85	566	0.38 J	6.83	50.9	1,350
	08/19/19	0.12	92.5	535	0.63	6.71	44.7	1,430
	05/11/20	0.166	103	560	0.365 J	6.74	43.3	1,300
	09/09/20	0.242	101	573	0.575	6.79	44.0	1,320
	06/17/21	0.116	90.4	440	0.471	6.72	33.8	1,160
	10/11/21	0.124	81.8	376	0.453	6.73	35.2	1,040
	05/11/22	0.121	73.7	323	0.491	6.63	30.5	890
	09/27/22	0.14	78.2	472	0.433	6.57	41.6	1190
	05/26/23	0.0948	54.2	244	0.634	6.55	24.9	679
	08/21/23	0.14	105	577	0.371	6.64	45.5	1390

TABLE 3
APPENDIX III ANALYTICAL DATA
OGSES FGD PONDS

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)
Downgradient Wells								
FGD-1	11/03/15	0.065	11	36.4	0.363 J	6.31	32	245
	12/17/15	0.0706	10.6	37.7	0.384 J	6.33	33.3	224
	02/09/16	0.0539	11.4	38.9	0.383 J	6.81	36.3	235
	04/14/16	0.0867	12.2	38.6	0.229	6.24	35.7	77
	06/15/16	0.066	12	39	0.302 J	6.75	41.2	258
	08/24/16	0.0601	13.5	42.1	0.225 J	6.58	46.6	193
	10/05/16	0.0629	14.2	38.7	0.483	6.78	44.2	266
	12/22/16	0.058	13.7	42.6	0.326 J	5.79	49.3	271
	10/03/17	0.0973	18.5	40	0.276 J	6.91	64.7	239
	06/05/18	0.0686	18.3	44.7	0.206 J	5.58	68.6	277
	09/06/18	0.0738	19.9	52.5	0.228 J	5.78	80.8	281
	05/15/19	0.0803	19.5	62.4	0.362 J	6.63	78.7	320
	08/19/19	0.0864	26.1	69.3	0.486	6.49	80.9	328
	05/11/20	0.121	37.8	146	0.231 J	6.95	79.5	448
	09/09/20	0.0871	36	320	0.215 J	6.73	158	875
	06/17/21	0.0843	35.7	299	0.356 J	6.89	140	935
	6/17/21 DUP	0.0808	35.7	304	0.352 J	6.79	143	960
	10/12/21	0.103	31.9	244	0.295 J	6.72	133	897
	05/11/22	0.116	22.2	201	0.348 J	6.75	100	747
	05/11/22 DUP	0.113	22	203	0.319	6.75	101	756
	09/27/22	0.101	23.2	146	0.217 J	6.72	74.6	514
	9/27/22 DUP	0.0944	22.5	134	0.234 J	6.72	73.4	509
	05/26/23	0.0881	15.6	73.9	0.405	6.64	72.4	415
	5/18/23 DUP	0.0818	2.82	6.66	<0.100	6.64	1.33 J	111
	08/22/23	0.0776	24.8	72.4	0.264	6.69	84.5	367
	8/22/23 DUP	0.0763	24.9	72.5	0.258	6.69	84.5	376
FGD-2	11/03/15	0.1	77.1	460	0.224	6.47	147	1,370
	12/17/15	0.0636	24.8	133	0.347 J	6.77	53.2	515
	02/09/16	0.0885	44.6	250	0.315 J	7.06	98.9	750
	04/14/16	0.136	53.8	285	0.192	6.54	103	924
	06/14/16	0.0729	26.8	138	0.122 J	6.73	62.2	564
	08/24/16	0.219	79.9	421	<0.100	6.75	158	1,060
	10/05/16	0.182	58.3	310	0.243 J	6.76	114	910
	12/22/16	0.251	95.3	570	<0.100	6.70	174	1,450
	10/03/17	0.362	151	813	<0.100	6.81	222	1,920
	06/05/18	0.352	91.6	465	0.185 J	6.1	148	1,190
	09/06/18	0.35	154	902	0.32 J	6.11	196	1,860
	05/16/19	0.105	38.9	260	0.383 J	6.86	70.7	729
	08/19/19	0.192	167	863	0.413	6.88	218	1,890
	05/11/20	0.605	217	1,150	<0.100	6.61	286	2,300
	09/09/20	0.567	193	1,030	<0.100	6.57	301	2,150
	06/17/21	0.195	76.4	422	<0.100	6.84	133	1,030
	10/12/21	0.473	245	950	<0.100	6.57	467	2,630
	10/21/21 DUP	0.492	249	921	<0.100	6.57	477	2,460
	05/10/22	0.605	254	1010	<0.100	6.74	533	2,580
	09/27/22	0.612	239	1100	<0.100	6.84	516	2700
	05/26/23	0.599	176	851	<0.100	6.72	409	2080
	08/21/23	0.609	210	1010	<0.100	6.78	505	2360

TABLE 3
APPENDIX III ANALYTICAL DATA
OGSES FGD PONDS

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)
FGD-3	11/03/15	0.343	108	439	0.505	6.51	479	1,950
	12/17/15	0.255	109	399	<0.100	6.64	478	1,640
	02/09/16	0.214	91.4	326	0.74	6.76	474	1,610
	04/14/16	0.231	98.1	314	0.69	6.59	396	1,980
	06/14/16	0.207	80.1	267	0.173 J	6.59	338	1,440
	08/24/16	0.112	90.4	279	0.463	6.89	357	1,490
	10/05/16	0.212	88.1	264	0.723	6.85	324	1,370
	12/22/16	0.196	82.6	290	1.32	6.1	392	1,490
	10/03/17	0.244	97	245	0.457	6.75	317	1,190
	06/05/18	0.199	82.7	234	1.06	5.99	319	1,260
	09/05/18	0.0379	73.9	227	1.03	6.21	306	1,260
	05/16/19	0.117	60.1	117	0.776	6.73	182	1,100
	08/19/19	0.134	51.1	84.9	0.874	6.72	150	882
	05/06/20	0.152	42.3	70.2	0.8	6.62	129	777
	09/09/20	0.130	36.8	58.5	0.772	6.82	122	709
	06/16/21	0.121	39	64.1	1.2	6.87	130	741
	10/11/21	0.0956	35.3	42.5	1.08	6.69	105	671
	05/10/22	0.101	27.1	28	1.05	6.82	86.6	597
	09/27/22	0.118	28	36.5	0.959	6.69	93.8	615
	05/26/23	0.112	32.5	55.5	0.981	6.72	119	708
	08/21/23	0.0956	26.3	33.4	1.06	6.92	86.8	618
FGD-4	11/03/15	0.0694	46.1	200	0.294 J	6.71	37.8	679
	12/17/15	0.0777	47.8	211	0.295 J	6.44	38.2	647
	02/09/16	0.0581	45.3	195	0.32 J	6.85	45	653
	04/14/16	0.0726	50.3	182	0.323	6.59	55.4	726
	06/14/16	0.0728	47.5	210	<0.100	6.68	37.9	689
	08/24/16	0.343	52.5	208	0.148 J	6.74	53.3	704
	10/05/16	0.0672	48.1	182	0.376 J	6.85	56	672
	12/22/16	0.0628	44.5	181	0.251 J	6.29	65.4	676
	10/03/17	0.225	54.9	182	0.219 J	6.82	69.8	659
	06/05/18	0.0839	49.4	200	0.297 J	6.15	46.6	648
	09/05/18	0.108	40.9	193	0.353 J	6.29	55.8	672
	05/16/19	0.0733	41.7	205	0.327 J	6.57	41.7	651
	08/19/19	0.085	42.5	188	0.67	6.69	5.4	681
	05/11/20	0.145	40.6	198	0.3 J	6.62	52.9	702
	09/15/20	0.109	33.6	197	<0.100	6.87	50.1	674
	06/16/21	0.0932	36.6	198	0.517	6.92	45.9	654
	10/11/21	0.0801	32.9	185	0.398	6.69	47.6	670
	05/10/22	0.0751	30.2	183	0.433	6.73	44.5	637
	09/27/22	0.0993	24.2	177	0.383 J	6.71	43.8	617
	05/26/23	0.0871	30.9	180	0.543	6.55	43.6	619
	08/21/23	0.0848	26.2	178	0.43	6.77	43	622

TABLE 3
APPENDIX III ANALYTICAL DATA
OGSES FGD PONDS

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)
FGD-5	11/04/15	0.0719	30.2	230	0.334	6.92	54.7	1,040
	12/17/15	0.0798	32.5	254	0.333 J	6.74	56.1	845
	02/09/16	0.0926	89.5	356	0.495	6.6	62.8	942
	04/14/16	0.107	101	359	0.491	6.71	50.8	1,510
	06/15/16	0.11	88.9	368	0.284 J	6.73	55.1	735
	08/24/16	0.0394	102	372	0.168 J	6.89	58.8	770
	10/05/16	0.0995	99.9	344	0.38 J	6.92	57.3	1,260
	12/22/16	0.0982	90.6	301	0.291 J	6.1	65.5	893
	10/03/17	0.211	100	309	0.211 J	6.76	60.2	826
	06/05/18	0.11	100	303	0.511	6.13	61.2	795
	09/06/18	0.215	93.1	317	0.548	6.17	64.8	840
	05/16/19	0.108	77.7	287	0.579	6.46	67.2	801
	08/19/19	0.114	90.7	283	0.863	6.76	70.7	816
	05/11/20	0.165	100	307	0.413	6.82	83.8	836
	09/10/20	0.154	96.6	310	0.617	6.84	95.9	845
	06/17/21	0.116	103	308	0.593	6.84	107	795
	10/11/21	0.0957	114	290	0.459	6.53	107	898
	05/10/22	0.103	115	320	0.474	6.86	114	900
	09/27/22	0.122	114	337	0.446	6.59	131	1010
	05/26/23	0.112	111	333	0.495	6.62	140	945
	08/21/23	0.123	115	338	0.501	6.87	135	990
FGD-6	11/03/15	0.0968	79.3	355	0.227	6.92	33.8	1,070
	12/17/15	0.103	89.9	342	0.469	6.52	65.9	940
	02/09/16	0.0791	31.8	252	0.354 J	7.12	59.5	940
	04/14/16	0.0936	36.4	259	0.442	6.71	57.9	1,140
	06/14/16	0.0955	33.9	237	<0.100	6.48	49.8	813
	08/24/16	0.0355	35.6	285	0.147 J	6.95	64.7	750
	10/05/16	0.102	35.3	275	0.364 J	6.94	60.2	1,010
	12/22/16	0.0847	35.6	286	0.204 J	6.34	64.4	905
	10/03/17	0.139	40.4	255	0.143 J	6.64	58.4	855
	06/05/18	0.0948	36.3	246	0.361 J	6.35	51.7	895
	09/05/18	0.0824	30.4	230	0.405	6.4	51.4	833
	05/16/19	0.116	20.3	170	0.669	6.85	51.3	710
	08/19/19	0.102	23.6	158	0.741	6.72	60.3	754
	05/06/20	0.109	27.4	189	0.292	6.75	70.7	746
	09/15/20	0.112	20.2	144	0.354 J	6.77	89.6	688
	06/16/21	0.0854	29	222	0.452	6.80	76.3	799
	10/11/21	0.105	19.1	130	0.616	6.57	73.2	656
	05/10/22	0.0914	27	236	0.391 J	6.64	80.2	791
	09/27/22	0.106	21.2	185	0.484	6.73	79.8	734
	05/26/23	0.0849	29.6	295	0.344	6.55	61	915
	08/21/23	0.0953	24.3	234	0.468	6.88	56.8	817

TABLE 3
APPENDIX III ANALYTICAL DATA
OGSES FGD PONDS

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)
FGD-12	11/04/15	0.0651	16.6	19.4	<0.100	6.68	20	217
	12/17/15	0.0671	13.2	15.5	0.159 J	6.47	16.6	161
	02/09/16	0.065	11.1	13.5	0.157 J	6.99	14.1	179
	04/14/16	0.0753	14.7	25.4	0.109	6.47	15.8	163
	06/15/16	0.0711	11.2	19.5	0.101 J	6.52	13.4	253
	08/25/16	0.0858	52.8	296	<0.100	6.86	33.8	817
	10/04/16	0.0682	12.5	17.8	0.129 J	6.74	10.5	142
	12/23/16	0.0512	260	1,250	0.112 J	6.95	174	3,270
	10/03/17	0.0731	10.4	10	0.154 J	6.76	10.8	134
	06/05/18	0.0812	8.74	12	0.137 J	6.37	13.7	196
	09/06/18	0.0698	6.78	14	<0.100	5.60	13.1	134
	05/16/19	0.0723	6.79	16	<0.100	6.52	15	140
	08/19/19	0.0794	10.5	16	0.145 J	6.71	17.1	209
	05/11/20	0.149	15.6	19.3	<0.100	6.59	19.9	198
	09/09/20	0.120	9.34	13.0	<0.100	6.82	14.1	166
	06/17/21	0.102	12.3	16.1	<0.100	6.97	18.3	202
	10/12/21	0.0759	8.69	12.5	0.101 J	6.53	18.1	195
	05/11/22	0.0659	8.44	11.3	<0.100	6.82	16.4	185
	09/27/22	0.0831	8.86	11.8	<0.100	6.79	15.7	185
	05/26/23	0.0723	8.79	13.9	<0.100	6.68	17.4	172
	08/21/23	0.0770	8.96	11.8	<0.100	6.78	14.7	199

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 ANALYTICAL DATA
OGSES FGD PONDS

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 Combined^ (pCi/L)
Background Wells																		
FGD-8	11/04/15	<0.0008	<0.002	0.119	<0.0003	<0.0003	0.00542	<0.003	0.173 J	<0.0003	0.149	<0.00008	0.0261	<0.002	<0.0005	0.671	1.38	2.05
	12/17/15	<0.0008	<0.002	0.179	<0.0003	<0.0003	0.00373 J	0.00646	0.361 J	<0.0003	0.116	<0.00008	0.00404 J	<0.002	<0.0005	<0.609	1.32	1.93
	02/09/16	<0.0008	0.0115	0.892	<0.0003	<0.0003	0.00234 J	0.00609	0.331 J	0.000406 J	0.0104	<0.00008	<0.002	0.00231 J	<0.0005	1.77	3.55	5.32
	04/14/16	<0.0008	0.0146	0.965	<0.0003	<0.0003	0.00202 J	0.00876	0.218 J	0.0016	0.016	<0.00008	<0.002	0.00211 J	<0.0005	0.973	8.34	9.31
	06/14/16	<0.0008	0.00639	0.792	<0.0003	<0.0003	<0.002	0.0158	<0.100	0.00137	0.015	<0.00008	<0.002	<0.002	<0.0005	1.93	2.30	4.23
	08/24/16	<0.0008	<0.002	0.102	0.000417 J	<0.0003	0.0107	0.015	0.186 J	0.00381	0.0265	<0.00008	<0.002	<0.002	<0.0005	0.778	<0.491	1.27
	10/05/16	<0.0008	0.00661	0.753	<0.0003	<0.0003	0.00672	0.00899	0.413	0.000908 J	0.0224	<0.00008	<0.002	<0.002	<0.0005	1.35	5.96	7.31
	12/23/16	<0.0008	0.0119	0.894	<0.0003	<0.0003	0.00259 J	0.00745	<0.100	0.00228	0.0185	<0.00008	<0.002	0.00217 J	<0.0005	2.17	3.70	5.87
	06/05/18	<0.0008	0.00839	0.834	<0.0003	<0.0003	<0.002	0.0193	<0.100	0.00039 J	0.0128	<0.00008	<0.002	<0.002	<0.0005	1.5	5.13	6.63
	09/06/18	NA	0.0137	0.635	<0.0003	<0.0003	<0.002	0.0243	0.362 J	<0.0003	0.009 J	NA	<0.002	0.0025 J	<0.0005	0.349	1.4	1.75
	05/16/19	<0.0008	0.0126	0.864	<0.0003	<0.0003	0.003 J	0.0146	<0.100	<0.00194	0.009 J	<0.00008	<0.002	0.0027 J	<0.0005	3.14	5.27	8.41
	08/19/19	<0.0008	0.00645	0.608	<0.0003	<0.0003	<0.002	0.0135	<0.100	0.00134	0.0144	<0.00008	<0.002	0.00252	<0.0005	1.79	6.82	8.61
	05/11/20	<0.000800	0.00663	0.732	<0.000300	<0.000300	<0.00200	0.0084	<0.100	0.000415 J	0.0152	<0.0000800	<0.00200	0.0021 J	<0.000500	2.07	6.58	8.65
	09/15/20	NA	0.00796	0.777	<0.000300	NA	0.00287 J	0.00379 J	<0.100	0.00107	0.00864 J	NA	<0.00200	<0.00200	<0.000500	2.5	6.2	8.7
	06/17/21	<0.0008	0.00749	1.1	<0.0003	<0.0003	<0.002	0.0067	<0.100	0.000766 J	0.0125	<0.00008	<0.002	<0.002	<0.0005	2.69	5.14	7.83
	10/11/21	<0.000800	0.00786	0.994	<0.000300	<0.000300	<0.00200	0.00312 J	<0.100	0.00119	0.00851 J	<0.0000800	<0.00200	0.00265 J	<0.000500	1.2	6.78	7.98
	05/10/22	<0.000800	0.0073	1.22	<0.000300	<0.000300	0.00280 J	0.00453 J	0.112 J	0.00117	0.0249	<0.0000800	<0.00200	0.00244	<0.000500	2.67	4.69	7.35
	09/27/22	<0.000800	0.00788	1.22	<0.000300	<0.000300	0.00403 J	0.00804	<0.100	0.00134	0.0209	<0.0000800	<0.00200	<0.00200	<0.000500	3.73	6.28	10.0
	05/26/23	<0.000800	0.00497 J	1.15	<0.000300	<0.000300	0.00374 J	0.00862	0.360	0.00103	0.0278	<0.0000800	<0.00200	<0.00200	<0.000500	2.33	5.91	8.24
	08/22/23	<0.000800	0.00857	1.14	<0.000300	<0.000300	0.00604	0.0118	<0.100	0.00368	0.0223	<0.0000800	<0.00200	<0.00200	<0.000500	10.9	7.5	18.4
FGD-11	11/04/15	<0.0008	<0.002	0.0527	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000727 J	0.0144	<0.00008	<0.002	<0.002	<0.0005	0.928	<1.41	2.34
	12/17/15	<0.0008	<0.002	0.0676	0.000303 J	<0.0003	<0.002	<0.003	0.13 J	0.000987 J	0.016	<0.00008	<0.002	<0.002	<0.0005	0.786	<1.63	2.42
	02/09/16	<0.0008	<0.002	0.271	<0.0003	<0.0003	<0.002	<0.003	0.548	<0.0003	0.011	<0.00008	<0.002	<0.002	<0.0005	1.39	2.64	4.03
	04/14/16	<0.0008	<0.002	0.26	<0.0003	<0.0003	0.00222 J	<0.003	0.671	0.0012	0.011	<0.00008	<0.002	<0.002	<0.0005	1.69	2.43	4.12
	06/15/16	<0.0008	<0.002	0.216	<0.0003	<0.0003	<0.002	<0.003	0.331 J	0.000407 J	0.0126	<0.00008	0.00238 J	<0.002	<0.0005	2.34	2.06	4.40
	08/25/16	<0.0008	<0.002	0.439	<0.0003	<0.0003	0.00465 J	<0.003	0.128 J	0.00179	0.011	<0.00008	<0.002	<0.002	<0.0005	4.23	3.58	7.81
	10/04/16	<0.0008	<0.002	0.55	<0.0003	<0.0003	<0.002	<0.003	0.579	0.000618 J	0.0124	<0.00008	<0.002	<0.002	<0.0005	1.73	2.53	4.26
	12/22/16	<0.0008	<0.002	0.734	<0.0003	<0.0003	0.00258 J	<0.003	0.127 J	0.000635 J	0.0124	<0.00008	<0.002	<0.002	<0.0005	3.94	5.09	9.03
	06/05/18	<0.0008	<0.002	0.520	<0.0003	<0.0003	0.0372	0.007	0.836	0.00891 J	0.0102	<0.00008	0.00266 J	<0.002	<0.0005	4.64	4.22	8.86
	09/06/18	NA	<0.002	0.702	<0.0003	<0.0003	0.0039 J	<0.003	1.09	<0.0003	0.0121	NA	<0.002	<0.002	<0.0005	6.24	6.47	12.71
	05/16/19	<0.0008	<0.002	0.347	<0.0003	<0.0003	0.028	<0.003	0.38 J	0.000576 J	0.0145	<0.00008	0.00358 J	<0.002	<0.0005	2.39	2.75	5.14
	08/19/19	<0.0008	<0.002	0.310	<0.0003	<0.0003	0.00391 J	<0.003	0.63	<0.0003	0.0136	<0.00008	0.00238 J	<0.002	<0.0005	1.39	2.55	3.95
	05/11/20	<0.000800	<0.00200	0.347	<0.000300	<0.000300	0.0146	<0.00300	0.365 J	0.000658 J	0.0132	<0.0000800	<0.00200	<0.00200	<0.000500	2.39	4.00	6.39
	09/10/20	NA	<0.00200	0.330	<0.000300	NA	0.0158	<0.00300	0.575	0.000706 J	0.0121	NA	<0.00200	<0.00200	<0.000500	3.35	4.69	8.04
	06/17/21	<0.0008	<0.002	0.3	<0.0003	<0.0003	0.00633	<0.00300	0.471	<0.0003	0.0149	<0.00008	0.00235 J	<0.002	<0.0005	2.23	2.29	4.52
	10/11/21	<0.000800	<0.00200	0.231	<0.000300	<0.000300	0.0158	<0.00300	0.453	0.000332	0.0126	<0.0000800	0.00276	<0.00200	<0.000500	1.11	3.33	4.45
	05/11/22	<0.000800	<0.00200	0.234	<0.000300	<0.000300	0.0106	<0.00300	0.491	<0.000300	0.0119	<0.0000800	0.00285 J	<0.00200	<0.000500	1.35	1.6	2.95
	09/27/22	<0.000800	<0.00200	0.258	<0.000300	<0.000300	0.01	<0.00300	0.433	<0.000300	0.0131	<0.0000800	0.00260 J	<0.00200	<0.000500	1.73	2.49	4.22
	05/26/23	<0.000800	<0.00200	0.186	<0.000300	<0.000300	0.0152	<0.00300	0.634	0.000419 J	0.00739 J	<0.0000800	<0.00200	<0.00200	<0.000500	2.32	1.42	3.74
	08/21/23	<0.000800	<0.00200	0.376	<0.000300	<0.000300	0.0194	<0.00300	0.371 J	0.000572 J	0.011	<0.0000800	0.00332 J	<0.00200	<0.000500	3.92	4.48	8.40

TABLE 4
APPENDIX IV ANALYTICAL DATA
OGSES FGD PONDS

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 Combined^ (pCi/L)
Downgradient Wells																		
FGD-1	11/03/15	<0.0008	<0.002	0.0311	<0.0003	<0.0003	<0.002	<0.003	0.363 J	<0.0003	0.034	<0.00008	<0.002	<0.002	<0.0005	0.718	<1.40	2.12
	12/17/15	<0.0008	<0.002	0.0263	<0.0003	<0.0003	<0.002	<0.003	0.384 J	<0.0003	0.0306	<0.00008	<0.002	<0.002	<0.0005	0.919	<1.43	2.35
	02/09/16	<0.0008	<0.002	0.0315	<0.0003	<0.0003	0.00437 J	0.0033 J	0.383 J	0.000379 J	0.0314	<0.00008	<0.002	<0.002	<0.0005	<0.318	1.42	1.74
	04/14/16	<0.0008	<0.002	0.0296	<0.0003	<0.0003	<0.002	<0.003	0.229 J	<0.0003	0.0338	<0.00008	<0.002	<0.002	<0.0005	<0.439	<1.28	<1.719
	06/15/16	<0.0008	<0.002	0.0276	<0.0003	<0.0003	<0.002	<0.003	0.302 J	<0.0003	0.0321	<0.00008	<0.002	<0.002	<0.0005	<0.258	1.66	1.92
	08/24/16	<0.0008	<0.002	0.0294	<0.0003	<0.0003	<0.002	<0.003	0.225 J	<0.0003	0.033	<0.00008	<0.002	<0.002	<0.0005	0.188	2.24	2.43
	10/05/16	<0.0008	<0.002	0.0319	<0.0003	<0.0003	<0.002	0.00447 J	0.483	<0.0003	0.0331	<0.00008	<0.002	<0.002	<0.0005	0.430	0.507	0.94
	12/22/16	<0.0008	<0.002	0.0418	<0.0003	<0.0003	<0.002	<0.003	0.326 J	<0.0003	0.0385	<0.00008	<0.002	<0.002	<0.0005	<0.273	<0.645	<0.918
	06/05/18	<0.0008	<0.002	0.0422	<0.0003	<0.0003	<0.002	<0.003	0.206 J	<0.0003	0.0426	<0.00008	<0.002	<0.002	<0.0005	0.194	<0.768	0.962
	09/06/18	NA	<0.002	0.0417	<0.0003	<0.0003	<0.002	0.0033 J	0.228 J	<0.0003	0.0436	NA	<0.002	<0.002	0.0005	0.209	<0.53	0.739
	05/16/19	<0.0008	<0.002	0.0485	<0.0003	<0.0003	<0.002	<0.003	0.362 J	<0.0003	0.0442	<0.00008	<0.002	<0.002	<0.0005	0.33	<0.593	0.923
	08/19/19	<0.0008	<0.002	0.0538	<0.0003	<0.0003	<0.002	<0.003	0.486	<0.0003	0.0441	<0.00008	<0.002	<0.002	<0.0005	0.489	1.09	1.57
	05/11/20	<0.000800	<0.00200	0.131	<0.000300	<0.000300	<0.00200	0.0495	0.231 J	<0.000300	0.0548	<0.0000800	<0.00200	<0.00200	<0.000500	1.08	0.808	1.89
	09/15/20	NA	<0.00200	0.162	<0.000300	NA	<0.00200	<0.00300	0.215 J	0.000342 J	0.0233	NA	<0.00200	<0.00200	<0.000500	0.664	1.66	2.32
	06/17/21	<0.0008	<0.002	0.174	<0.0003	<0.0003	<0.002	0.00441 J	0.356 J	<0.0003	0.0225	<0.00008	<0.002	<0.002	<0.0005	0.712	1.64	2.36
	6/17/21 DUP	<0.0008	<0.002	0.168	<0.0003	<0.0003	<0.002	0.00423 J	0.352 J	<0.0003	0.0221	<0.00008	<0.002	<0.002	<0.0005	0.609	1.90	2.51
	10/12/21	<0.000800	<0.00200	0.132	<0.000300	<0.000300	<0.00200	<0.00300	0.295 J	<0.000300	0.0182	<0.0000800	<0.00200	<0.00200	<0.000500	0.362	1.85	2.21
	10/12/21 DUP	<0.000800	<0.00200	0.0814	<0.000300	0.492	<0.00200	<0.003	<0.100	0.0003	0.0263	0.00008	<0.002	0.0194	<0.0005	0.324	1.5	1.82
	05/11/22	<0.000800	<0.00200	0.101	<0.000300	<0.000300	<0.00200	<0.00300	0.348 J	<0.000300	0.015	<0.0000800	<0.00200	<0.00200	<0.000500	0.298	0.723	1.02
	05/11/22 DUP	<0.000800	<0.00200	0.0969	<0.000300	<0.000300	<0.00200	<0.00300	0.319 J	<0.000300	0.013	<0.0000800	<0.00200	<0.00200	<0.000500	0.243	0.524	0.77
	09/27/22	<0.000800	<0.00200	0.108	<0.000300	<0.000300	<0.00200	0.00696	0.217 J	<0.000300	0.0373	<0.0000800	<0.00200	<0.00200	<0.000500	0.391	1.51	1.90
	9/27/22 DUP	<0.000800	<0.00200	0.103	<0.000300	<0.000300	<0.00200	0.00679	0.234 J	<0.000300	0.0361	<0.0000800	<0.00200	<0.00200	<0.000500	0.278	0.947	1.23
	05/26/23	<0.000800	<0.00200	0.0687	<0.000300	<0.000300	<0.00200	0.00371 J	0.405	<0.000300	0.0245	<0.0000800	<0.00200	<0.00200	<0.000500	0.336	0.241 J	0.58
	5/26/23 DUP	<0.000800	<0.00200	0.0587	<0.000300	<0.000300	<0.00200	<0.00300	0.406	<0.000300	0.0238	<0.0000800	<0.00200	<0.00200	<0.000500	0.207 J	0.975	1.18
	08/22/23	<0.000800	<0.00200	0.0697	<0.000300	<0.000300	<0.00200	0.0053	0.264 J	<0.000300	0.0357	<0.0000800	<0.00200	<0.00200	<0.000500	2.5	0.547	3.04
	8/22/23 DUP	<0.000800	<0.00200	0.0685	<0.000300	<0.000300	<0.00200	0.00516	0.258 J	<0.000300	0.0346	<0.0000800	<0.00200	<0.00200	<0.000500	2.5	1.03	3.53
FGD-2	11/03/15	<0.0008	<0.002	0.146	<0.0003	<0.0003	0.00244 J	<0.003	0.224 J	<0.0003	0.0224	<0.00008	<0.002	0.0203	<0.0005	<0.249	1.97	2.22
	12/17/15	<0.0008	<0.002	0.103	<0.0003	<0.0003	0.00386 J	<0.003	0.347 J	0.00145	0.0183	<0.00008	<0.002	0.0127	<0.0005	1.030	<1.24	2.27
	02/09/16	<0.0008	<0.002	0.133	<0.0003	<0.0003	0.00426 J	<0.003	0.315 J	<0.0003	0.0221	<0.00008	<0.002	0.0181	<0.0005	0.669	1.81	2.48
	04/14/16	<0.0008	<0.002	0.129	<0.0003	<0.0003	<0.002	<0.003	0.192 J	<0.0003	0.0196	<0.00008	<0.002	0.0166	<0.0005	0.198	<2.03	2.23
	06/14/16	<0.0008	<0.002	0.091	<0.0003	<0.0003	<0.002	<0.003	0.122 J	<0.0003	0.0243	<0.00008	<0.002	0.0189	<0.0005	0.275	1.66	1.94
	08/24/16	<0.0008	<0.002	0.144	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.019	<0.00008	<0.002	0.0185	<0.0005	2.47	0.769	3.24
	10/05/16	<0.0008	<0.002	0.129	<0.0003	<0.0003	0.00549	<0.003	0.243 J	0.000693 J	0.0199	<0.00008	<0.002	0.0176	<0.0005	0.716	1.70	2.42
	12/22/16	<0.0008	<0.002	0.158	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0217	<0.00008	<0.002	0.022	<0.0005	0.345	1.79	2.14
	06/05/18	<0.0008	<0.002	0.108	<0.0003	<0.0003	<0.002	<0.003	0.185 J	<0.0003	0.0226	<0.00008	<0.002	0.0185	<0.0005	0.505	1.12	1.63
	09/06/18	NA	<0.002	0.125	<0.0003	<0.0003	<0.002	<0.003	0.32 J	<0.0003	0.0253	NA	<0.002	0.0204	<0.0005	0.641	0.822	1.46
	05/16/19	<0.0008	<0.002	0.0993	<0.0003	<0.0003	0.003 J	<0.003	0.383 J	<0.0003	0.0228	0.00008	<0.002	0.0214	<0.0005	0.648	0.588	1.24
	08/19/19	<0.0008	<0.002	0.181	<0.0003	<0.0003	<0.002	<0.003	0.413	<0.0003	0.0257	<0.00008	<0.002	0.0249	<0.0005	0.456	2.8	3.26
	05/11/20	<0.000800	<0.00200	0.108	<0.000300	<0.000300	0.00234 J	<0.00300	<0.100	<0.000300	0.028	<0.0000800	<0.00200	0.0208	<0.000500	0.677	2.08	2.76
	09/10/20	NA	<0.00200	0.104	<0.000300	NA	0.00239 J	<0.00300	<0.100	<0.000300	0.0250	NA	<0.00200	0.0217	<0.000500	0.744	0.29	1.03
	06/17/21	<0.0008	<0.002	0.108	<0.0003	<0.0003	<0.002	<0.00300	<0.100	<0.0003	0.023	<0.00008	<0.002	0.0233	<0.0005	0.440	0.774	1.21
	10/12/21	<0.000800	<0.00200	0.0823	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0259	<0.0000800	<0.00200	0.0185	<0.000500	593	0.922	1.52
	05/10/22	<0.000800	<0.00200	0.0651	<0.000300	<0.000300	0.00248 J	<0.00300	<0.100	<0.000300	0.0244	<0.0000800	<0.00200	0.0258	<0.000500	0.572	1.38	1.96
	09/27/22	<0.000800	<0.00200	0.0631	<0.000300	<0.000300	0.00354 J	<0.00300	<0.100	<0.000300	0.0297	<0.0000800	<0.00200	0.0235	<0.000500	0.423	1.78	2.20
	05/26/23	<0.000800	<0.00200	0.0768	<0.000300	<0.000300	0.00322 J	<0.00300	<0.100	<0.000300	0.0283	<0.0000800	<0.00200	0.0253	<0.000500	0.62	1.3	1.92
	08/21/23	<0.000800	<0.00200	0.0654	<0.000300	<0.000300	0.00501	<0.00300	<0.100	<0.000300	0.0256	<0.0000800	<0.00200	0.0234	<0.000500	0.328 J	1.28	1.61

TABLE 4
APPENDIX IV ANALYTICAL DATA
OGSES FGD PONDS

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 Combined^ (pCi/L)
FGD-3	11/03/15	<0.0008	0.00226 J	0.0417	<0.0003	0.00492	<0.002	0.0436	0.505	<0.0003	0.176	<0.00008	<0.002	0.0881	0.0017	0.930	3.18	4.11
	12/17/15	<0.0008	0.00215 J	0.0371	0.000475 J	0.00372	<0.002	0.0399	<0.1	<0.0003	0.14	<0.00008	<0.002	0.0798	0.0016	1.70	2.66	4.36
	02/09/16	<0.0008	0.00206 J	0.0407	<0.0003	0.00343	<0.002	0.0417	0.74	0.000438 J	0.13	<0.00008	<0.002	0.0907	0.0015 J	1.04	3.37	4.41
	04/14/16	<0.0008	0.00218 J	0.0371	<0.0003	0.00212	<0.002	0.0326	0.69	<0.0003	0.119	<0.00008	<0.002	0.064	0.00137 J	<0.276	<1.35	<1.626
	06/14/16	<0.0008	0.00205 J	0.0392	<0.0003	0.00156	<0.002	0.0261	0.173 J	<0.0003	0.107	<0.00008	<0.002	0.0447	0.00126 J	0.754	1.56	2.31
	08/24/16	<0.0008	0.00221 J	0.0387	<0.0003	0.00146	<0.002	0.0232	0.463	<0.0003	0.0974	<0.00008	<0.002	0.0272	0.00123 J	0.416	2.60	3.02
	10/05/16	<0.0008	0.00225 J	0.039	<0.0003	0.00152	<0.002	0.0226	0.723	<0.0003	0.113	<0.00008	<0.002	0.0276	0.00114 J	0.455	2.44	2.90
	12/22/16	<0.0008	0.00226 J	0.0437	<0.0003	0.00173	<0.002	0.0266	1.32	<0.0003	0.11	<0.00008	<0.002	0.0245	0.00124 J	<0.352	2.46	2.81
	06/05/18	<0.0008	0.00236 J	0.0391	<0.0003	0.00152	<0.002	0.0207	1.06	<0.0003	0.0975	<0.00008	0.00212 J	0.0192	0.000985 J	0.528	2.19	2.72
	09/05/18	NA	0.00208 J	0.0379	<0.0003	0.00146	<0.002	0.0192	1.03	<0.0003	0.0955	NA	0.0021 J	0.0213	0.000925 J	<0.323	0.704	1.03
	05/16/19	<0.0008	0.0023 J	0.051	<0.0003	<0.0003	<0.002	0.0052	0.776	<0.0003	0.057	<0.00008	0.0031 J	0.0423	0.0006 J	<0.403	<0.638	<1.041
	08/19/19	<0.0008	0.00248 J	0.0365	<0.0003	<0.0003	<0.002	0.00364 J	0.874	<0.0003	0.0546	<0.00008	0.00231 J	0.0245	0.000588 J	0.523	0.858	1.38
	05/06/20	<0.000800	0.00209 J	0.0353	<0.000300	<0.000300	0.0117	0.00332 J	0.8	<0.000300	0.0498	<0.0000800	0.00284 J	0.00993	0.000556 J	0.394	0.463	0.857
	09/15/20	NA	0.00225 J	0.0326	<0.000300	NA	<0.00200	<0.00300	0.772	<0.000300	0.0416	NA	0.00245 J	0.00646	0.000534 J	0.257	0.484	0.711
	06/16/21	<0.0008	0.00217	0.0343 J	<0.0003	<0.0003	<0.002	0.00624	1.2	0.000491 J	0.0426	0.000094 J	0.00336 J	0.00752	0.000528 J	0.246	0.808	1.05
	10/11/21	<0.000800	<0.00200	0.0322	<0.000300	<0.000300	<0.00200	<0.00300	1.08	0.000494 J	0.0296	<0.0000800	0.00370 J	0.00748	<0.000500	0.223 J	1.02	1.25
	05/10/22	<0.000800	0.00219 J	0.0358	<0.000300	<0.000300	<0.00200	<0.00300	1.05	0.00152	0.0349	<0.0000800	0.00351 J	0.00418 J	<0.000500	0.411	1.79	2.2
	09/27/22	<0.000800	0.00236 J	0.0375	<0.000300	<0.000300	<0.00200	<0.00300	0.959	0.00166	0.0403	<0.0000800	0.00323 J	0.00344 J	<0.000500	0.28	1.01	1.28
	03/14/23	<0.000800	<0.00200	0.0381	<0.000300	<0.000300	<0.00200	<0.00300	1.11	0.00152	0.0307	<0.0000800	0.00358	0.00516	<0.000500	0.4	0.617 J	1.02
	05/25/23	<0.000800	0.00242 J	0.0315	<0.000300	0.000311 J	<0.00200	0.00564	0.981	0.000403 J	0.0486	0.000170 J	0.00279 J	0.00308 J	0.000569 J	0.841	0.955	1.8
	08/21/23	<0.000800	0.00225 J	0.0363	<0.000300	<0.000300	<0.00200	<0.00300	1.06	0.0014	0.0342	0.0000853 J	0.00340 J	0.00328 J	0.000507 J	0.799	<0.432	0.799
FGD-4	11/03/15	<0.0008	<0.002	0.126	<0.0003	<0.0003	<0.002	<0.003	0.294 J	<0.0003	0.0433	<0.00008	<0.002	<0.002	<0.0005	1.01	<1.39	2.40
	12/17/15	<0.0008	<0.002	0.105	<0.0003	<0.0003	<0.002	<0.003	0.295 J	<0.0003	0.0436	0.000229	0.00211 J	0.00214 J	<0.0005	<0.361	<1.73	<2.091
	02/09/16	<0.0008	<0.002	0.113	<0.0003	<0.0003	<0.002	<0.003	0.32 J	<0.0003	0.0419	0.000288	<0.002	<0.002	<0.0005	<0.332	<1.11	<1.442
	04/14/16	<0.0008	<0.002	0.12	<0.0003	<0.0003	0.00208 J	<0.003	0.323 J	0.0271	0.0357	0.000232	<0.002	<0.002	<0.0005	0.560	<1.21	1.77
	06/14/16	<0.0008	<0.002	0.128	<0.0003	0.000561 J	<0.002	<0.003	<0.1	<0.0003	0.0477	<0.00008	<0.002	<0.002	<0.0005	0.437	<0.975	1.41
	08/24/16	<0.0008	<0.002	0.111	<0.0003	<0.0003	<0.002	<0.003	0.148 J	0.000578 J	0.0383	<0.00008	<0.002	<0.002	<0.0005	<0.199	0.625	0.82
	10/05/16	<0.0008	<0.002	0.106	<0.0003	<0.0003	<0.002	<0.003	0.376 J	0.000489 J	0.0353	<0.00008	<0.002	<0.002	<0.0005	0.308	1.30	1.61
	12/22/16	<0.0008	<0.002	0.114	<0.0003	<0.0003	0.0023 J	<0.003	0.251 J	<0.0003	0.0273	<0.00008	<0.002	<0.002	<0.0005	0.227	<0.667	0.89
	06/04/18	<0.0008	<0.002	0.119	<0.0003	<0.0003	<0.002	<0.003	0.297 J	<0.0003	0.0265	<0.00008	<0.002	<0.002	<0.0005	0.261	<0.923	1.184
	09/05/18	NA	<0.002	0.108	<0.0003	<0.0003	<0.002	<0.003	0.353 J	<0.0003	0.0199	NA	<0.002	<0.002	<0.0005	<0.39	0.673	1.063
	05/16/19	<0.0008	<0.002	0.117	<0.0003	<0.0003	<0.002	<0.003	0.327 J	<0.0003	0.0325	<0.00008	<0.002	<0.002	<0.0005	0.627	0.745	1.372
	08/19/19	<0.0008	<0.002	0.1	<0.0003	<0.0003	<0.002	<0.003	0.67	<0.0003	0.019	<0.00008	<0.002	<0.002	<0.0005	0.39	1.58	1.97
	05/11/20	<0.000800	<0.00200	0.104	<0.000300	<0.000300	<0.00200	<0.00300	0.3 J	<0.000300	0.0166	<0.0000800	<0.00200	<0.00200	<0.000500	0.15	1.2	1.35
	09/15/20	NA	<0.00200	0.0899	<0.000300	NA	<0.00200	<0.00300	<0.100	<0.000300	0.0140	NA	<0.00200	<0.00200	<0.000500	0.498	<1.27	0.498
	06/16/21	<0.0008	<0.002	0.103	<0.0003	<0.0003	<0.002	<0.00300	0.517	<0.0003	0.0137	<0.00008	<0.002	<0.002	<0.0005	0.283	<0.749	<0.944
	10/11/21	<0.000800	<0.00200	0.0796	<0.000300	<0.000300	<0.00200	<0.00300	0.398	<0.000300	0.00984 J	<0.0000800	<0.00200	<0.00200	<0.000500	0.169 J	1.27	1.44
	05/10/22	<0.000800	<0.00200	0.0773	<0.000300	<0.000300	<0.00200	<0.00300	0.433	<0.000300	0.00958 J	<0.0000800	<0.00200	<0.00200	<0.000500	0.401	2.16	2.56
	09/27/22	<0.000800	<0.00200	0.0657	<0.000300	<0.000300	<0.00200	<0.00300	0.383 J	<0.000300	0.00981 J	<0.0000800	<0.00200	<0.00200	<0.000500	0.426	1.08	1.50
	03/14/23	<0.000800	<0.00200	0.0921	<0.000300	<0.000300	<0.00200	<0.00300	0.386	<0.000300	0.0141	<0.0000800	<0.00200	<0.00200	<0.000500	0.595	1.42	2.01
	05/25/23	<0.000800	<0.00200	0.0981	<0.000300	<0.000300	<0.00200	<0.00300	0.543	<0.000300	0.0123	<0.0000800	<0.00200	<0.00200	<0.000500	0.233 J	1.38	1.61
	08/21/23	<0.000800	<0.00200	0.0799	<0.000300	<0.000300	<0.00200	<0.00300	0.43	<0.000300	0.00858 J	<0.0000800	<0.00200	<0.00200	<0.000500	0.886	0.607	1.49

TABLE 4
APPENDIX IV ANALYTICAL DATA
OGSES FGD PONDS

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 Combined^ (pCi/L)
FGD-5	11/04/15	<0.0008	<0.002	0.13	<0.0003	0.000557 J	0.0121	<0.003	0.334 J	<0.0003	0.17	<0.00008	0.0445	<0.002	<0.0005	0.449	1.52	1.97
	12/17/15	<0.0008	<0.002	0.237	<0.0003	0.000593 J	0.0391	0.0164	0.333 J	0.000369 J	0.156	<0.00008	0.0203	<0.002	<0.0005	1.23	3.63	4.86
	02/09/16	<0.0008	<0.002	0.261	<0.0003	<0.0003	<0.002	0.00441 J	0.495	<0.0003	0.158	<0.00008	<0.002	<0.002	<0.0005	1.99	1.50	3.49
	04/14/16	<0.0008	<0.002	0.224	<0.0003	0.000392 J	0.00477 J	<0.003	0.491	<0.0003	0.164	<0.00008	0.0183	<0.002	<0.0005	0.951	<1.24	2.19
	06/15/16	<0.0008	<0.002	0.174	<0.0003	<0.0003	0.00599	<0.003	0.284 J	<0.0003	0.162	<0.00008	0.0144	<0.002	<0.0005	0.429	1.25	1.68
	08/24/16	<0.0008	<0.002	0.173	<0.0003	<0.0003	0.0189	<0.003	0.168 J	0.00045 J	0.145	<0.00008	0.00814	<0.002	<0.0005	0.398	<0.643	1.04
	10/05/16	<0.0008	<0.002	0.229	<0.0003	<0.0003	0.00304 J	<0.003	0.38 J	<0.0003	0.153	<0.00008	0.00355 J	<0.002	<0.0005	0.877	1.16	2.04
	12/22/16	<0.0008	<0.002	0.261	<0.0003	<0.0003	<0.002	0.00471 J	0.291 J	<0.0003	0.152	<0.00008	<0.002	<0.002	<0.0005	0.579	<0.76	1.34
	06/05/18	<0.0008	<0.002	0.136	<0.0003	<0.0003	0.00935	<0.003	0.511	<0.0003	0.154	<0.00008	<0.002	<0.002	<0.0005	0.705	<0.765	1.47
	09/06/18	NA	<0.002	0.215	<0.0003	<0.0003	<0.002	<0.003	0.548	<0.0003	0.155	NA	<0.002	<0.002	<0.0005	0.535	1.31	1.845
	05/16/19	<0.0008	<0.002	0.0926	<0.0003	<0.0003	0.024	<0.003	0.579	<0.0003	0.145	<0.00008	0.003 J	<0.002	<0.0005	0.342	<0.506	0.848
	08/19/19	<0.0008	<0.002	0.106	<0.0003	<0.0003	0.0103	<0.003	0.863	<0.0003	0.152	<0.00008	<0.002	<0.002	<0.0005	0.551	0.659	1.21
	05/11/20	<0.000800	<0.00200	0.0959	<0.000300	<0.000300	0.0374	<0.00300	0.413	<0.000300	0.156	<0.0000800	0.00561	<0.00200	<0.000500	0.0983	5.18	5.28
	09/10/20	NA	<0.00200	0.0929	<0.000300	NA	0.0307	<0.00300	0.617	<0.000300	0.150	NA	0.00362 J	<0.00200	<0.000500	0.132	<1.11	0.132
	06/17/21	<0.0008	<0.002	0.111	<0.0003	<0.0003	0.0376	<0.00300	0.593	<0.0003	0.147	<0.00008	0.00504	<0.002	<0.0005	0.173 J	0.546	0.719 J
	10/11/21	<0.000800	<0.00200	0.0995	<0.000300	<0.000300	0.0549	<0.00300	0.459	<0.000300	0.139	<0.0000800	0.00669	<0.00200	<0.000500	<0.243	<0.243	<0.889
	05/10/22	<0.000800	<0.00200	0.123	<0.000300	<0.000300	0.0396	<0.00300	0.474	<0.000300	0.165	<0.0000800	0.00427 J	<0.00200	<0.000500	<0.217	0.241 J	0.273 J
	09/27/22	<0.000800	<0.00200	0.15	<0.000300	<0.000300	0.0305	<0.00300	0.446	<0.000300	0.182	<0.0000800	0.00217 J	<0.00200	<0.000500	0.159 J	<0.35	<0.438
	05/26/23	<0.000800	<0.00200	0.108	<0.000300	<0.000300	0.0738	<0.00300	0.495	<0.000300	0.173	<0.0000800	0.00985	<0.00200	<0.000500	0.571	0.773	1.34
	08/21/23	<0.000800	<0.00200	0.125	<0.000300	<0.000300	0.0808	<0.00300	0.501	<0.000300	0.159	<0.0000800	0.00872	<0.00200	<0.000500	0.147 J	<0.371	<0.147
FGD-6	11/03/15	<0.0008	<0.002	0.124	<0.0003	<0.0003	0.00253 J	<0.003	0.227 J	<0.0003	0.0112	<0.00008	<0.002	<0.002	<0.0005	0.470	<1.70	2.17
	12/17/15	<0.0008	<0.002	0.135	<0.0003	<0.0003	<0.002	<0.003	0.469	<0.0003	0.00964 J	<0.00008	<0.002	<0.002	<0.0005	1.03	<2.13	3.16
	02/09/16	<0.0008	<0.002	0.132	<0.0003	<0.0003	<0.002	<0.003	0.354 J	<0.0003	0.0105	<0.00008	<0.002	<0.002	<0.0005	0.801	<1.71	2.51
	04/14/16	<0.0008	<0.002	0.122	<0.0003	<0.0003	0.0568	<0.003	0.442	<0.0003	0.011	<0.00008	<0.002	<0.002	<0.0005	0.484	2.08	2.56
	06/14/16	<0.0008	<0.002	0.16	0.000309 J	0.000404 J	<0.002	0.00657	<0.1	0.00132	0.0092 J	<0.00008	<0.002	<0.002	<0.0005	1.31	2.16	3.47
	08/24/16	<0.0008	0.00725	0.127	<0.0003	<0.0003	0.00334 J	0.00399 J	0.147 J	0.000656 J	0.00885 J	<0.00008	0.00244 J	<0.002	<0.0005	0.465	0.896	1.36
	10/05/16	<0.0008	0.00536	0.117	<0.0003	<0.0003	0.00427 J	0.00414 J	0.364 J	<0.0003	0.00985 J	<0.00008	<0.002	<0.002	<0.0005	0.489	1.69	2.18
	12/22/16	<0.0008	0.00458 J	0.129	<0.0003	<0.0003	<0.002	0.00352 J	0.204 J	<0.0003	0.0102	<0.00008	<0.002	<0.002	<0.0005	0.349	0.917	1.27
	06/04/18	<0.0008	0.0021 J	0.0854	<0.0003	<0.0003	<0.002	<0.003	0.361 J	<0.0003	0.0098 J	<0.00008	<0.002	<0.002	<0.0005	<0.277	<0.964	<1.241
	09/05/18	NA	<0.002	0.0824	<0.0003	<0.0003	<0.002	<0.003	0.405	<0.0003	0.0094 J	NA	<0.002	<0.002	<0.0005	<0.336	<0.677	<1.013
	05/16/19	<0.0008	0.0294	0.107	<0.0003	<0.0003	<0.002	0.0132	0.669	<0.0003	0.0068 J	<0.00008	0.0077	<0.002	<0.0005	1.43	1.67	3.1
	08/19/19	<0.0008	0.0146	0.0903	<0.0003	<0.0003	<0.002	0.00493 J	0.741	<0.0003	0.0082 J	<0.00008	0.00332 J	<0.002	<0.0005	0.385	2.55	2.93
	05/11/20	<0.000800	0.00286 J	0.0814	<0.000300	<0.000300	<0.00200	<0.00300	0.292 J	<0.000300	0.00877 J	<0.0000800	0.00205 J	<0.00200	<0.000500	0.513	0.845	1.36
	09/15/20	NA	0.00651	0.0695	<0.000300	NA	<0.00200	0.00615	0.354 J	<0.000300	0.00669 J	NA	<0.00200	<0.00200	<0.000500	0.485	1.08	1.57
	06/16/21	<0.0008	0.00232 J	0.0769	<0.0003	<0.0003	<0.002	<0.00300	0.452	<0.0003	0.00824 J	<0.00008	<0.002	<0.002	<0.0005	0.322	1.54	1.86
	10/11/21	<0.000800	0.00696	0.0507	<0.000300	<0.000300	<0.00200	<0.00300	0.616	<0.000300	0.00641 J	<0.0000800	0.00222 J	<0.00200	<0.000500	<0.356	1.39	1.44
	05/10/22	<0.000800	<0.00200	0.0632	<0.000300	<0.000300	<0.00200	<0.00300	0.391	<0.000300	<0.00500	<0.0000800	<0.00200	<0.00200	<0.000500	0.306	1.05	1.35
	09/27/22	<0.000800	0.00380 J	0.0596	<0.000300	<0.000300	<0.00200	<0.00300	0.484	<0.000300	0.00736 J	<0.0000800	<0.00200	<0.00200	<0.000500	0.199 J	0.887	1.09
	03/14/23	<0.000800	0.00429 J	0.0803	<0.000300	<0.000300	<0.00200	<0.00300	0.324	<0.000300	0.00866	<0.0000800	<0.00200	<0.00200	<0.000500	0.41	1.72	2.12
	05/25/23	<0.000800	0.00285 J	0.079	<0.000300	<0.000300	<0.00200	<0.00300	0.344 J	<0.000300	0.00859 J	<0.0000800	<0.00200	<0.00200	<0.000500	0.128 J	1.52	1.64
	08/21/23	<0.000800	0.00807	0.0727	<0.000300	<0.000300	<0.00200	<0.00300	0.468	<0.000300	0.00600 J	<0.0000800	<0.00200	<0.00200	<0.000500	0.638	1.34	1.98

TABLE 4
APPENDIX IV ANALYTICAL DATA
OGSES FGD PONDS

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 Combined^ (pCi/L)
FGD-12	11/04/15	<0.0008	<0.002	0.0884	<0.0003	<0.0003	0.0124	<0.003	<0.1	0.000678 J	0.0234	<0.00008	0.00221 J	<0.002	<0.0005	1.07	<1.55	2.62
	12/17/15	<0.0008	<0.002	0.0781	<0.0003	<0.0003	<0.002	<0.003	0.159 J	0.000775 J	0.022	<0.00008	<0.002	<0.002	<0.0005	1.32	<2.57	3.89
	2/9/2016	<0.0008	<0.002	0.0664	<0.0003	<0.0003	<0.002	<0.003	0.157 J	0.000339 J	0.0211	<0.00008	<0.002	<0.002	<0.0005	0.771	<1.53	2.30
	04/14/16	<0.0008	<0.002	0.104	<0.0003	<0.0003	0.00425 J	<0.003	0.109 J	0.00371	0.0255	<0.00008	<0.002	<0.002	<0.0005	0.560	1.46	2.02
	06/15/16	<0.0008	<0.002	0.107	0.00039 J	<0.0003	0.00269 J	0.00323 J	0.101 J	0.00513	0.0192	0.000134 J	<0.002	<0.002	<0.0005	2.01	2.06	4.07
	08/25/16	<0.0008	0.00451 J	0.262	0.000629 J	<0.0003	0.0135	0.00412 J	<0.1	0.00842	0.0204	<0.00008	<0.002	<0.002	<0.0005	1.59	1.84	3.43
	10/04/16	<0.0008	0.00402 J	0.122	0.00062 J	<0.0003	0.0133	0.00395 J	0.129 J	0.0084	0.0259	<0.00008	<0.002	0.00292 J	<0.0005	1.41	<0.76	2.17
	12/23/16	<0.0008	0.00938	0.557	<0.0003	<0.0003	0.00435 J	0.00609	0.112 J	0.00216	0.0755	<0.00008	<0.002	0.00786	<0.0005	1.89	3.54	5.43
	06/05/18	<0.0008	<0.002	0.0777	0.00031	<0.0003	0.00578	<0.003	0.137 J	0.0029	0.0213	<0.00008	<0.002	<0.002	<0.0005	1.68	<0.526	2.206
	09/06/18	NA	<0.002	0.0517	<0.0003	<0.0003	0.0024 J	<0.003	<0.10	0.0005 J	0.0188	NA	<0.002	<0.002	<0.0005	<0.304	<0.5450	<0.849
	05/16/19	0.0008	<0.002	0.0474	<0.0003	<0.0003	0.0030 J	<0.003	<0.10	0.0003 J	0.0221	<0.00008	<0.002	<0.002	<0.0005	0.385	1.43	1.82
	08/19/19	<0.0008	<0.002	0.0631	<0.0003	<0.0003	0.00218 J	<0.003	0.145 J	0.00139	0.0251	<0.00008	<0.002	<0.002	<0.0005	1.12	3.52	4.64
	05/11/20	<0.000800	0.0116	0.23	0.00166	<0.000300	0.037	0.00883	<0.100	0.0249	0.0371	<0.0000800	<0.00200	0.00678	0.000651	5.96	10.7	16.6
	09/10/20	NA	0.00252 J	0.0922	0.000375 J	NA	0.00723	<0.00300	<0.100	0.00402	0.0235	NA	<0.00200	0.00254 J	<0.000500	2.59	6.72	9.31
	06/17/21	<0.0008	<0.002	0.0817	0.000504 J	<0.0003	0.00273 J	<0.00300	<0.100	0.00317	0.0239	<0.00008	<0.002	<0.002	<0.0005	0.861	4.67	5.53
	10/12/21	<0.000800	<0.00200	0.0613	<0.000300	<0.000300	0.00387 J	<0.00300	0.101 J	0.00255	0.0222	<0.0000800	<0.00200	0.00255 J	<0.000500	1.84	1.94	3.78
	05/11/22	<0.000800	<0.00200	0.0674	<0.000300	<0.000300	0.00874	<0.00300	<0.100	0.00244	0.0204	<0.0000800	<0.00200	<0.00200	<0.000500	1.31	0.221 J	1.53
	09/27/22	<0.000800	0.00245 J	0.0986	0.000349 J	<0.000300	0.0082	<0.00300	<0.100	0.00422	0.0213	<0.0000800	<0.00200	<0.00200	<0.000500	2.06	5.61	7.67
	05/26/23	<0.000800	0.00444 J	0.135	0.000644 J	<0.000300	0.016	0.00343 J	<0.100	0.00841	0.0264	<0.0000800	<0.00200	<0.00200	<0.000500	2.43	3.4	5.83
	08/21/23	<0.000800	0.00285 J	0.115	0.000417 J	<0.000300	0.00931	<0.00300	<0.100	0.00503	0.0175	<0.0000800	<0.00200	<0.00200	<0.000500	1.53	5.89	7.42

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. Groundwater sample analyses for the second semi-annual sampling events were in some instances limited to Appendix IV parameters detected during the preceding first semi-annual sampling event inaccordance with 40 CFR § 257.95(d)(1).

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
FGD Pond Area				
FGD-1	424.44	11/03/15	14.27	410.17
		12/17/15	14.22	410.22
		02/09/16	13.89	410.55
		04/14/16	13.79	410.65
		06/14/16	13.54	410.90
		08/24/16	13.37	411.07
		10/04/16	13.28	411.16
		12/19/16	13.25	411.19
		10/03/17	13.64	410.80
		06/04/18	12.96	411.48
		12/17/18	12.57	411.87
		12/26/19	11.82	412.62
		05/06/20	11.59	412.85
		09/09/20	12.12	412.32
		06/16/21	10.11	414.33
		10/11/21	10.82	413.62
		5/10/2022	11.13	413.31
		9/26/2022	11.63	412.81
		05/25/23	11.28	413.16
		8/21/2023	11.91	412.53
FGD-2	439.36	11/03/15	29.31	410.05
		12/17/15	29.39	409.97
		02/09/16	29.03	410.33
		04/14/16	28.89	410.47
		06/14/16	28.21	411.15
		08/24/16	28.22	411.14
		10/04/16	28.06	411.30
		12/19/16	28.50	410.86
		10/03/17	28.56	410.80
		06/04/18	28.58	410.78
		12/17/18	28.02	411.34
		12/26/19	27.41	411.95
		05/06/20	26.98	412.38
		09/09/20	27.49	411.87
		06/16/21	25.58	413.78
		10/11/21	25.72	413.64
		05/10/22	26.76	412.60
		9/26/2022	27.12	412.24
		05/25/23	27.17	412.19
		8/21/2023	27.73	411.63

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
FGD-3	434.90	11/03/15	24.76	410.14
		12/17/15	24.33	410.57
		02/09/16	24.08	410.82
		04/14/16	24.11	410.79
		06/14/16	23.21	411.69
		08/24/16	23.74	411.16
		10/04/16	23.39	411.51
		12/19/16	23.69	411.21
		10/03/17	23.97	410.93
		06/04/18	23.89	411.01
		12/17/18	23.21	411.69
		12/26/19	22.87	412.03
		05/06/20	22.64	412.26
		09/09/20	22.83	412.07
		06/16/21	20.86	414.04
		10/11/21	21.72	413.18
		05/10/22	22.51	412.39
		9/26/2022	23.11	411.79
		05/25/23	26.58	408.32
		8/21/2023	23.33	411.57
FGD-4	432.03	11/03/15	21.84	410.19
		12/17/15	21.89	410.14
		02/09/16	21.31	410.72
		04/14/16	21.21	410.82
		06/14/16	20.47	411.56
		08/24/16	20.99	411.04
		10/04/16	20.79	411.24
		12/19/16	21.02	411.01
		10/03/17	21.09	410.94
		06/04/18	20.91	411.12
		12/17/18	20.52	411.51
		12/26/19	19.82	412.21
		05/06/20	19.78	412.25
		09/09/20	20.04	411.99
		06/16/21	17.87	414.16
		10/11/21	19.06	412.97
		05/10/22	19.62	412.41
		9/26/2022	20.08	411.95
		05/25/23	19.62	412.41
		8/21/2023	20.31	411.72

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
FGD-5	433.01	11/03/15	22.81	410.20
		12/17/15	22.58	410.43
		02/09/16	22.73	410.28
		04/14/16	22.27	410.74
		06/14/16	21.81	411.20
		08/24/16	21.68	411.33
		10/04/16	21.68	411.33
		12/19/16	21.69	411.32
		10/03/17	21.54	411.47
		06/04/18	21.33	411.68
		12/17/18	21.09	411.92
		12/26/19	20.34	412.67
		05/06/20	20.09	412.92
		09/09/20	20.48	412.53
		06/16/21	18.76	414.25
		10/11/21	18.91	414.10
		05/10/22	19.39	413.62
		9/26/2022	20.02	412.99
		05/25/23	19.59	413.42
		8/21/2023	21.77	411.24
FGD-6	428.62	11/03/15	18.44	410.18
		12/17/15	18.04	410.58
		02/09/16	17.96	410.66
		04/14/16	17.89	410.73
		06/14/16	17.22	411.40
		08/24/16	17.51	411.11
		10/04/16	17.37	411.25
		12/19/16	17.72	410.90
		10/03/17	17.88	410.74
		06/04/18	17.65	410.97
		12/17/18	17.38	411.24
		12/26/19	16.29	412.33
		05/06/20	16.84	411.78
		09/09/20	16.91	411.71
		06/16/21	15.07	413.55
		10/11/21	16.04	412.58
		05/10/22	16.57	412.05
		9/26/2022	16.92	411.7
		05/25/23	16.74	411.88
		8/21/2023	17.18	411.44
FGD-7*	425.87	06/04/18	14.58	411.29
		12/17/18	14.17	411.70
		12/26/19	13.67	412.20
		05/06/20	13.08	412.79
		09/09/02	13.51	412.36
		06/16/21	11.64	414.23
		10/11/21	12.47	413.40
		05/10/22	13.09	412.78
		9/26/2022	13.57	412.30
		05/25/23	12.93	412.94
		8/21/2023	13.77	412.10

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
FGD-8	440.15	11/03/15	16.39	423.76
		12/17/15	16.26	423.89
		02/09/16	29.64	410.51
		04/14/16	29.54	410.61
		06/14/16	29.37	410.78
		08/24/16	29.16	410.99
		10/04/16	28.81	411.34
		12/19/16	29.21	410.94
		01/03/17	29.31	410.84
		06/04/18	29.15	411.00
		12/17/18	29.25	410.90
		12/26/19	28.92	411.23
		05/06/20	28.99	411.16
		09/09/20	29.06	411.09
		06/16/21	25.78	414.37
		10/11/21	28.41	411.74
		05/10/22	29.33	410.82
		9/26/2022	29.17	410.98
		05/25/23	28.79	411.36
		8/21/2023	29.77	410.38
FGD-9*	435.51	06/04/18	24.56	410.95
		12/17/18	24.59	410.92
		12/26/19	24.06	411.45
		05/06/20	23.97	411.54
		09/09/20	24.17	411.34
		06/16/21	23.21	412.30
		10/11/21	23.62	411.89
		05/10/22	24.38	411.13
		9/26/2022	24.39	411.12
		5/25/2023	23.64	411.87
		8/21/2023	24.21	411.30
FGD-10*	424.19	06/04/18	13.44	410.75
		12/17/18	13.49	410.70
		12/26/19	12.82	411.37
		05/06/20	11.83	412.36
		09/09/20	14.26	409.93
		06/16/21	10.47	413.72
		10/11/21	11.82	412.37
		05/10/22	11.22	412.97
		9/26/2022	13.11	411.08
		5/25/2023	12.09	412.10
		8/21/2023	13.49	410.70

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
FGD-11	452.22	11/03/15	20.67	431.55
		12/17/15	20.61	431.61
		02/09/16	41.62	410.60
		04/14/16	40.04	412.18
		06/14/16	39.81	412.41
		08/24/16	39.59	412.63
		10/04/16	41.59	410.63
		12/19/16	42.01	410.21
		10/03/17	40.97	411.25
		06/04/18	40.4	411.82
		12/17/18	40.12	412.10
		12/26/19	39.38	412.84
		05/06/20	38.91	413.31
		09/09/20	39.97	412.25
		06/16/21	38.09	414.13
		10/11/21	38.52	413.70
		05/10/22	38.22	414.00
		9/26/2022	39.82	412.4
		05/25/23	40.79	411.43
		8/21/2023	40.18	412.04
FGD-12	443.16	11/03/15	33.82	409.34
		12/17/15	33.69	409.47
		02/09/16	32.42	410.74
		04/14/16	32.04	411.12
		06/14/16	32.02	411.14
		08/24/16	31.89	411.27
		10/04/16	31.77	411.39
		12/19/16	31.96	411.20
		10/03/17	31.31	411.85
		06/04/18	31.19	411.97
		12/17/18	30.67	412.49
		12/26/19	30.04	413.12
		05/06/20	29.97	413.19
		09/09/20	30.31	412.85
		06/16/21	29.12	414.04
		10/11/21	28.91	414.25
		05/10/22	29.06	414.10
		9/26/2022	29.59	413.57
		05/25/23	29.61	413.55
		8/21/2023	29.72	413.44

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
Ash Landfill 1 Area				
AL-10	460.81	11/03/15	43.19	417.62
		12/17/15	43.09	417.72
		02/10/16	42.51	418.3
		04/15/16	42.14	418.67
		06/14/16	41.61	419.2
		08/24/16	41.89	418.92
		10/04/16	41.92	418.89
		12/19/16	43.68	417.13
		10/02/17	42.37	418.44
		06/04/18	42.32	418.49
		09/15/18	43.01	417.8
		05/17/19	41.04	419.77
		05/06/20	40.80	420.01
		09/09/20	41.46	419.35
		06/16/21	40.61	420.2
		10/11/21	39.02	421.79
		05/11/22	40.32	420.49
		09/26/22	41.37	419.44
		05/25/23	41.17	419.64
		08/17/23	41.63	419.18
MW-01*	454.30	06/05/18	34.86	419.44
		12/17/18	34.47	419.83
		12/26/19	33.57	420.73
		05/07/20	33.14	421.16
		09/09/20	34.19	420.11
		06/16/21	32.31	421.99
		10/12/21	32.51	421.79
		05/11/22	32.83	421.47
		09/26/22	34.09	420.21
		05/25/23	33.78	420.52
		08/17/23	34.37	419.93
MW-02	463.65	11/03/15	47.61	416.04
		12/17/15	47.49	416.16
		02/10/16	45.93	417.72
		04/15/16	46.69	416.96
		06/14/16	44.84	418.81
		08/24/16	44.61	419.04
		10/04/16	45.24	418.41
		12/19/16	46.96	416.69
		10/02/17	45.54	418.11
		06/05/18	45.48	418.17
		12/17/18	45.91	417.74
		12/26/19	44.27	419.38
		05/06/20	42.29	421.36
		09/09/20	44.57	419.08
		06/16/21	43.58	420.07
		10/12/21	43.08	420.57
		05/11/22	43.54	420.11
		09/26/22	44.54	419.11
		05/25/23	44.27	419.38
		08/17/23	44.64	419.01

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
MW-03*	440.48	06/05/18	26.11	414.37
		12/17/18	26.21	414.27
		12/26/19	24.81	415.67
		05/07/20	24.33	416.15
		09/09/20	23.31	417.17
		06/16/21	23.41	417.07
		10/12/21	23.63	416.85
		05/11/22	23.14	417.34
		09/26/22	25.12	415.36
		05/25/23	24.83	415.65
		08/17/23	25.12	415.36
MW-04*	436.63	06/05/18	25.73	410.9
		12/17/18	25.77	410.86
		12/26/19	24.68	411.95
		05/07/20	24.96	411.67
		09/09/20	25.69	410.94
		06/16/21	23.72	412.91
		10/12/21	23.81	412.82
		05/11/22	23.63	413.00
		09/26/22	24.77	411.86
		05/25/23	24.19	412.44
		08/17/23	24.72	411.91
MW-05	436.98	11/03/15	29.94	407.04
		12/17/15	29.71	407.27
		02/10/16	28.93	408.05
		04/15/16	28.02	408.96
		06/14/16	27.57	409.41
		08/24/16	28.38	408.60
		10/04/16	27.94	409.04
		12/19/16	30.02	406.96
		10/02/17	29.06	407.92
		06/05/18	28.17	408.81
		12/17/18	28.74	408.24
		12/26/19	27.17	409.81
		05/06/20	26.68	410.30
		09/09/20	27.09	409.89
		06/16/21	26.21	410.77
		10/12/21	26.46	410.52
		05/11/22	26.09	410.89
		09/26/22	27.47	409.51
		05/25/23	26.51	410.47
		08/17/23	27.59	409.39
MW-06*	432.97	06/05/18	25.79	407.18
		12/17/18	25.52	407.45
		12/26/19	24.81	408.16
		05/07/20	NM	NM
		09/09/20	25.13	407.84
		06/16/21	22.46	410.51
		10/12/21	NM	NM
		05/11/22	NM	NM
		09/26/22	29.12	403.85
		05/25/23	28.22	404.75
		08/17/23	29.03	403.94

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
MW-07	438.84	11/03/15	28.54	410.30
		12/17/15	28.07	410.77
		02/09/16	27.71	411.13
		04/15/16	27.43	411.41
		06/14/16	27.11	411.73
		08/24/16	27.11	411.73
		10/04/16	27.62	411.22
		12/19/16	26.79	412.05
		10/02/17	26.21	412.63
		06/05/18	26.71	412.13
		12/17/18	26.11	412.73
		12/26/19	26.04	412.80
		05/07/20	25.82	413.02
		09/09/20	25.78	413.06
		06/16/21	25.79	413.05
		10/12/21	27.86	410.98
		05/11/22	25.09	413.75
		09/26/22	25.58	413.26
		05/25/23	25.08	413.76
		08/17/23	25.27	413.57
MW-08	443.38	11/03/15	32.77	410.61
		12/17/15	32.63	410.75
		02/09/16	32.47	410.91
		04/15/16	32.12	411.26
		06/14/16	29.96	413.42
		Well Damaged		
MW-08R	443.84	12/19/16	33.97	409.87
		03/21/17	31.89	411.95
		04/20/17	31.80	412.04
		10/02/17	31.66	412.18
		06/05/18	31.74	412.10
		12/17/18	46.26	397.58
		12/26/19	41.02	402.82
		05/07/20	33.62	410.22
		09/09/20	30.68	413.16
		06/16/21	29.61	414.23
		10/12/21	29.41	414.43
		05/11/22	42.26	401.58
		09/26/22	30.08	413.76
		05/25/23	29.77	414.07
		08/17/23	30.06	413.78

TABLE 5
GROUNDWATER ELEVATION DATA
OGSES FGD PONDS AND ASH LANDFILL 1

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
MW-09	461.46	11/03/15	48.43	413.03
		12/17/15	48.71	412.75
		02/09/16	48.20	413.26
		04/15/16	47.69	413.77
		06/14/16	47.31	414.15
		08/24/16	47.56	413.90
		10/04/16	47.22	414.24
		12/19/16	50.38	411.08
		10/02/17	47.11	414.35
		06/05/18	47.21	414.25
		12/17/18	47.51	413.95
		12/26/19	46.09	415.37
		05/06/20	38.62	422.84
		09/09/20	46.07	415.39
		06/16/21	45.71	415.75
		10/12/21	44.89	416.57
		05/11/22	45.21	416.25
		9/26/2022	45.76	415.70
		05/25/23	45.77	415.69
		08/17/23	45.82	415.64

Notes:
Abbreviations: TOC - top of casing; btoc - below top of casing; amsl - above mean sea level.
* - non-CCR groundwater monitoring program well used only to evaluate groundwater 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.: 2305376

RE: Luminant-OGSES FGD Ponds CCR

Dear Jacob Jarvis:

DHL Analytical, Inc. received 10 sample(s) on 5/27/2023 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

PAGE 1 OF 1

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

DATE: 5-26-23
PO#: 31404097.017

LAB USE ONLY
DHL WORKORDER #: 2305376

PROJECT LOCATION OR NAME: LUMINANT - OGSES FGD PONDS CCR
CLIENT PROJECT # 31404097.017 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.	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
FGD-6	01	5-25-23	1645	W	P	4			X				X			X	X	
FGD-4	02	"	1745	W	P	4			X				X			X	X	
FGD-3	03	"	1835	W	P	4			X				X			X	X	
FGD-2	04	5-26-23	0755	W	P	4			X				X			X	X	
FGD-5	05	"	0850	W	P	4			X				X			X	X	
FGD-1	06	"	0950	W	P	4			X				X			X	X	
DUP-1	07	"	0950	W	P	4			X				X			X	X	
FGD-8	08	"	1220	W	P	4			X				X			X	X	
FGD-11	09	"	1405	W	P	4			X				X			X	X	
FGD-12	10	"	1510	W	P	4			X				X			X	X	

Relinquished By: (Sign)	DATE/TIME	Received by:
	5-26-23 1800	FedEx
FedEx	5/27/23 1:05 p.m.	
	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): 4.5 / 26.3 - Rad: um only cooler
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**

DHL COC REV 4 | MAR 2023

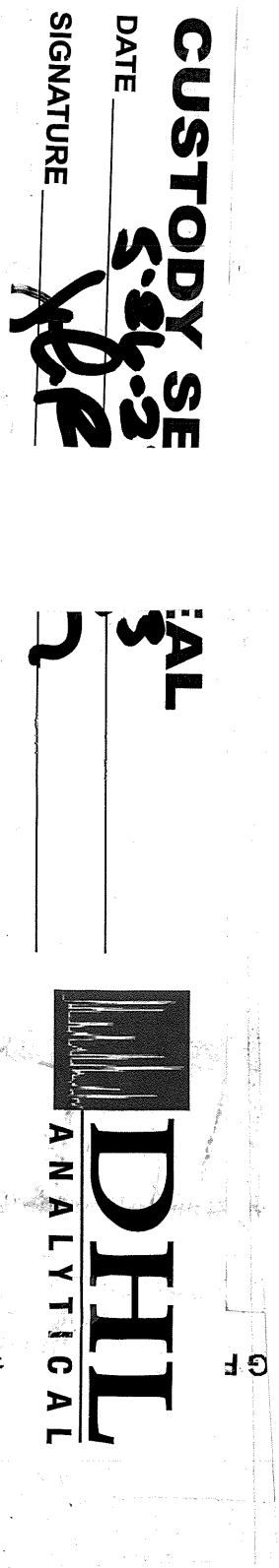
Eric Lau

From: John DuPont
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau
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:KIPA (214) 583-3422
JOHN BRAYTON
WSP USA INC.
3102 OAK LAWN AVENUE
SUITE 450
DALLAS, TX 75219
UNITED STATES US

SHIP DATE: 26MAY23
ACTWGT: 50.00 LB
CAD: 253052732/INET4610

BILL SENDER

TO LOGIN
DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF: 0000
INV: 1FLD.EXP
PO: 31404097.017 DEPT: JOHN BRAYTON

583J3/2BC3/FE2D

FedEx Express

SATURDAY 12:00P
PRIORITY OVERNIGHT

4 of 5
MPS# 0263 7722 6434 1058
Mstr# 7722 6434 1665

0201

78664
TX-US AUS

44 BSMA

CUSTODY SEA
DATE 5.26.23
SIGNATURE

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: 26MAY23
ACTWGT: 50.00 LB
CAD: 253052732/INET4610

BILL SENDER

TO LOGIN
DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF: 0000
INV: 1FLD.EXP
PO: 31404097.017 DEPT: JOHN BRAYTON

583J3/2BC3/FE2D

FedEx Express

1 of 5

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7722 6434 1665
MASTER

44 BSMA

78664
TX-US AUS

L

DHL ANALYTICAL

CCR

W

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: WSP-Golder

Date Received: 5/27/2023

Work Order Number: 2305376

Received by: CF

Checklist completed by: _____ 5/30/2023
Signature | Date

Reviewed by: DL 5/30/2023
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 # 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	4.5	26.3
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-OGSES FGD Ponds CCR	**LRC Date:** 6/30/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2305376
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-OGSES FGD Ponds CCR	**LRC Date:** 6/30/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2305376
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

Name: Dr. Derhsing Luu
Official Title: Technical Director

Signature

7/10/2023
Date

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

CLIENT: WSP-Golder
Project: Luminant-OGSES FGD Ponds CCR
Lab Order: 2305376

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 5/27/23. A total of 10 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions analysis performed on 5/30/23 and 6/2/23 (batches 110408 & 110459) the matrix spikes and matrix spike duplicate recoveries (2305376-04 MS/MSD & 2305403-15 MS/MSD) were below control limits for Chloride. 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 (2305376-04 MS/MSD) was from this work order. The sample selected for the matrix spike and matrix spike duplicate (2305403-15 MS/MSD) was not from this work order. The LCSs were within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 6/2/23 the matrix spike duplicate recovery was below control limits for Calcium. This is flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

DHL Analytical, Inc.

Date: *30-Jun-23*

CLIENT: WSP-Golder
Project: Luminant-OGSES FGD Ponds CCR
Lab Order: 2305376

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2305376-01	FGD-6		05/25/23 04:45 PM	05/27/2023
2305376-02	FGD-4		05/25/23 05:45 PM	05/27/2023
2305376-03	FGD-3		05/25/23 06:35 PM	05/27/2023
2305376-04	FGD-2		05/26/23 07:55 AM	05/27/2023
2305376-05	FGD-5		05/26/23 08:50 AM	05/27/2023
2305376-06	FGD-1		05/26/23 09:50 AM	05/27/2023
2305376-07	DUP-1		05/26/23 09:50 AM	05/27/2023
2305376-08	FGD-8		05/26/23 12:20 PM	05/27/2023
2305376-09	FGD-11		05/26/23 02:05 PM	05/27/2023
2305376-10	FGD-12		05/26/23 03:10 PM	05/27/2023

Lab Order: 2305376
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305376-01A	FGD-6	05/25/23 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-6	05/25/23 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-6	05/25/23 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-6	05/25/23 04:45 PM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305376-01B	FGD-6	05/25/23 04:45 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-6	05/25/23 04:45 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-6	05/25/23 04:45 PM	Aqueous	M2540C	TDS Preparation	05/30/23 03:06 PM	110410
2305376-02A	FGD-4	05/25/23 05:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-4	05/25/23 05:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-4	05/25/23 05:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-4	05/25/23 05:45 PM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305376-02B	FGD-4	05/25/23 05:45 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-4	05/25/23 05:45 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-4	05/25/23 05:45 PM	Aqueous	M2540C	TDS Preparation	05/30/23 03:06 PM	110410
2305376-03A	FGD-3	05/25/23 06:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-3	05/25/23 06:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-3	05/25/23 06:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-3	05/25/23 06:35 PM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305376-03B	FGD-3	05/25/23 06:35 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-3	05/25/23 06:35 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-3	05/25/23 06:35 PM	Aqueous	M2540C	TDS Preparation	05/30/23 03:06 PM	110410
2305376-04A	FGD-2	05/26/23 07:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-2	05/26/23 07:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-2	05/26/23 07:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-2	05/26/23 07:55 AM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305376-04B	FGD-2	05/26/23 07:55 AM	Aqueous	E300	Anion Preparation	06/02/23 09:54 AM	110459
	FGD-2	05/26/23 07:55 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-2	05/26/23 07:55 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408

Lab Order: 2305376
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305376-04B	FGD-2	05/26/23 07:55 AM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305376-05A	FGD-5	05/26/23 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-5	05/26/23 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-5	05/26/23 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-5	05/26/23 08:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305376-05B	FGD-5	05/26/23 08:50 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-5	05/26/23 08:50 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-5	05/26/23 08:50 AM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305376-06A	FGD-1	05/26/23 09:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-1	05/26/23 09:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-1	05/26/23 09:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305376-06B	FGD-1	05/26/23 09:50 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-1	05/26/23 09:50 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-1	05/26/23 09:50 AM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305376-07A	DUP-1	05/26/23 09:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	DUP-1	05/26/23 09:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	DUP-1	05/26/23 09:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305376-07B	DUP-1	05/26/23 09:50 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	DUP-1	05/26/23 09:50 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	DUP-1	05/26/23 09:50 AM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305376-08A	FGD-8	05/26/23 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-8	05/26/23 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-8	05/26/23 12:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-8	05/26/23 12:20 PM	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305376-08B	FGD-8	05/26/23 12:20 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-8	05/26/23 12:20 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-8	05/26/23 12:20 PM	Aqueous	E300	Anion Preparation	06/02/23 09:54 AM	110459
	FGD-8	05/26/23 12:20 PM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435

Lab Order: 2305376
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305376-09A	FGD-11	05/26/23 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-11	05/26/23 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-11	05/26/23 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-11	05/26/23 02:05 PM	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305376-09B	FGD-11	05/26/23 02:05 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-11	05/26/23 02:05 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-11	05/26/23 02:05 PM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305376-10A	FGD-12	05/26/23 03:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-12	05/26/23 03:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110437
	FGD-12	05/26/23 03:10 PM	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305376-10B	FGD-12	05/26/23 03:10 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-12	05/26/23 03:10 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	FGD-12	05/26/23 03:10 PM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435

Lab Order: 2305376
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305376-01A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:19 PM	CETAC2_HG_230606A
	FGD-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 11:47 AM	ICP-MS4_230606E
	FGD-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 10:47 AM	ICP-MS5_230602A
	FGD-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	5	06/02/23 12:15 PM	ICP-MS5_230602A
2305376-01B	FGD-6	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 05:33 PM	IC4_230530B
	FGD-6	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 03:41 AM	IC4_230530B
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	110410	1	05/30/23 04:15 PM	WC_230530C
2305376-02A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:22 PM	CETAC2_HG_230606A
	FGD-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	5	06/02/23 12:18 PM	ICP-MS5_230602A
	FGD-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 11:49 AM	ICP-MS4_230606E
	FGD-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 10:50 AM	ICP-MS5_230602A
2305376-02B	FGD-4	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 05:52 PM	IC4_230530B
	FGD-4	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 04:00 AM	IC4_230530B
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	110410	1	05/30/23 04:15 PM	WC_230530C
2305376-03A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:24 PM	CETAC2_HG_230606A
	FGD-3	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	5	06/02/23 12:20 PM	ICP-MS5_230602A
	FGD-3	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 10:52 AM	ICP-MS5_230602A
	FGD-3	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 11:51 AM	ICP-MS4_230606E
2305376-03B	FGD-3	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 04:19 AM	IC4_230530B
	FGD-3	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 06:11 PM	IC4_230530B
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	110410	1	05/30/23 04:15 PM	WC_230530C
2305376-04A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:26 PM	CETAC2_HG_230606A
	FGD-2	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	10	06/02/23 12:10 PM	ICP-MS5_230602A
	FGD-2	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	2	06/06/23 11:43 AM	ICP-MS4_230606E
	FGD-2	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 10:42 AM	ICP-MS5_230602A
2305376-04B	FGD-2	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 04:38 AM	IC4_230530B

Lab Order: 2305376
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305376-04B	FGD-2	Aqueous	E300	Anions by IC method - Water	110459	100	06/02/23 07:09 PM	IC2_230602B
	FGD-2	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 06:30 PM	IC4_230530B
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305376-05A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:28 PM	CETAC2_HG_230606A
	FGD-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 11:53 AM	ICP-MS4_230606E
	FGD-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 10:55 AM	ICP-MS5_230602A
	FGD-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	10	06/02/23 12:23 PM	ICP-MS5_230602A
2305376-05B	FGD-5	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 04:57 AM	IC4_230530B
	FGD-5	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 07:27 PM	IC4_230530B
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305376-06A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:31 PM	CETAC2_HG_230606A
	FGD-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 11:55 AM	ICP-MS4_230606E
	FGD-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 10:57 AM	ICP-MS5_230602A
2305376-06B	FGD-1	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 07:46 PM	IC4_230530B
	FGD-1	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 05:16 AM	IC4_230530B
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305376-07A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:31 AM	CETAC2_HG_230608A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 11:00 AM	ICP-MS5_230602A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 11:57 AM	ICP-MS4_230606E
2305376-07B	DUP-1	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 08:05 PM	IC4_230530B
	DUP-1	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 05:35 AM	IC4_230530B
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305376-08A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:33 AM	CETAC2_HG_230608A
	FGD-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 11:02 AM	ICP-MS5_230602A
	FGD-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	50	06/02/23 12:26 PM	ICP-MS5_230602A
	FGD-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 11:59 AM	ICP-MS4_230606E

Lab Order: 2305376
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305376-08B	FGD-8	Aqueous	E300	Anions by IC method - Water	110459	100	06/02/23 07:26 PM	IC2_230602B
	FGD-8	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 09:40 PM	IC4_230530B
	FGD-8	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 07:10 AM	IC4_230530B
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305376-09A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:36 AM	CETAC2_HG_230608A
	FGD-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	10	06/02/23 12:28 PM	ICP-MS5_230602A
	FGD-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 12:01 PM	ICP-MS4_230606E
	FGD-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 11:05 AM	ICP-MS5_230602A
2305376-09B	FGD-11	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 09:59 PM	IC4_230530B
	FGD-11	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 07:29 AM	IC4_230530B
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305376-10A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:38 AM	CETAC2_HG_230608A
	FGD-12	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/06/23 12:03 PM	ICP-MS4_230606E
	FGD-12	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110437	1	06/02/23 11:08 AM	ICP-MS5_230602A
2305376-10B	FGD-12	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 10:18 PM	IC4_230530B
	FGD-12	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 07:48 AM	IC4_230530B
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A

DHL Analytical, Inc.

Date: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-6
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-01
Project No:	31404097.017	**Collection Date:**	05/25/23 04:45 PM
Lab Order:	2305376	**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	06/02/23 10:47 AM
Arsenic	0.00285	0.00200	0.00500	J	mg/L	1	06/02/23 10:47 AM
Barium	0.0790	0.00300	0.0100		mg/L	1	06/02/23 10:47 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:47 AM
Boron	0.0849	0.0100	0.0300		mg/L	1	06/06/23 11:47 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:47 AM
Calcium	29.6	0.500	1.50		mg/L	5	06/02/23 12:15 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:47 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/23 10:47 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:47 AM
Lithium	0.00859	0.00500	0.0100	J	mg/L	1	06/02/23 10:47 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:47 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:47 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 10:47 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:19 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	295	3.00	10.0		mg/L	10	05/30/23 05:33 PM
Fluoride	0.344	0.100	0.400	J	mg/L	1	05/31/23 03:41 AM
Sulfate	61.0	1.00	3.00		mg/L	1	05/31/23 03:41 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	915	50.0	50.0		mg/L	1	05/30/23 04:15 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: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-4
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-02
Project No:	31404097.017	**Collection Date:**	05/25/23 05:45 PM
Lab Order:	2305376	**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	06/02/23 10:50 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:50 AM
Barium	0.0981	0.00300	0.0100		mg/L	1	06/02/23 10:50 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:50 AM
Boron	0.0871	0.0100	0.0300		mg/L	1	06/06/23 11:49 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:50 AM
Calcium	30.9	0.500	1.50		mg/L	5	06/02/23 12:18 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:50 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/23 10:50 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:50 AM
Lithium	0.0123	0.00500	0.0100		mg/L	1	06/02/23 10:50 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:50 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:50 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 10:50 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:22 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	180	3.00	10.0		mg/L	10	05/30/23 05:52 PM
Fluoride	0.543	0.100	0.400		mg/L	1	05/31/23 04:00 AM
Sulfate	43.6	1.00	3.00		mg/L	1	05/31/23 04:00 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	619	10.0	10.0		mg/L	1	05/30/23 04:15 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: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-3
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-03
Project No:	31404097.017	**Collection Date:**	05/25/23 06:35 PM
Lab Order:	2305376	**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	06/02/23 10:52 AM
Arsenic	0.00242	0.00200	0.00500	J	mg/L	1	06/02/23 10:52 AM
Barium	0.0315	0.00300	0.0100		mg/L	1	06/02/23 10:52 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:52 AM
Boron	0.112	0.0100	0.0300		mg/L	1	06/06/23 11:51 AM
Cadmium	0.000311	0.000300	0.00100	J	mg/L	1	06/02/23 10:52 AM
Calcium	32.5	0.500	1.50		mg/L	5	06/02/23 12:20 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:52 AM
Cobalt	0.00564	0.00300	0.00500		mg/L	1	06/02/23 10:52 AM
Lead	0.000403	0.000300	0.00100	J	mg/L	1	06/02/23 10:52 AM
Lithium	0.0486	0.00500	0.0100		mg/L	1	06/02/23 10:52 AM
Molybdenum	0.00279	0.00200	0.00500	J	mg/L	1	06/02/23 10:52 AM
Selenium	0.00308	0.00200	0.00500	J	mg/L	1	06/02/23 10:52 AM
Thallium	0.000569	0.000500	0.00150	J	mg/L	1	06/02/23 10:52 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	0.000170	0.0000800	0.000200	J	mg/L	1	06/06/23 03:24 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	55.5	3.00	10.0		mg/L	10	05/30/23 06:11 PM
Fluoride	0.981	0.100	0.400		mg/L	1	05/31/23 04:19 AM
Sulfate	119	1.00	3.00		mg/L	1	05/31/23 04:19 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	708	10.0	10.0		mg/L	1	05/30/23 04:15 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: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-2
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-04
Project No:	31404097.017	**Collection Date:**	05/26/23 07:55 AM
Lab Order:	2305376	**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	06/02/23 10:42 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:42 AM
Barium	0.0768	0.00300	0.0100		mg/L	1	06/02/23 10:42 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:42 AM
Boron	0.599	0.0200	0.0600		mg/L	2	06/06/23 11:43 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:42 AM
Calcium	176	1.00	3.00		mg/L	10	06/02/23 12:10 PM
Chromium	0.00322	0.00200	0.00500	J	mg/L	1	06/02/23 10:42 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/23 10:42 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:42 AM
Lithium	0.0283	0.00500	0.0100		mg/L	1	06/02/23 10:42 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:42 AM
Selenium	0.0253	0.00200	0.00500		mg/L	1	06/02/23 10:42 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 10:42 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:26 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	851	30.0	100		mg/L	100	06/02/23 07:09 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/31/23 04:38 AM
Sulfate	409	10.0	30.0		mg/L	10	05/30/23 06:30 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	2080	50.0	50.0		mg/L	1	05/31/23 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

DHL Analytical, Inc.

Date: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-5
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-05
Project No:	31404097.017	**Collection Date:**	05/26/23 08:50 AM
Lab Order:	2305376	**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	06/02/23 10:55 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:55 AM
Barium	0.108	0.00300	0.0100		mg/L	1	06/02/23 10:55 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:55 AM
Boron	0.112	0.0100	0.0300		mg/L	1	06/06/23 11:53 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:55 AM
Calcium	111	1.00	3.00		mg/L	10	06/02/23 12:23 PM
Chromium	0.0738	0.00200	0.00500		mg/L	1	06/02/23 10:55 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/23 10:55 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:55 AM
Lithium	0.173	0.00500	0.0100		mg/L	1	06/02/23 10:55 AM
Molybdenum	0.00985	0.00200	0.00500		mg/L	1	06/02/23 10:55 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:55 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 10:55 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:28 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	333	3.00	10.0		mg/L	10	05/30/23 07:27 PM
Fluoride	0.495	0.100	0.400		mg/L	1	05/31/23 04:57 AM
Sulfate	140	1.00	3.00		mg/L	1	05/31/23 04:57 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	945	50.0	50.0		mg/L	1	05/31/23 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

DHL Analytical, Inc.

Date: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-1
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-06
Project No:	31404097.017	**Collection Date:**	05/26/23 09:50 AM
Lab Order:	2305376	**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	06/02/23 10:57 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:57 AM
Barium	0.0687	0.00300	0.0100		mg/L	1	06/02/23 10:57 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:57 AM
Boron	0.0881	0.0100	0.0300		mg/L	1	06/06/23 11:55 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:57 AM
Calcium	15.6	0.100	0.300		mg/L	1	06/02/23 10:57 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:57 AM
Cobalt	0.00371	0.00300	0.00500	J	mg/L	1	06/02/23 10:57 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 10:57 AM
Lithium	0.0245	0.00500	0.0100		mg/L	1	06/02/23 10:57 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:57 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 10:57 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 10:57 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:31 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	73.9	3.00	10.0		mg/L	10	05/30/23 07:46 PM
Fluoride	0.405	0.100	0.400		mg/L	1	05/31/23 05:16 AM
Sulfate	72.4	1.00	3.00		mg/L	1	05/31/23 05:16 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	415	10.0	10.0		mg/L	1	05/31/23 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

DHL Analytical, Inc.

Date: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	DUP-1
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-07
Project No:	31404097.017	**Collection Date:**	05/26/23 09:50 AM
Lab Order:	2305376	**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	06/02/23 11:00 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:00 AM
Barium	0.0587	0.00300	0.0100		mg/L	1	06/02/23 11:00 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:00 AM
Boron	0.0826	0.0100	0.0300		mg/L	1	06/06/23 11:57 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:00 AM
Calcium	15.0	0.100	0.300		mg/L	1	06/02/23 11:00 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:00 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/23 11:00 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:00 AM
Lithium	0.0238	0.00500	0.0100		mg/L	1	06/02/23 11:00 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:00 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:00 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 11:00 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:31 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	73.3	3.00	10.0		mg/L	10	05/30/23 08:05 PM
Fluoride	0.406	0.100	0.400		mg/L	1	05/31/23 05:35 AM
Sulfate	71.8	1.00	3.00		mg/L	1	05/31/23 05:35 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	423	10.0	10.0		mg/L	1	05/31/23 05:10 PM

Qualifiers:

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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: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-8
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-08
Project No:	31404097.017	**Collection Date:**	05/26/23 12:20 PM
Lab Order:	2305376	**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	06/02/23 11:02 AM
Arsenic	0.00497	0.00200	0.00500	J	mg/L	1	06/02/23 11:02 AM
Barium	1.15	0.00300	0.0100		mg/L	1	06/02/23 11:02 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:02 AM
Boron	0.0894	0.0100	0.0300		mg/L	1	06/06/23 11:59 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:02 AM
Calcium	373	5.00	15.0		mg/L	50	06/02/23 12:26 PM
Chromium	0.00374	0.00200	0.00500	J	mg/L	1	06/02/23 11:02 AM
Cobalt	0.00862	0.00300	0.00500		mg/L	1	06/02/23 11:02 AM
Lead	0.00103	0.000300	0.00100		mg/L	1	06/02/23 11:02 AM
Lithium	0.0278	0.00500	0.0100		mg/L	1	06/02/23 11:02 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:02 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:02 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 11:02 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:33 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	2150	30.0	100		mg/L	100	06/02/23 07:26 PM
Fluoride	0.360	0.100	0.400	J	mg/L	1	05/31/23 07:10 AM
Sulfate	154	10.0	30.0		mg/L	10	05/30/23 09:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	4350	50.0	50.0		mg/L	1	05/31/23 05:10 PM

Qualifiers:

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J - Analyte detected between SDL and RL
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DF- Dilution Factor
N - Parameter not NELAP certified
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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: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-11
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-09
Project No:	31404097.017	**Collection Date:**	05/26/23 02:05 PM
Lab Order:	2305376	**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	06/02/23 11:05 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:05 AM
Barium	0.186	0.00300	0.0100		mg/L	1	06/02/23 11:05 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:05 AM
Boron	0.0948	0.0100	0.0300		mg/L	1	06/06/23 12:01 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:05 AM
Calcium	54.2	1.00	3.00		mg/L	10	06/02/23 12:28 PM
Chromium	0.0152	0.00200	0.00500		mg/L	1	06/02/23 11:05 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/23 11:05 AM
Lead	0.000419	0.000300	0.00100	J	mg/L	1	06/02/23 11:05 AM
Lithium	0.00739	0.00500	0.0100	J	mg/L	1	06/02/23 11:05 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:05 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:05 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 11:05 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:36 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	244	3.00	10.0		mg/L	10	05/30/23 09:59 PM
Fluoride	0.634	0.100	0.400		mg/L	1	05/31/23 07:29 AM
Sulfate	24.9	1.00	3.00		mg/L	1	05/31/23 07:29 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	679	10.0	10.0		mg/L	1	05/31/23 05:10 PM

Qualifiers:

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J - Analyte detected between SDL and RL
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DF- Dilution Factor
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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: *10-Jul-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-12
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2305376-10
Project No:	31404097.017	**Collection Date:**	05/26/23 03:10 PM
Lab Order:	2305376	**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	06/02/23 11:08 AM
Arsenic	0.00444	0.00200	0.00500	J	mg/L	1	06/02/23 11:08 AM
Barium	0.135	0.00300	0.0100		mg/L	1	06/02/23 11:08 AM
Beryllium	0.000644	0.000300	0.00100	J	mg/L	1	06/02/23 11:08 AM
Boron	0.0723	0.0100	0.0300		mg/L	1	06/06/23 12:03 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 11:08 AM
Calcium	8.79	0.100	0.300		mg/L	1	06/02/23 11:08 AM
Chromium	0.0160	0.00200	0.00500		mg/L	1	06/02/23 11:08 AM
Cobalt	0.00343	0.00300	0.00500	J	mg/L	1	06/02/23 11:08 AM
Lead	0.00841	0.000300	0.00100		mg/L	1	06/02/23 11:08 AM
Lithium	0.0264	0.00500	0.0100		mg/L	1	06/02/23 11:08 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:08 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 11:08 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 11:08 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:38 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	13.9	0.300	1.00		mg/L	1	05/31/23 07:48 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	05/31/23 07:48 AM
Sulfate	17.4	1.00	3.00		mg/L	1	05/31/23 07:48 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	172	10.0	10.0		mg/L	1	05/31/23 05:10 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
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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

CLIENT: WSP-Golder
Work Order: 2305376
Project: Luminant-OGSES FGD 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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230606A

The QC data in batch 110508 applies to the following samples: 2305376-01A, 2305376-02A, 2305376-03A, 2305376-04A, 2305376-05A, 2305376-06A

Sample ID: **MB-110508** Batch ID: **110508** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_230606A** Analysis Date: **6/6/2023 2:29:58 PM** Prep Date: **6/6/2023**

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

Sample ID: **LCS-110508** Batch ID: **110508** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCS** Run ID: **CETAC2_HG_230606A** Analysis Date: **6/6/2023 2:32:14 PM** Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00204	0.000200	0.00200	0	102	85	115			

Sample ID: **LCSD-110508** Batch ID: **110508** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCSD** Run ID: **CETAC2_HG_230606A** Analysis Date: **6/6/2023 2:34:30 PM** Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00205	0.000200	0.00200	0	103	85	115	0.489	15	

Sample ID: **2305368-01AMS** Batch ID: **110508** TestNo: **SW7470A** Units: **mg/L**
SampType: **MS** Run ID: **CETAC2_HG_230606A** Analysis Date: **6/6/2023 2:39:03 PM** Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0202	0.00100	0.0200	0	101	80	120			

Sample ID: **2305368-01AMSD** Batch ID: **110508** TestNo: **SW7470A** Units: **mg/L**
SampType: **MSD** Run ID: **CETAC2_HG_230606A** Analysis Date: **6/6/2023 2:41:18 PM** Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0204	0.00100	0.0200	0	102	80	120	0.985	15	

Sample ID: **2305368-01ASD** Batch ID: **110508** TestNo: **SW7470A** Units: **mg/L**
SampType: **SD** Run ID: **CETAC2_HG_230606A** Analysis Date: **6/6/2023 2:43:34 PM** Prep Date: **6/6/2023**

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

Sample ID: **2305368-01APDS** Batch ID: **110508** TestNo: **SW7470A** Units: **mg/L**
SampType: **PDS** Run ID: **CETAC2_HG_230606A** Analysis Date: **6/6/2023 2:45:49 PM** Prep Date: **6/6/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0124	0.00100	0.0125	0	99.2	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230606A

Sample ID: **ICV-230606**	Batch ID: **R127218**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_230606A**	Analysis Date: **6/6/2023 10:48:19 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00423	0.000200	0.00400	0	106	90	110			

Sample ID: **CCV2-230606**	Batch ID: **R127218**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230606A**	Analysis Date: **6/6/2023 11:47:26 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00201	0.000200	0.00200	0	101	90	110			

Sample ID: **CCV3-230606**	Batch ID: **R127218**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230606A**	Analysis Date: **6/6/2023 3:08:31 PM**	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: **CCV4-230606**	Batch ID: **R127218**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230606A**	Analysis Date: **6/6/2023 3:35:51 PM**	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230608A

The QC data in batch 110534 applies to the following samples: 2305376-07A, 2305376-08A, 2305376-09A, 2305376-10A

Sample ID: **MB-110534**	Batch ID: **110534**			TestNo: **SW7470A**				Units: **mg/L**			
SampType: **MBLK**	Run ID: **CETAC2_HG_230608A**			Analysis Date: **6/8/2023 9:22:24 AM**				Prep Date: **6/7/2023**			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	<0.0000800	0.000200									

Sample ID: **LCS-110534**	Batch ID: **110534**			TestNo: **SW7470A**				Units: **mg/L**			
SampType: **LCS**	Run ID: **CETAC2_HG_230608A**			Analysis Date: **6/8/2023 9:24:39 AM**				Prep Date: **6/7/2023**			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.00188	0.000200	0.00200	0	94.0	85	115				

Sample ID: **LCSD-110534**	Batch ID: **110534**			TestNo: **SW7470A**				Units: **mg/L**			
SampType: **LCSD**	Run ID: **CETAC2_HG_230608A**			Analysis Date: **6/8/2023 9:26:55 AM**				Prep Date: **6/7/2023**			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.00187	0.000200	0.00200	0	93.5	85	115	0.533	15		

Sample ID: **2305377-01AMS**	Batch ID: **110534**			TestNo: **SW7470A**				Units: **mg/L**			
SampType: **MS**	Run ID: **CETAC2_HG_230608A**			Analysis Date: **6/8/2023 9:42:49 AM**				Prep Date: **6/7/2023**			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.00180	0.000200	0.00200	0	90.0	80	120				

Sample ID: **2305377-01AMSD**	Batch ID: **110534**			TestNo: **SW7470A**				Units: **mg/L**			
SampType: **MSD**	Run ID: **CETAC2_HG_230608A**			Analysis Date: **6/8/2023 9:45:05 AM**				Prep Date: **6/7/2023**			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.00182	0.000200	0.00200	0	91.0	80	120	1.10	15		

Sample ID: **2305377-01ASD**	Batch ID: **110534**			TestNo: **SW7470A**				Units: **mg/L**			
SampType: **SD**	Run ID: **CETAC2_HG_230608A**			Analysis Date: **6/8/2023 9:47:21 AM**				Prep Date: **6/7/2023**			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	<0.000400	0.00100	0	0				0	10		

Sample ID: **2305377-01APDS**	Batch ID: **110534**			TestNo: **SW7470A**				Units: **mg/L**			
SampType: **PDS**	Run ID: **CETAC2_HG_230608A**			Analysis Date: **6/8/2023 9:49:37 AM**				Prep Date: **6/7/2023**			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.00233	0.000200	0.00250	0	93.2	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230608A

Sample ID: **ICV-230608**	Batch ID: **R127270**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_230608A**	Analysis Date: **6/8/2023 9:17:50 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00405	0.000200	0.00400	0	101	90	110			

Sample ID: **CCV1-230608**	Batch ID: **R127270**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230608A**	Analysis Date: **6/8/2023 10:07:49 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00181	0.000200	0.00200	0	90.5	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_230606B

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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_230606E

The QC data in batch 110437 applies to the following samples: 2305376-01A, 2305376-02A, 2305376-03A, 2305376-04A, 2305376-05A, 2305376-06A, 2305376-07A, 2305376-08A, 2305376-09A, 2305376-10A

Sample ID: **MB-110437** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_230606E** Analysis Date: **6/6/2023 11:33:00 AM** Prep Date: **6/1/2023**

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

Sample ID: **LCS-110437** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_230606E** Analysis Date: **6/6/2023 11:35:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.188	0.0300	0.200	0	94.2	80	120			

Sample ID: **LCSD-110437** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_230606E** Analysis Date: **6/6/2023 11:37:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.206	0.0300	0.200	0	103	80	120	8.79	15	

Sample ID: **2305376-04A SD** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_230606E** Analysis Date: **6/6/2023 11:45:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.686	0.300	0	0.599				13.6	20	

Sample ID: **2305376-04A PDS** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_230606E** Analysis Date: **6/6/2023 12:05:00 PM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.02	0.0600	0.400	0.599	105	75	125			

Sample ID: **2305376-04A MS** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_230606E** Analysis Date: **6/6/2023 12:07:00 PM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.835	0.0600	0.200	0.599	118	75	125			

Sample ID: **2305376-04A MSD** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_230606E** Analysis Date: **6/6/2023 12:09:00 PM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.818	0.0600	0.200	0.599	110	75	125	2.09	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_230606E

Sample ID: **ICV-230606**	Batch ID: **R127221**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_230606E**	Analysis Date: **6/6/2023 9:49:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0948	0.0300	0.100	0	94.8	90	110			

Sample ID: **LCVL-230606**	Batch ID: **R127221**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_230606E**	Analysis Date: **6/6/2023 10:03:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0219	0.0300	0.0200	0	109	80	120			

Sample ID: **CCV3-230606**	Batch ID: **R127221**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_230606E**	Analysis Date: **6/6/2023 11:27:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.205	0.0300	0.200	0	103	90	110			

Sample ID: **CCV4-230606**	Batch ID: **R127221**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_230606E**	Analysis Date: **6/6/2023 12:14:00 PM**	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: 2305376
Project: Luminant-OGSES FGD 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	

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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230602A

The QC data in batch 110437 applies to the following samples: 2305376-01A, 2305376-02A, 2305376-03A, 2305376-04A, 2305376-05A, 2305376-06A, 2305376-07A, 2305376-08A, 2305376-09A, 2305376-10A

Sample ID: **MB-110437** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 10:31:00 AM** Prep Date: **6/1/2023**

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-110437** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 10:34:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.5	80	120			
Arsenic	0.203	0.00500	0.200	0	101	80	120			
Barium	0.201	0.0100	0.200	0	101	80	120			
Beryllium	0.201	0.00100	0.200	0	100	80	120			
Cadmium	0.201	0.00100	0.200	0	101	80	120			
Calcium	4.83	0.300	5.00	0	96.7	80	120			
Chromium	0.202	0.00500	0.200	0	101	80	120			
Cobalt	0.207	0.00500	0.200	0	103	80	120			
Lead	0.200	0.00100	0.200	0	100	80	120			
Lithium	0.201	0.0100	0.200	0	100	80	120			
Molybdenum	0.194	0.00500	0.200	0	96.8	80	120			
Selenium	0.209	0.00500	0.200	0	104	80	120			
Thallium	0.200	0.00150	0.200	0	100	80	120			

Sample ID: **LCSD-110437** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 10:37:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	80	120	0.902	15	
Arsenic	0.206	0.00500	0.200	0	103	80	120	1.80	15	
Barium	0.204	0.0100	0.200	0	102	80	120	1.29	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230602A

Sample ID: **LCSD-110437**	Batch ID: **110437**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 10:37:00 AM**	Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.204	0.00100	0.200	0	102	80	120	1.58	15	
Cadmium	0.204	0.00100	0.200	0	102	80	120	1.40	15	
Calcium	4.80	0.300	5.00	0	96.0	80	120	0.757	15	
Chromium	0.203	0.00500	0.200	0	102	80	120	0.954	15	
Cobalt	0.211	0.00500	0.200	0	106	80	120	2.10	15	
Lead	0.202	0.00100	0.200	0	101	80	120	0.981	15	
Lithium	0.203	0.0100	0.200	0	102	80	120	1.24	15	
Molybdenum	0.197	0.00500	0.200	0	98.4	80	120	1.66	15	
Selenium	0.211	0.00500	0.200	0	106	80	120	1.08	15	
Thallium	0.202	0.00150	0.200	0	101	80	120	1.01	15	

Sample ID: **2305376-04A SD**	Batch ID: **110437**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 10:44:00 AM**	Prep Date: **6/1/2023**

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	0.0770	0.0500	0	0.0768				0.329	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0.00322				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	0.0293	0.0500	0	0.0283				3.67	20	
Molybdenum	<0.0100	0.0250	0	0				0	20	
Selenium	0.0268	0.0250	0	0.0253				5.80	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: **2305376-04A PDS**	Batch ID: **110437**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 11:10:00 AM**	Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.184	0.00250	0.200	0	92.0	75	125			
Arsenic	0.201	0.00500	0.200	0	101	75	125			
Barium	0.278	0.0100	0.200	0.0768	101	75	125			
Beryllium	0.202	0.00100	0.200	0	101	75	125			
Cadmium	0.202	0.00100	0.200	0	101	75	125			
Chromium	0.204	0.00500	0.200	0.00322	101	75	125			
Cobalt	0.199	0.00500	0.200	0	99.4	75	125			
Lead	0.201	0.00100	0.200	0	101	75	125			
Lithium	0.229	0.0100	0.200	0.0283	100	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230602A

Sample ID: **2305376-04A PDS** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 11:10:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.199	0.00500	0.200	0	99.5	75	125			
Selenium	0.219	0.00500	0.200	0.0253	96.8	75	125			
Thallium	0.205	0.00150	0.200	0	102	75	125			

Sample ID: **2305376-04A MS** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 11:13:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.205	0.00250	0.200	0	102	75	125			
Arsenic	0.202	0.00500	0.200	0	101	75	125			
Barium	0.284	0.0100	0.200	0.0768	104	75	125			
Beryllium	0.201	0.00100	0.200	0	100	75	125			
Cadmium	0.197	0.00100	0.200	0	98.7	75	125			
Chromium	0.202	0.00500	0.200	0.00322	99.2	75	125			
Cobalt	0.199	0.00500	0.200	0	99.3	75	125			
Lead	0.202	0.00100	0.200	0	101	75	125			
Lithium	0.230	0.0100	0.200	0.0283	101	75	125			
Molybdenum	0.201	0.00500	0.200	0	100	75	125			
Selenium	0.221	0.00500	0.200	0.0253	97.6	75	125			
Thallium	0.203	0.00150	0.200	0	101	75	125			

Sample ID: **2305376-04A MSD** Batch ID: **110437** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 11:16:00 AM** Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.202	0.00250	0.200	0	101	75	125	1.22	15	
Arsenic	0.201	0.00500	0.200	0	101	75	125	0.455	15	
Barium	0.282	0.0100	0.200	0.0768	102	75	125	0.932	15	
Beryllium	0.199	0.00100	0.200	0	99.4	75	125	0.898	15	
Cadmium	0.195	0.00100	0.200	0	97.5	75	125	1.26	15	
Chromium	0.200	0.00500	0.200	0.00322	98.6	75	125	0.594	15	
Cobalt	0.198	0.00500	0.200	0	98.8	75	125	0.554	15	
Lead	0.201	0.00100	0.200	0	101	75	125	0.033	15	
Lithium	0.229	0.0100	0.200	0.0283	100	75	125	0.724	15	
Molybdenum	0.200	0.00500	0.200	0	99.9	75	125	0.536	15	
Selenium	0.218	0.00500	0.200	0.0253	96.6	75	125	0.927	15	
Thallium	0.204	0.00150	0.200	0	102	75	125	0.433	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230602A

Sample ID: **2305376-04A SD**	Batch ID: **110437**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 12:13:00 PM**	Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	176	15.0	0	176				0.137	20	

Sample ID: **2305376-04A PDS**	Batch ID: **110437**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 12:39:00 PM**	Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	226	3.00	50.0	176	99.8	75	125			

Sample ID: **2305376-04A MS**	Batch ID: **110437**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 12:41:00 PM**	Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	181	3.00	5.00	176	105	75	125			

Sample ID: **2305376-04A MSD**	Batch ID: **110437**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 12:44:00 PM**	Prep Date: **6/1/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	178	3.00	5.00	176	41.9	75	125	1.76	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230602A

Sample ID: **ICV-230602** Batch ID: **R127158** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 10:18:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0989	0.00250	0.100	0	98.9	90	110			
Arsenic	0.0985	0.00500	0.100	0	98.5	90	110			
Barium	0.0979	0.0100	0.100	0	97.9	90	110			
Beryllium	0.0978	0.00100	0.100	0	97.8	90	110			
Cadmium	0.0987	0.00100	0.100	0	98.7	90	110			
Calcium	2.48	0.300	2.50	0	99.4	90	110			
Chromium	0.100	0.00500	0.100	0	100	90	110			
Cobalt	0.101	0.00500	0.100	0	101	90	110			
Lead	0.0966	0.00100	0.100	0	96.6	90	110			
Lithium	0.0996	0.0100	0.100	0	99.6	90	110			
Molybdenum	0.0942	0.00500	0.100	0	94.2	90	110			
Selenium	0.0994	0.00500	0.100	0	99.4	90	110			
Thallium	0.0964	0.00150	0.100	0	96.4	90	110			

Sample ID: **LCVL-230602** Batch ID: **R127158** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 10:24:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00196	0.00250	0.00200	0	98.1	80	120			
Arsenic	0.00498	0.00500	0.00500	0	99.6	80	120			
Barium	0.00483	0.0100	0.00500	0	96.5	80	120			
Beryllium	0.00100	0.00100	0.00100	0	100	80	120			
Cadmium	0.00100	0.00100	0.00100	0	100	80	120			
Calcium	0.0841	0.300	0.100	0	84.1	80	120			
Chromium	0.00496	0.00500	0.00500	0	99.3	80	120			
Cobalt	0.00504	0.00500	0.00500	0	101	80	120			
Lead	0.000983	0.00100	0.00100	0	98.3	80	120			
Lithium	0.0100	0.0100	0.0100	0	100	80	120			
Molybdenum	0.00491	0.00500	0.00500	0	98.3	80	120			
Selenium	0.00528	0.00500	0.00500	0	106	80	120			
Thallium	0.000974	0.00150	0.00100	0	97.4	80	120			

Sample ID: **CCV1-230602** Batch ID: **R127158** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230602A** Analysis Date: **6/2/2023 11:27:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.194	0.00250	0.200	0	97.1	90	110			
Arsenic	0.198	0.00500	0.200	0	99.2	90	110			
Barium	0.198	0.0100	0.200	0	98.9	90	110			
Beryllium	0.195	0.00100	0.200	0	97.5	90	110			
Cadmium	0.196	0.00100	0.200	0	98.1	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230602A

Sample ID: **CCV1-230602**	Batch ID: **R127158**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 11:27:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.75	0.300	5.00	0	95.0	90	110			
Chromium	0.197	0.00500	0.200	0	98.5	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			
Lead	0.195	0.00100	0.200	0	97.6	90	110			
Lithium	0.198	0.0100	0.200	0	98.9	90	110			
Molybdenum	0.191	0.00500	0.200	0	95.4	90	110			
Selenium	0.203	0.00500	0.200	0	101	90	110			
Thallium	0.196	0.00150	0.200	0	97.9	90	110			

Sample ID: **CCV2-230602**	Batch ID: **R127158**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 12:02:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.72	0.300	5.00	0	94.5	90	110			

Sample ID: **CCV3-230602**	Batch ID: **R127158**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230602A**	Analysis Date: **6/2/2023 12:46:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.88	0.300	5.00	0	97.6	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: 2305376
Project: Luminant-OGSES FGD 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	

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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230602B

The QC data in batch 110459 applies to the following samples: 2305376-04B, 2305376-08B

Sample ID: **MB-110459**	Batch ID: **110459**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC2_230602B**	Analysis Date: **6/2/2023 11:33:13 AM**	Prep Date: **6/2/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: **LCS-110459**	Batch ID: **110459**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC2_230602B**	Analysis Date: **6/2/2023 11:50:13 AM**	Prep Date: **6/2/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.73	1.00	10.00	0	97.3	90	110			

Sample ID: **LCSD-110459**	Batch ID: **110459**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC2_230602B**	Analysis Date: **6/2/2023 12:07:13 PM**	Prep Date: **6/2/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.66	1.00	10.00	0	96.6	90	110	0.733	20	

Sample ID: **2305403-15BMS**	Batch ID: **110459**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_230602B**	Analysis Date: **6/2/2023 6:18:41 PM**	Prep Date: **6/2/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	43800	1000	20000	26740	85.1	90	110			S

Sample ID: **2305403-15BMSD**	Batch ID: **110459**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_230602B**	Analysis Date: **6/2/2023 6:35:41 PM**	Prep Date: **6/2/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	43800	1000	20000	26740	85.2	90	110	0.047	20	S

Sample ID: **2305380-02BMS**	Batch ID: **110459**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_230602B**	Analysis Date: **6/3/2023 12:49:41 AM**	Prep Date: **6/2/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	244	10.0	200.0	48.67	97.4	90	110			

Sample ID: **2305380-02BMSD**	Batch ID: **110459**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_230602B**	Analysis Date: **6/3/2023 1:06:41 AM**	Prep Date: **6/2/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	244	10.0	200.0	48.67	97.7	90	110	0.229	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_230602B

Sample ID: **ICV-230602**	Batch ID: **R127176**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_230602B**	Analysis Date: **6/2/2023 10:59:13 AM**	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			

Sample ID: **CCV1-230602**	Batch ID: **R127176**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230602B**	Analysis Date: **6/2/2023 9:42:41 PM**	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			

Sample ID: **CCV2-230602**	Batch ID: **R127176**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_230602B**	Analysis Date: **6/3/2023 2:14:41 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.78	1.00	10.00	0	97.8	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230519A

Sample ID: **DCS3-110237** Batch ID: **110237** TestNo: **E300** Units: **mg/L**
SampType: **DCS3** Run ID: **IC4_230519A** Analysis Date: **5/19/2023 4:06:25 PM** Prep Date: **5/19/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.899	1.00	1.000	0	89.9	70	130	0	0	
Fluoride	0.432	0.400	0.4000	0	108	70	130	0	0	
Sulfate	2.76	3.00	3.000	0	92.1	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230530B

The QC data in batch 110408 applies to the following samples: 2305376-01B, 2305376-02B, 2305376-03B, 2305376-04B, 2305376-05B, 2305376-06B, 2305376-07B, 2305376-08B, 2305376-09B, 2305376-10B

Sample ID: **MB-110408** Batch ID: **110408** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC4_230530B** Analysis Date: **5/30/2023 11:26:01 AM** Prep Date: **5/30/2023**

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-110408** Batch ID: **110408** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC4_230530B** Analysis Date: **5/30/2023 11:45:01 AM** Prep Date: **5/30/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.44	1.00	10.00	0	94.4	90	110			
Fluoride	3.86	0.400	4.000	0	96.6	90	110			
Sulfate	30.8	3.00	30.00	0	103	90	110			

Sample ID: **LCSD-110408** Batch ID: **110408** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC4_230530B** Analysis Date: **5/30/2023 12:04:01 PM** Prep Date: **5/30/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.45	1.00	10.00	0	94.5	90	110	0.159	20	
Fluoride	3.88	0.400	4.000	0	97.0	90	110	0.358	20	
Sulfate	30.8	3.00	30.00	0	103	90	110	0.038	20	

Sample ID: **2305376-04BMS** Batch ID: **110408** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_230530B** Analysis Date: **5/30/2023 6:49:31 PM** Prep Date: **5/30/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	801	10.0	200.0	736.5	32.1	90	110			S
Fluoride	206	4.00	200.0	0	103	90	110			
Sulfate	601	30.0	200.0	408.7	96.0	90	110			

Sample ID: **2305376-04BMSD** Batch ID: **110408** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_230530B** Analysis Date: **5/30/2023 7:08:31 PM** Prep Date: **5/30/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	801	10.0	200.0	736.5	32.4	90	110	0.069	20	S
Fluoride	207	4.00	200.0	0	104	90	110	0.762	20	
Sulfate	602	30.0	200.0	408.7	96.6	90	110	0.217	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230530B

Sample ID: **2305376-10BMS**	Batch ID: **110408**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC4_230530B**	Analysis Date: **5/30/2023 10:37:30 PM**	Prep Date: **5/30/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	210	10.0	200.0	13.22	98.6	90	110			
Fluoride	209	4.00	200.0	0	104	90	110			
Sulfate	224	30.0	200.0	15.33	104	90	110			

Sample ID: **2305376-10BMSD**	Batch ID: **110408**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC4_230530B**	Analysis Date: **5/30/2023 10:56:30 PM**	Prep Date: **5/30/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	211	10.0	200.0	13.22	98.9	90	110	0.291	20	
Fluoride	210	4.00	200.0	0	105	90	110	0.674	20	
Sulfate	225	30.0	200.0	15.33	105	90	110	0.337	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230530B

Sample ID: **ICV-230530**	Batch ID: **R127095**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC4_230530B**	Analysis Date: **5/30/2023 10:48:01 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.8	90	110			
Fluoride	9.94	0.400	10.00	0	99.4	90	110			
Sulfate	78.7	3.00	75.00	0	105	90	110			

Sample ID: **CCV1-230530**	Batch ID: **R127095**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230530B**	Analysis Date: **5/30/2023 9:02:30 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.35	1.00	10.00	0	93.5	90	110			
Fluoride	3.89	0.400	4.000	0	97.1	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID: **CCV2-230530**	Batch ID: **R127095**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230530B**	Analysis Date: **5/31/2023 2:06:30 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.35	1.00	10.00	0	93.5	90	110			
Fluoride	3.90	0.400	4.000	0	97.6	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID: **CCV3-230530**	Batch ID: **R127095**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230530B**	Analysis Date: **5/31/2023 6:32:30 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.39	1.00	10.00	0	93.9	90	110			
Fluoride	3.93	0.400	4.000	0	98.3	90	110			
Sulfate	30.7	3.00	30.00	0	102	90	110			

Sample ID: **CCV4-230530**	Batch ID: **R127095**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230530B**	Analysis Date: **5/31/2023 10:58:30 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	3.99	0.400	4.000	0	99.7	90	110			
Sulfate	30.7	3.00	30.00	0	102	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_230530C

The QC data in batch 110410 applies to the following samples: 2305376-01B, 2305376-02B, 2305376-03B

Sample ID: **MB-110410**	Batch ID: **110410**		TestNo: **M2540C**				Units: **mg/L**				
SampType: **MBLK**	Run ID: **WC_230530C**		Analysis Date: **5/30/2023 4:15:00 PM**				Prep Date: **5/30/2023**				
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-110410**	Batch ID: **110410**		TestNo: **M2540C**				Units: **mg/L**				
SampType: **LCS**	Run ID: **WC_230530C**		Analysis Date: **5/30/2023 4:15:00 PM**				Prep Date: **5/30/2023**				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Dissolved Solids (Residue, Filtera	744	10.0	745.6	0	99.8	90	113				

Sample ID: **2305376-01B-DUP**	Batch ID: **110410**		TestNo: **M2540C**				Units: **mg/L**				
SampType: **DUP**	Run ID: **WC_230530C**		Analysis Date: **5/30/2023 4:15:00 PM**				Prep Date: **5/30/2023**				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Dissolved Solids (Residue, Filtera	900	50.0	0	915.0				1.65	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: 2305376
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_230531A

The QC data in batch 110435 applies to the following samples: 2305376-04B, 2305376-05B, 2305376-06B, 2305376-07B, 2305376-08B, 2305376-09B, 2305376-10B

Sample ID: **MB-110435** Batch ID: **110435** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_230531A** Analysis Date: **5/31/2023 5:10:00 PM** Prep Date: **5/31/2023**

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-110435** Batch ID: **110435** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_230531A** Analysis Date: **5/31/2023 5:10:00 PM** Prep Date: **5/31/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	740	10.0	745.6	0	99.2	90	113			

Sample ID: **2305376-04B-DUP** Batch ID: **110435** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230531A** Analysis Date: **5/31/2023 5:10:00 PM** Prep Date: **5/31/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2080	50.0	0	2080				0.241	5	

Sample ID: **2305376-08B-DUP** Batch ID: **110435** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230531A** Analysis Date: **5/31/2023 5:10:00 PM** Prep Date: **5/31/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4190	50.0	0	4350				3.87	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: 2305376
Project: Luminant-OGSES FGD 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

July 10, 2023

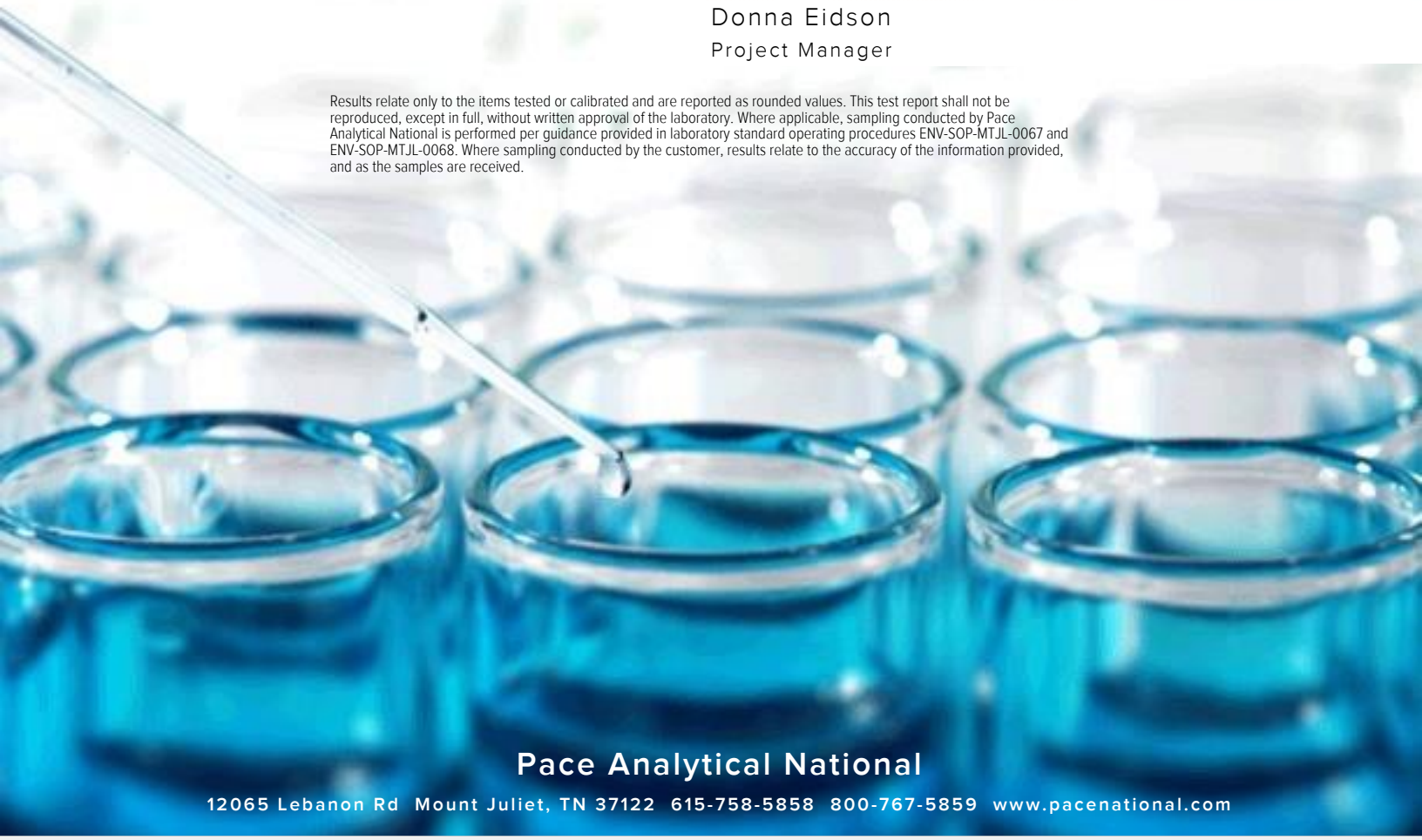
DHL Analytical, Inc.

Sample Delivery Group:	L1621984
Samples Received:	06/01/2023
Project Number:	2305376
Description:	

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

Entire Report Reviewed By:

Donna Eidson
Project Manager



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FGD-6 L1621984-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/25/23 16:45	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:27	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:27	RGT	Mt. Juliet, TN

FGD-4 L1621984-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/25/23 17:45	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:27	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:27	RGT	Mt. Juliet, TN

FGD-3 L1621984-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/25/23 18:35	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:27	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:27	RGT	Mt. Juliet, TN

FGD-2 L1621984-04 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/25/23 19:55	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	RGT	Mt. Juliet, TN

FGD-5 L1621984-05 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/26/23 07:55	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	RGT	Mt. Juliet, TN

FGD-1 L1621984-06 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/26/23 08:50	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	RGT	Mt. Juliet, TN

DUP-1 L1621984-07 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/26/23 09:50	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2083601	1	06/23/23 19:00	06/27/23 21:48	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	RGT	Mt. Juliet, TN

FGD-8 L1621984-08 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/26/23 09:50	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2083601	1	06/23/23 19:00	06/27/23 21:48	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	RGT	Mt. Juliet, TN

FGD-11 L1621984-09 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/26/23 12:20	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2083601	1	06/23/23 19:00	06/27/23 21:48	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	RGT	Mt. Juliet, TN

FGD-12 L1621984-10 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/26/23 15:10	06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2083601	1	06/23/23 19:00	06/27/23 21:48	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	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	1.52		0.304	0.505	06/27/2023 17:08	WG2081814
(T) Barium	*106*			*30.0-143*	*06/27/2023 17:08*	WG2081814
(T) Yttrium	*84.1*			*30.0-136*	*06/27/2023 17:08*	WG2081814

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.64		0.337	0.539	07/03/2023 17:27	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.128	J	0.146	0.188	07/03/2023 17:27	WG2086740
(T) Barium-133	*80.7*			*30.0-143*	*07/03/2023 17:27*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.38		0.221	0.356	06/27/2023 17:08	WG2081814
(T) Barium	*109*			*30.0-143*	*06/27/2023 17:08*	WG2081814
(T) Yttrium	*102*			*30.0-136*	*06/27/2023 17:08*	WG2081814

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.61		0.324	0.467	07/03/2023 17:27	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.233	J	0.237	0.302	07/03/2023 17:27	WG2086740
(T) Barium-133	*77.4*			*30.0-143*	*07/03/2023 17:27*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.955		0.277	0.476	06/27/2023 17:08	WG2081814
(T) Barium	*105*			*30.0-143*	*06/27/2023 17:08*	WG2081814
(T) Yttrium	*109*			*30.0-136*	*06/27/2023 17:08*	WG2081814

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.80		0.464	0.546	07/03/2023 17:27	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.841		0.372	0.268	07/03/2023 17:27	WG2086740
(T) Barium-133	*86.8*			*30.0-143*	*07/03/2023 17:27*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.30		0.366	0.626	06/27/2023 17:08	WG2081814
(T) Barium	*106*			*30.0-143*	*06/27/2023 17:08*	WG2081814
(T) Yttrium	*112*			*30.0-136*	*06/27/2023 17:08*	WG2081814

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.92		0.518	0.724	07/03/2023 17:19	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.620		0.367	0.364	07/03/2023 17:19	WG2086740
(T) Barium-133	*89.2*			*30.0-143*	*07/03/2023 17:19*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.773		0.250	0.430	06/27/2023 17:08	WG2081814
(T) Barium	*98.2*			*30.0-143*	*06/27/2023 17:08*	WG2081814
(T) Yttrium	*88.4*			*30.0-136*	*06/27/2023 17:08*	WG2081814

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.34		0.429	0.519	07/03/2023 17:19	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.571		0.349	0.290	07/03/2023 17:19	WG2086740
(T) Barium-133	*74.8*			*30.0-143*	*07/03/2023 17:19*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.241	J	0.276	0.495	06/27/2023 17:08	WG2081814
(T) Barium	*115*			*30.0-143*	*06/27/2023 17:08*	WG2081814
(T) Yttrium	*195*	C1		*30.0-136*	*06/27/2023 17:08*	WG2081814

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.577		0.379	0.567	07/03/2023 17:19	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.336		0.260	0.277	07/03/2023 17:19	WG2086740
(T) Barium-133	*90.2*			*30.0-143*	*07/03/2023 17:19*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.975		0.397	0.693	06/27/2023 21:48	WG2083601
(T) Barium	*120*			*30.0-143*	*06/27/2023 21:48*	WG2083601
(T) Yttrium	*98.7*			*30.0-136*	*06/27/2023 21:48*	WG2083601

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.18		0.490	0.810	07/03/2023 17:19	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.207	J	0.287	0.419	07/03/2023 17:19	WG2086740
(T) Barium-133	*66.1*			*30.0-143*	*07/03/2023 17:19*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	5.91		0.404	0.591	06/27/2023 21:48	WG2083601
(T) Barium	*93.5*			*30.0-143*	*06/27/2023 21:48*	WG2083601
(T) Yttrium	*113*			*30.0-136*	*06/27/2023 21:48*	WG2083601

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	8.24		0.721	0.667	07/03/2023 17:19	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	2.33		0.597	0.310	07/03/2023 17:19	WG2086740
(T) Barium-133	*101*			*30.0-143*	*07/03/2023 17:19*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.42		0.336	0.571	06/27/2023 21:48	WG2083601
(T) Barium	*107*			*30.0-143*	*06/27/2023 21:48*	WG2083601
(T) Yttrium	*116*			*30.0-136*	*06/27/2023 21:48*	WG2083601

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	3.74		0.652	0.642	07/03/2023 17:19	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	2.32		0.559	0.294	07/03/2023 17:19	WG2086740
(T) Barium-133	*102*			*30.0-143*	*07/03/2023 17:19*	WG2086740

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	3.40		0.459	0.741	06/27/2023 21:48	WG2083601
(T) Barium	*105*			*30.0-143*	*06/27/2023 21:48*	WG2083601
(T) Yttrium	*101*			*30.0-136*	*06/27/2023 21:48*	WG2083601

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	5.83		0.697	0.760	07/03/2023 17:19	WG2086740

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	2.43		0.524	0.168	07/03/2023 17:19	WG2086740
(T) Barium-133	*100*			*30.0-143*	*07/03/2023 17:19*	WG2086740

QUALITY CONTROL SUMMARY

L1621984-01,02,03,04,05,06

Method Blank (MB)

(MB) R3945894-1 06/27/23 17:08

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	0.218	J	0.157	0.282
(T) Barium	*106*		*106*	
(T) Yttrium	*106*		*106*	

L1621984-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621984-01 06/27/23 17:08 • (DUP) R3945894-5 06/27/23 17:08

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-228	1.52	0.304	0.505	2.56	0.403	0.505	1	51.4	2.07		20	3
(T) Barium	*106*			*98.9*	*98.9*							
(T) Yttrium	*84.1*			*98.2*	*98.2*							

Laboratory Control Sample (LCS)

(LCS) R3945894-2 06/27/23 17:08

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	5.53	111	80.0-120	
(T) Barium			*102*		
(T) Yttrium			*107*		

L1621971-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621971-01 06/27/23 17:08 • (MS) R3945894-3 06/27/23 17:08 • (MSD) R3945894-4 06/27/23 17:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	16.7	0.363	20.7	19.3	122	113	1	70.0-130			7.10		20
(T) Barium		*110*			*109*	*104*							
(T) Yttrium		*101*			*113*	*112*							

Method Blank (MB)

(MB) R3945973-1 06/27/23 21:48

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.308		0.168	0.298
(T) Barium	*115*		*115*	
(T) Yttrium	*93.3*		*93.3*	

L1623271-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1623271-01 06/27/23 21:48 • (DUP) R3945973-5 06/27/23 21:48

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	1.22	0.326	0.553	1.48	0.389	0.553	1	19.4	0.516		20	3
(T) Barium	*122*			*115*	*115*							
(T) Yttrium	*119*			*95.7*	*95.7*							

Laboratory Control Sample (LCS)

(LCS) R3945973-2 06/27/23 21:48

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.98	99.6	80.0-120	
(T) Barium			*126*		
(T) Yttrium			*118*		

L1621984-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621984-07 06/27/23 21:48 • (MS) R3945973-3 06/27/23 21:48 • (MSD) R3945973-4 06/27/23 21:48

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.975	9.17	9.00	81.9	80.2	1	70.0-130			1.85		20
(T) Barium		*120*			*112*	*117*							
(T) Yttrium		*98.7*			*105*	*101*							

Method Blank (MB)

(MB) R3945005-1 07/03/23 17:19

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0510	J	0.0632	0.0887
(T) Barium-133	*78.5*		*78.5*	

L1621982-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1621982-03 07/03/23 17:27 • (DUP) R3945005-5 07/03/23 17:19

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-226	0.872	0.374	0.213	0.0461	0.258	0.213	1	180	1.82	U	20	3
(T) Barium-133	*77.0*			*61.5*	*61.5*							

Laboratory Control Sample (LCS)

(LCS) R3945005-2 07/03/23 17:19

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.82	96.2	80.0-120	
(T) Barium-133			*76.1*		

L1621984-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621984-04 07/03/23 17:19 • (MS) R3945005-3 07/03/23 17:19 • (MSD) R3945005-4 07/03/23 17:19

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.620	17.7	19.5	85.2	94.4	1	75.0-125			9.96		20
(T) Barium-133		*89.2*			*62.7*	*48.7*							

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
C1	Tracer recovery limits have been exceeded; values are outside upper control limits.
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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

J154

Work Order: 2305376

L1621984

PH-10BDH4321 TRC-2144141
CR6-220221V

Subcontractor:
Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

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

∠2

30-May-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests Ra-228 E904.0	Ra-226 M7500 Ra B M					
FGD-6	Aqueous	01C	05/25/23 04:45 PM	1LHDPEHNO3		1					]-01
FGD-6	Aqueous	01D	05/25/23 04:45 PM	1LHDPEHNO3	1						
FGD-4	Aqueous	02C	05/25/23 05:45 PM	1LHDPEHNO3		1					]-02
FGD-4	Aqueous	02D	05/25/23 05:45 PM	1LHDPEHNO3	1						
FGD-3	Aqueous	03C	05/25/23 06:35 PM	1LHDPEHNO3		1					]-03
FGD-3	Aqueous	03D	05/25/23 06:35 PM	1LHDPEHNO3	1						
FGD-2	Aqueous	04C	05/26/23 07:55 AM	1LHDPEHNO3		1					]04
FGD-2	Aqueous	04D	05/26/23 07:55 AM	1LHDPEHNO3	1						
FGD-5	Aqueous	05C	05/26/23 08:50 AM	1LHDPEHNO3		1					]-05
FGD-5	Aqueous	05D	05/26/23 08:50 AM	1LHDPEHNO3	1						
FGD-1	Aqueous	06C	05/26/23 09:50 AM	1LHDPEHNO3		1					]-06
FGD-1	Aqueous	06D	05/26/23 09:50 AM	1LHDPEHNO3	1						
DUP-1	Aqueous	07C	05/26/23 09:50 AM	1LHDPEHNO3		1					]-07
DUP-1	Aqueous	07D	05/26/23 09:50 AM	1LHDPEHNO3	1						
FGD-8	Aqueous	08C	05/26/23 12:20 PM	1LHDPEHNO3		1					]-08
FGD-8	Aqueous	08D	05/26/23 12:20 PM	1LHDPEHNO3	1						
FGD-11	Aqueous	09C	05/26/23 02:05 PM	1LHDPEHNO3		1					-09

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	AMB	
Sufficient volume sent:	__Y__N		
RAD Screen <0.5 mR/hr:	✓Y__N	1Z970R400302447129	

		Date/Time			Date/Time
Relinquished by:	E	5/30/23 1800	Received by:		
Relinquished by:			Received by:		6/1/23 1130

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

CHAIN-OF-CUSTODY RECORD

Work Order: 2305376

LL621984

Subcontractor:
Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

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

30-May-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228	Ra-226				
					E904.0	M7500 Ra B M				
FGD-11	Aqueous	09D	05/26/23 02:05 PM	1LHDPEHNO3	1					
FGD-12	Aqueous	10C	05/26/23 03:10 PM	1LHDPEHNO3		1				
FGD-12	Aqueous	10D	05/26/23 03:10 PM	1LHDPEHNO3	1					

09
10

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

		Date/Time		Date/Time
Relinquished by:	[signature]	5/30/23 1800	Received by:	
Relinquished by:			Received by:	[signature] 6/1/23 1130

October 06, 2023

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

Order No.: 2308306

RE: Luminant-OGSES FGD Ponds CCR

Dear Jacob Jarvis:

DHL Analytical, Inc. received 10 sample(s) on 8/23/2023 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

PAGE 1 OF 1

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

DATE: 8-22-23
PO#: 31404097.017

LAB USE ONLY
DHL WORKORDER #: 2308306

PROJECT LOCATION OR NAME: LUMINANT- OGSES FGD PONDS CCR
CLIENT PROJECT # 31404097.017 COLLECTOR: JOHN BRAYBOY

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	APPENDIX III	APPENDIX IV	FIELD NOTES
FGD-6	01	8-21-23	0810	W	P	4			X				X			X	X	
FGD-4	02		0905	W	P	4			X				X			X	X	
FGD-3	03		1000	W	P	4			X				X			X	X	
FGD-2	04		1050	W	P	4			X				X			X	X	
FGD-5	05		1150	W	P	4			X				X			X	X	
FGD-11	06		1310	W	P	4			X				X			X	X	
FGD-12	07	↓	1415	W	P	4			X				X			X	X	
FGD-8	08	8-22-23	0915	W	P	4			X				X			X	X	
FGD-1	09		1025	W	P	4			X				X			X	X	
DUP-1	10	↓	1025	W	P	4			X				X			X	X	

Relinquished By: (Sign) — DATE/TIME: 8-22-23 1900 — Received by: Fed Ex
Relinquished By: (Sign) Fed Ex — DATE/TIME: 8/23/23 0910 — 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
RECEIVING TEMP (°C): 4.6 / 27.9 ← cooler — **THERMO #:** 78 Rad chem only
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
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau
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:ELKA (512) 388-8222
JOHN BRAYTON
3102 OAK LAWN AVE
DALLAS, TX 75219
UNITED STATES US

SHIP DATE: 22AUG23
ACTWGT: 58.40 LB
CAD: 6994696/SSFE2422
DIMS: 22x13x13 IN
BILL THIRD PARTY

TO
DHL
2300 DOUBLE CREEK DR

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

FedEx Express

1 of 3
TRK# 0201 7828 3735 2747
MASTER
A8 BSMA

WED - 23 AUG 10:30A
PRIORITY OVERNIGHT

78664
TX-US AUS

CUSTODY SEAL
DATE 8-22-23
SIGNATURE

DHL ANALYTICAL

ORIGIN ID:ELKA (512) 388-8222
JOHN BRAYTON

3102 OAK LAWN AVE

DALLAS, TX 75219
UNITED STATES US

SHIP DATE: 22AUG23
ACTWGT: 40.90 LB
CAD: 6994696/SSFE2422
DIMS: 24x13x14 IN

BILL THIRD PARTY

TO

DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222 REF:
INV:
PO: DEPT:

FedEx Express

3 of 3

MPS# 0263 7828 3735 2769

Mstr# 7828 3735 2747 0201

WED - 23 AUG 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US **AUS**

CUSTODY SEAL

DATE 8-22-23

SIGNATURE

DHL ANALYTICAL

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **WSP-Golder**

Date Received: **8/23/2023**

Work Order Number: **2308306**

Received by: **EL**

Checklist completed by: _____ 8/23/2023 (Signature / Date)

Reviewed by: SH 8/23/2023 (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 # 13171
	Adjusted? N		Checked by GK
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	4.6	27.9
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-OGSES FGD Ponds CCR	**LRC Date:** 10/6/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2308306
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-OGSES FGD Ponds CCR	**LRC Date:** 10/6/23
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2308306
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

10/06/23
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *06-Oct-23*

CLIENT: WSP-Golder
Project: Luminant-OGSES FGD Ponds CCR
Lab Order: 2308306

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 8/23/23. A total of 10 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions analysis performed on 8/23/23 the matrix spike and matrix spike duplicate recoveries (2308306-08 MS/MSD) were below control limits for Chloride. 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 was 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 8/30/23 the RPD for the serial dilution was slightly above control limits for Boron. This is flagged accordingly in the QC summary report. The PDS was within control limits for this analyte. No further corrective actions were taken.

DHL Analytical, Inc.

Date: *06-Oct-23*

CLIENT: WSP-Golder
Project: Luminant-OGSES FGD Ponds CCR
Lab Order: 2308306

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2308306-01	FGD-6		08/21/23 08:10 AM	08/23/2023
2308306-02	FGD-4		08/21/23 09:05 AM	08/23/2023
2308306-03	FGD-3		08/21/23 10:00 AM	08/23/2023
2308306-04	FGD-2		08/21/23 10:50 AM	08/23/2023
2308306-05	FGD-5		08/21/23 11:50 AM	08/23/2023
2308306-06	FGD-11		08/21/23 01:10 PM	08/23/2023
2308306-07	FGD-12		08/21/23 02:15 PM	08/23/2023
2308306-08	FGD-8		08/22/23 09:15 AM	08/23/2023
2308306-09	FGD-1		08/22/23 10:25 AM	08/23/2023
2308306-10	DUP-1		08/22/23 10:25 AM	08/23/2023

Lab Order: 2308306
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308306-01A	FGD-6	08/21/23 08:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-6	08/21/23 08:10 AM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-01B	FGD-6	08/21/23 08:10 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-6	08/21/23 08:10 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-6	08/21/23 08:10 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-02A	FGD-4	08/21/23 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-4	08/21/23 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-4	08/21/23 09:05 AM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-02B	FGD-4	08/21/23 09:05 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-4	08/21/23 09:05 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-4	08/21/23 09:05 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-03A	FGD-3	08/21/23 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-3	08/21/23 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-3	08/21/23 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-03B	FGD-3	08/21/23 10:00 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-3	08/21/23 10:00 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-3	08/21/23 10:00 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-04A	FGD-2	08/21/23 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-2	08/21/23 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-2	08/21/23 10:50 AM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-04B	FGD-2	08/21/23 10:50 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-2	08/21/23 10:50 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-2	08/21/23 10:50 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-2	08/21/23 10:50 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-05A	FGD-5	08/21/23 11:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-5	08/21/23 11:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-5	08/21/23 11:50 AM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-05B	FGD-5	08/21/23 11:50 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843

Lab Order: 2308306
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308306-05B	FGD-5	08/21/23 11:50 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-5	08/21/23 11:50 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-06A	FGD-11	08/21/23 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-11	08/21/23 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-11	08/21/23 01:10 PM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-06B	FGD-11	08/21/23 01:10 PM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-11	08/21/23 01:10 PM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-11	08/21/23 01:10 PM	Aqueous	E300	Anion Preparation	08/25/23 09:30 AM	111900
	FGD-11	08/21/23 01:10 PM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-07A	FGD-12	08/21/23 02:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-12	08/21/23 02:15 PM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-07B	FGD-12	08/21/23 02:15 PM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-12	08/21/23 02:15 PM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-08A	FGD-8	08/22/23 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-8	08/22/23 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-8	08/22/23 09:15 AM	Aqueous	SW7470A	Mercury Aq Prep	08/24/23 08:09 AM	111854
2308306-08B	FGD-8	08/22/23 09:15 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-8	08/22/23 09:15 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-8	08/22/23 09:15 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-8	08/22/23 09:15 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-09A	FGD-1	08/22/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-1	08/22/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	FGD-1	08/22/23 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep	08/25/23 08:26 AM	111881
2308306-09B	FGD-1	08/22/23 10:25 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-1	08/22/23 10:25 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	FGD-1	08/22/23 10:25 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896
2308306-10A	DUP-1	08/22/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	DUP-1	08/22/23 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep	08/25/23 08:26 AM	111881

Lab Order: 2308306
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308306-10B	DUP-1	08/22/23 10:25 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	DUP-1	08/22/23 10:25 AM	Aqueous	E300	Anion Preparation	08/23/23 01:19 PM	111843
	DUP-1	08/22/23 10:25 AM	Aqueous	M2540C	TDS Preparation	08/25/23 02:12 PM	111896

Lab Order: 2308306
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308306-01A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:36 PM	CETAC2_HG_230824B
	FGD-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:40 AM	ICP-MS5_230830B
2308306-01B	FGD-6	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 01:53 AM	IC4_230823B
	FGD-6	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 07:35 AM	IC4_230823B
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-02A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:39 PM	CETAC2_HG_230824B
	FGD-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:43 AM	ICP-MS5_230830B
	FGD-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	5	08/30/23 02:03 PM	ICP-MS5_230830B
2308306-02B	FGD-4	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 02:12 AM	IC4_230823B
	FGD-4	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 07:54 AM	IC4_230823B
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-03A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:41 PM	CETAC2_HG_230824B
	FGD-3	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	5	08/30/23 02:06 PM	ICP-MS5_230830B
	FGD-3	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:45 AM	ICP-MS5_230830B
2308306-03B	FGD-3	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 02:31 AM	IC4_230823B
	FGD-3	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 08:13 AM	IC4_230823B
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-04A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:43 PM	CETAC2_HG_230824B
	FGD-2	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:48 AM	ICP-MS5_230830B
	FGD-2	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	20	08/30/23 02:08 PM	ICP-MS5_230830B
2308306-04B	FGD-2	Aqueous	E300	Anions by IC method - Water	111843	100	08/23/23 09:46 PM	IC4_230823B
	FGD-2	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 02:50 AM	IC4_230823B
	FGD-2	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 08:32 AM	IC4_230823B
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-05A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:45 PM	CETAC2_HG_230824B
	FGD-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:50 AM	ICP-MS5_230830B

Lab Order: 2308306
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308306-05A	FGD-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:11 PM	ICP-MS5_230830B
2308306-05B	FGD-5	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 08:51 AM	IC4_230823B
	FGD-5	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 03:09 AM	IC4_230823B
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-06A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:48 PM	CETAC2_HG_230824B
	FGD-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:53 AM	ICP-MS5_230830B
	FGD-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:13 PM	ICP-MS5_230830B
2308306-06B	FGD-11	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 03:28 AM	IC4_230823B
	FGD-11	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 10:26 AM	IC4_230823B
	FGD-11	Aqueous	E300	Anions by IC method - Water	111900	100	08/25/23 03:58 PM	IC4_230825A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-07A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:50 PM	CETAC2_HG_230824B
	FGD-12	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:35 AM	ICP-MS5_230830B
2308306-07B	FGD-12	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 10:45 AM	IC4_230823B
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-08A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	111854	1	08/24/23 01:52 PM	CETAC2_HG_230824B
	FGD-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	50	08/30/23 02:16 PM	ICP-MS5_230830B
	FGD-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:55 AM	ICP-MS5_230830B
2308306-08B	FGD-8	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 11:04 AM	IC4_230823B
	FGD-8	Aqueous	E300	Anions by IC method - Water	111843	100	08/23/23 10:43 PM	IC4_230823B
	FGD-8	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 03:47 AM	IC4_230823B
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-09A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	111881	1	08/25/23 12:51 PM	CETAC2_HG_230825B
	FGD-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 11:58 AM	ICP-MS5_230830B
	FGD-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	5	08/30/23 02:19 PM	ICP-MS5_230830B
2308306-09B	FGD-1	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 04:06 AM	IC4_230823B

Lab Order: 2308306
Client: WSP-Golder
Project: Luminant-OGSES FGD Ponds CC

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308306-09B	FGD-1	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 11:23 AM	IC4_230823B
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A
2308306-10A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	111881	1	08/25/23 12:53 PM	CETAC2_HG_230825B
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:01 PM	ICP-MS5_230830B
2308306-10B	DUP-1	Aqueous	E300	Anions by IC method - Water	111843	10	08/24/23 04:25 AM	IC4_230823B
	DUP-1	Aqueous	E300	Anions by IC method - Water	111843	1	08/24/23 11:42 AM	IC4_230823B
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	111896	1	08/25/23 05:10 PM	WC_230825A

DHL Analytical, Inc.

Date: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-6
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-01
Project No:	31404097.017	**Collection Date:**	08/21/23 08:10 AM
Lab Order:	2308306	**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	08/30/23 11:40 AM
Arsenic	0.00807	0.00200	0.00500		mg/L	1	08/30/23 11:40 AM
Barium	0.0727	0.00300	0.0100		mg/L	1	08/30/23 11:40 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:40 AM
Boron	0.0953	0.0100	0.0300		mg/L	1	08/30/23 11:40 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:40 AM
Calcium	24.3	0.100	0.300		mg/L	1	08/30/23 11:40 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:40 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 11:40 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:40 AM
Lithium	0.00600	0.00500	0.0100	J	mg/L	1	08/30/23 11:40 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:40 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:40 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:40 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/24/23 01:36 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	234	3.00	10.0		mg/L	10	08/24/23 01:53 AM
Fluoride	0.468	0.100	0.400		mg/L	1	08/24/23 07:35 AM
Sulfate	56.8	1.00	3.00		mg/L	1	08/24/23 07:35 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	817	10.0	10.0		mg/L	1	08/25/23 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

DHL Analytical, Inc.

Date: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-4
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-02
Project No:	31404097.017	**Collection Date:**	08/21/23 09:05 AM
Lab Order:	2308306	**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	08/30/23 11:43 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:43 AM
Barium	0.0799	0.00300	0.0100		mg/L	1	08/30/23 11:43 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:43 AM
Boron	0.0848	0.0100	0.0300		mg/L	1	08/30/23 11:43 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:43 AM
Calcium	26.2	0.500	1.50		mg/L	5	08/30/23 02:03 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:43 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 11:43 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:43 AM
Lithium	0.00858	0.00500	0.0100	J	mg/L	1	08/30/23 11:43 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:43 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:43 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:43 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/24/23 01:39 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	178	3.00	10.0		mg/L	10	08/24/23 02:12 AM
Fluoride	0.430	0.100	0.400		mg/L	1	08/24/23 07:54 AM
Sulfate	43.0	1.00	3.00		mg/L	1	08/24/23 07:54 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	622	10.0	10.0		mg/L	1	08/25/23 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

DHL Analytical, Inc.

Date: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-3
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-03
Project No:	31404097.017	**Collection Date:**	08/21/23 10:00 AM
Lab Order:	2308306	**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	08/30/23 11:45 AM
Arsenic	0.00225	0.00200	0.00500	J	mg/L	1	08/30/23 11:45 AM
Barium	0.0363	0.00300	0.0100		mg/L	1	08/30/23 11:45 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:45 AM
Boron	0.0956	0.0100	0.0300		mg/L	1	08/30/23 11:45 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:45 AM
Calcium	26.3	0.500	1.50		mg/L	5	08/30/23 02:06 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:45 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 11:45 AM
Lead	0.00140	0.000300	0.00100		mg/L	1	08/30/23 11:45 AM
Lithium	0.0342	0.00500	0.0100		mg/L	1	08/30/23 11:45 AM
Molybdenum	0.00340	0.00200	0.00500	J	mg/L	1	08/30/23 11:45 AM
Selenium	0.00328	0.00200	0.00500	J	mg/L	1	08/30/23 11:45 AM
Thallium	0.000507	0.000500	0.00150	J	mg/L	1	08/30/23 11:45 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	0.0000853	0.0000800	0.000200	J	mg/L	1	08/24/23 01:41 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	33.4	0.300	1.00		mg/L	1	08/24/23 08:13 AM
Fluoride	1.06	0.100	0.400		mg/L	1	08/24/23 08:13 AM
Sulfate	86.8	1.00	3.00		mg/L	1	08/24/23 08:13 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	618	10.0	10.0		mg/L	1	08/25/23 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

DHL Analytical, Inc.

Date: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-2
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-04
Project No:	31404097.017	**Collection Date:**	08/21/23 10:50 AM
Lab Order:	2308306	**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	08/30/23 11:48 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:48 AM
Barium	0.0654	0.00300	0.0100		mg/L	1	08/30/23 11:48 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:48 AM
Boron	0.609	0.0100	0.0300		mg/L	1	08/30/23 11:48 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:48 AM
Calcium	210	2.00	6.00		mg/L	20	08/30/23 02:08 PM
Chromium	0.00501	0.00200	0.00500		mg/L	1	08/30/23 11:48 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 11:48 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:48 AM
Lithium	0.0256	0.00500	0.0100		mg/L	1	08/30/23 11:48 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:48 AM
Selenium	0.0234	0.00200	0.00500		mg/L	1	08/30/23 11:48 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:48 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/24/23 01:43 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	1010	30.0	100		mg/L	100	08/23/23 09:46 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/24/23 08:32 AM
Sulfate	505	10.0	30.0		mg/L	10	08/24/23 02:50 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	2360	50.0	50.0		mg/L	1	08/25/23 05:10 PM

Qualifiers:

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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: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-5
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-05
Project No:	31404097.017	**Collection Date:**	08/21/23 11:50 AM
Lab Order:	2308306	**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	08/30/23 11:50 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:50 AM
Barium	0.125	0.00300	0.0100		mg/L	1	08/30/23 11:50 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:50 AM
Boron	0.123	0.0100	0.0300		mg/L	1	08/30/23 11:50 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:50 AM
Calcium	115	1.00	3.00		mg/L	10	08/30/23 02:11 PM
Chromium	0.0808	0.00200	0.00500		mg/L	1	08/30/23 11:50 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 11:50 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:50 AM
Lithium	0.159	0.00500	0.0100		mg/L	1	08/30/23 11:50 AM
Molybdenum	0.00872	0.00200	0.00500		mg/L	1	08/30/23 11:50 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:50 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:50 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/24/23 01:45 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	338	3.00	10.0		mg/L	10	08/24/23 03:09 AM
Fluoride	0.501	0.100	0.400		mg/L	1	08/24/23 08:51 AM
Sulfate	135	1.00	3.00		mg/L	1	08/24/23 08:51 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	990	50.0	50.0		mg/L	1	08/25/23 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: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-11
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-06
Project No:	31404097.017	**Collection Date:**	08/21/23 01:10 PM
Lab Order:	2308306	**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	08/30/23 11:53 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:53 AM
Barium	0.376	0.00300	0.0100		mg/L	1	08/30/23 11:53 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:53 AM
Boron	0.140	0.0100	0.0300		mg/L	1	08/30/23 11:53 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:53 AM
Calcium	105	1.00	3.00		mg/L	10	08/30/23 02:13 PM
Chromium	0.0194	0.00200	0.00500		mg/L	1	08/30/23 11:53 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 11:53 AM
Lead	0.000572	0.000300	0.00100	J	mg/L	1	08/30/23 11:53 AM
Lithium	0.0110	0.00500	0.0100		mg/L	1	08/30/23 11:53 AM
Molybdenum	0.00332	0.00200	0.00500	J	mg/L	1	08/30/23 11:53 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:53 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:53 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/24/23 01:48 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	577	30.0	100		mg/L	100	08/25/23 03:58 PM
Fluoride	0.371	0.100	0.400	J	mg/L	1	08/24/23 10:26 AM
Sulfate	45.5	1.00	3.00		mg/L	1	08/24/23 10:26 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1390	50.0	50.0		mg/L	1	08/25/23 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: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-12
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-07
Project No:	31404097.017	**Collection Date:**	08/21/23 02:15 PM
Lab Order:	2308306	**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	08/30/23 11:35 AM
Arsenic	0.00285	0.00200	0.00500	J	mg/L	1	08/30/23 11:35 AM
Barium	0.115	0.00300	0.0100		mg/L	1	08/30/23 11:35 AM
Beryllium	0.000417	0.000300	0.00100	J	mg/L	1	08/30/23 11:35 AM
Boron	0.0770	0.0100	0.0300		mg/L	1	08/30/23 11:35 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:35 AM
Calcium	8.96	0.100	0.300		mg/L	1	08/30/23 11:35 AM
Chromium	0.00931	0.00200	0.00500		mg/L	1	08/30/23 11:35 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 11:35 AM
Lead	0.00503	0.000300	0.00100		mg/L	1	08/30/23 11:35 AM
Lithium	0.0175	0.00500	0.0100		mg/L	1	08/30/23 11:35 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:35 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:35 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:35 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/24/23 01:50 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	11.8	0.300	1.00		mg/L	1	08/24/23 10:45 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/24/23 10:45 AM
Sulfate	14.7	1.00	3.00		mg/L	1	08/24/23 10:45 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	199	10.0	10.0		mg/L	1	08/25/23 05:10 PM

Qualifiers:

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DF- Dilution Factor
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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: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-8
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-08
Project No:	31404097.017	**Collection Date:**	08/22/23 09:15 AM
Lab Order:	2308306	**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	08/30/23 11:55 AM
Arsenic	0.00857	0.00200	0.00500		mg/L	1	08/30/23 11:55 AM
Barium	1.14	0.00300	0.0100		mg/L	1	08/30/23 11:55 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:55 AM
Boron	0.0938	0.0100	0.0300		mg/L	1	08/30/23 11:55 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:55 AM
Calcium	388	5.00	15.0		mg/L	50	08/30/23 02:16 PM
Chromium	0.00604	0.00200	0.00500		mg/L	1	08/30/23 11:55 AM
Cobalt	0.0118	0.00300	0.00500		mg/L	1	08/30/23 11:55 AM
Lead	0.00368	0.000300	0.00100		mg/L	1	08/30/23 11:55 AM
Lithium	0.0223	0.00500	0.0100		mg/L	1	08/30/23 11:55 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:55 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:55 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:55 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/24/23 01:52 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	2240	30.0	100		mg/L	100	08/23/23 10:43 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/24/23 11:04 AM
Sulfate	206	10.0	30.0		mg/L	10	08/24/23 03:47 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	4300	50.0	50.0		mg/L	1	08/25/23 05:10 PM

Qualifiers:

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DF- Dilution Factor
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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: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	FGD-1
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-09
Project No:	31404097.017	**Collection Date:**	08/22/23 10:25 AM
Lab Order:	2308306	**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	08/30/23 11:58 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:58 AM
Barium	0.0697	0.00300	0.0100		mg/L	1	08/30/23 11:58 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:58 AM
Boron	0.0776	0.0100	0.0300		mg/L	1	08/30/23 11:58 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:58 AM
Calcium	24.8	0.500	1.50		mg/L	5	08/30/23 02:19 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:58 AM
Cobalt	0.00530	0.00300	0.00500		mg/L	1	08/30/23 11:58 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 11:58 AM
Lithium	0.0357	0.00500	0.0100		mg/L	1	08/30/23 11:58 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:58 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 11:58 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 11:58 AM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/25/23 12:51 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	72.4	3.00	10.0		mg/L	10	08/24/23 04:06 AM
Fluoride	0.264	0.100	0.400	J	mg/L	1	08/24/23 11:23 AM
Sulfate	84.5	1.00	3.00		mg/L	1	08/24/23 11:23 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	367	10.0	10.0		mg/L	1	08/25/23 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: *06-Oct-23*

CLIENT:	WSP-Golder	**Client Sample ID:**	DUP-1
Project:	Luminant-OGSES FGD Ponds CCR	**Lab ID:**	2308306-10
Project No:	31404097.017	**Collection Date:**	08/22/23 10:25 AM
Lab Order:	2308306	**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	08/30/23 12:01 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:01 PM
Barium	0.0685	0.00300	0.0100		mg/L	1	08/30/23 12:01 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:01 PM
Boron	0.0763	0.0100	0.0300		mg/L	1	08/30/23 12:01 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:01 PM
Calcium	24.9	0.100	0.300		mg/L	1	08/30/23 12:01 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:01 PM
Cobalt	0.00516	0.00300	0.00500		mg/L	1	08/30/23 12:01 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:01 PM
Lithium	0.0346	0.00500	0.0100		mg/L	1	08/30/23 12:01 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:01 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:01 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:01 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/25/23 12:53 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	72.5	3.00	10.0		mg/L	10	08/24/23 04:25 AM
Fluoride	0.258	0.100	0.400	J	mg/L	1	08/24/23 11:42 AM
Sulfate	84.5	1.00	3.00		mg/L	1	08/24/23 11:42 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	376	10.0	10.0		mg/L	1	08/25/23 05:10 PM

Qualifiers:

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DF- Dilution Factor
N - Parameter not NELAP certified
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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

CLIENT: WSP-Golder
Work Order: 2308306
Project: Luminant-OGSES FGD 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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230824B

The QC data in batch 111854 applies to the following samples: 2308306-01A, 2308306-02A, 2308306-03A, 2308306-04A, 2308306-05A, 2308306-06A, 2308306-07A, 2308306-08A

Sample ID: **MB-111854** Batch ID: **111854** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_230824B** Analysis Date: **8/24/2023 12:44:34 PM** Prep Date: **8/24/2023**

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

Sample ID: **LCS-111854** Batch ID: **111854** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCS** Run ID: **CETAC2_HG_230824B** Analysis Date: **8/24/2023 12:49:06 PM** Prep Date: **8/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00193	0.000200	0.00200	0	96.5	85	115			

Sample ID: **LCSD-111854** Batch ID: **111854** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCSD** Run ID: **CETAC2_HG_230824B** Analysis Date: **8/24/2023 12:51:22 PM** Prep Date: **8/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00191	0.000200	0.00200	0	95.5	85	115	1.04	15	

Sample ID: **2308266-01AMS** Batch ID: **111854** TestNo: **SW7470A** Units: **mg/L**
SampType: **MS** Run ID: **CETAC2_HG_230824B** Analysis Date: **8/24/2023 12:58:12 PM** Prep Date: **8/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00955	0.00100	0.0100	0	95.5	80	120			

Sample ID: **2308266-01AMSD** Batch ID: **111854** TestNo: **SW7470A** Units: **mg/L**
SampType: **MSD** Run ID: **CETAC2_HG_230824B** Analysis Date: **8/24/2023 1:00:28 PM** Prep Date: **8/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00935	0.00100	0.0100	0	93.5	80	120	2.12	15	

Sample ID: **2308266-01ASD** Batch ID: **111854** TestNo: **SW7470A** Units: **mg/L**
SampType: **SD** Run ID: **CETAC2_HG_230824B** Analysis Date: **8/24/2023 1:02:43 PM** Prep Date: **8/24/2023**

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

Sample ID: **2308266-01APDS** Batch ID: **111854** TestNo: **SW7470A** Units: **mg/L**
SampType: **PDS** Run ID: **CETAC2_HG_230824B** Analysis Date: **8/24/2023 1:04:59 PM** Prep Date: **8/24/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0116	0.00100	0.0125	0	93.2	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230824B

Sample ID: **ICV-230824**	Batch ID: **R128802**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_230824B**	Analysis Date: **8/24/2023 12:40:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00394	0.000200	0.00400	0	98.5	90	110			

Sample ID: **CCV1-230824**	Batch ID: **R128802**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230824B**	Analysis Date: **8/24/2023 1:27:41 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00197	0.000200	0.00200	0	98.5	90	110			

Sample ID: **CCV2-230822**	Batch ID: **R128802**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230824B**	Analysis Date: **8/24/2023 1:55:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00196	0.000200	0.00200	0	98.0	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230825B

The QC data in batch 111881 applies to the following samples: 2308306-09A, 2308306-10A

Sample ID: **MB-111881**	Batch ID: **111881**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MBLK**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:19:33 PM**	Prep Date: **8/25/2023**

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

Sample ID: **LCS-111881**	Batch ID: **111881**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCS**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:26:21 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	85	115			

Sample ID: **LCSD-111881**	Batch ID: **111881**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:28:38 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00196	0.000200	0.00200	0	98.0	85	115	1.03	15	

Sample ID: **2308238-01AMS**	Batch ID: **111881**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MS**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:37:43 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0100	0.00100	0.0100	0	100	80	120			

Sample ID: **2308238-01AMSD**	Batch ID: **111881**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **MSD**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:39:59 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00970	0.00100	0.0100	0	97.0	80	120	3.05	15	

Sample ID: **2308238-01ASD**	Batch ID: **111881**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **SD**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:42:15 PM**	Prep Date: **8/25/2023**

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

Sample ID: **2308238-01APDS**	Batch ID: **111881**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **PDS**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:44:31 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0119	0.00100	0.0125	0	95.2	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_230825B

Sample ID: **ICV-230825**	Batch ID: **R128839**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:14:59 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00397	0.000200	0.00400	0	99.2	90	110			

Sample ID: **CCV1-230825**	Batch ID: **R128839**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_230825B**	Analysis Date: **8/25/2023 12:55:52 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00205	0.000200	0.00200	0	103	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: 2308306
Project: Luminant-OGSES FGD 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	

Sample ID: **DCS4-110475**	Batch ID: **110475**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS4**	Run ID: **ICP-MS5_230606A**	Analysis Date: **6/6/2023 4:39:00 PM**	Prep Date: **6/5/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0327	0.0300	0.0300	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230830B

The QC data in batch 111925 applies to the following samples: 2308306-01A, 2308306-02A, 2308306-03A, 2308306-04A, 2308306-05A, 2308306-06A, 2308306-07A, 2308306-08A, 2308306-09A, 2308306-10A

Sample ID: **MB-111925** Batch ID: **111925** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_230830B** Analysis Date: **8/30/2023 11:24:00 AM** Prep Date: **8/29/2023**

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-111925** Batch ID: **111925** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_230830B** Analysis Date: **8/30/2023 11:27:00 AM** Prep Date: **8/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.6	80	120			
Arsenic	0.199	0.00500	0.200	0	99.3	80	120			
Barium	0.200	0.0100	0.200	0	99.8	80	120			
Beryllium	0.191	0.00100	0.200	0	95.6	80	120			
Boron	0.194	0.0300	0.200	0	96.9	80	120			
Cadmium	0.198	0.00100	0.200	0	98.9	80	120			
Calcium	4.89	0.300	5.00	0	97.9	80	120			
Chromium	0.197	0.00500	0.200	0	98.6	80	120			
Cobalt	0.200	0.00500	0.200	0	99.8	80	120			
Lead	0.195	0.00100	0.200	0	97.7	80	120			
Lithium	0.192	0.0100	0.200	0	96.2	80	120			
Molybdenum	0.198	0.00500	0.200	0	98.9	80	120			
Selenium	0.197	0.00500	0.200	0	98.6	80	120			
Thallium	0.195	0.00150	0.200	0	97.6	80	120			

Sample ID: **LCSD-111925** Batch ID: **111925** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_230830B** Analysis Date: **8/30/2023 11:30:00 AM** Prep Date: **8/29/2023**

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	1.03	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230830B

Sample ID: **LCSD-111925**	Batch ID: **111925**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 11:30:00 AM**	Prep Date: **8/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.201	0.00500	0.200	0	101	80	120	1.20	15	
Barium	0.198	0.0100	0.200	0	99.0	80	120	0.739	15	
Beryllium	0.190	0.00100	0.200	0	95.0	80	120	0.675	15	
Boron	0.200	0.0300	0.200	0	100	80	120	3.15	15	
Cadmium	0.198	0.00100	0.200	0	99.1	80	120	0.241	15	
Calcium	4.90	0.300	5.00	0	98.0	80	120	0.139	15	
Chromium	0.196	0.00500	0.200	0	98.0	80	120	0.626	15	
Cobalt	0.202	0.00500	0.200	0	101	80	120	1.09	15	
Lead	0.194	0.00100	0.200	0	96.8	80	120	0.861	15	
Lithium	0.189	0.0100	0.200	0	94.5	80	120	1.76	15	
Molybdenum	0.196	0.00500	0.200	0	98.1	80	120	0.768	15	
Selenium	0.194	0.00500	0.200	0	97.2	80	120	1.39	15	
Thallium	0.194	0.00150	0.200	0	96.9	80	120	0.729	15	

Sample ID: **2308306-07A SD**	Batch ID: **111925**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 11:37:00 AM**	Prep Date: **8/29/2023**

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	0.00285				0	20	
Barium	0.117	0.0500	0	0.115				1.78	20	
Beryllium	<0.00150	0.00500	0	0.000417				0	20	
Boron	0.102	0.150	0	0.0770				28.3	20	R
Cadmium	<0.00150	0.00500	0	0				0	20	
Calcium	9.09	1.50	0	8.96				1.41	20	
Chromium	<0.0100	0.0250	0	0.00931				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	0.00522	0.00500	0	0.00503				3.55	20	
Lithium	<0.0250	0.0500	0	0.0175				0	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: **2308306-07A PDS**	Batch ID: **111925**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 12:03:00 PM**	Prep Date: **8/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.177	0.00250	0.200	0	88.5	75	125			
Arsenic	0.197	0.00500	0.200	0.00285	97.0	75	125			
Barium	0.311	0.0100	0.200	0.115	98.1	75	125			
Beryllium	0.183	0.00100	0.200	0.000417	91.1	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230830B

Sample ID: **2308306-07A PDS**	Batch ID: **111925**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 12:03:00 PM**	Prep Date: **8/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.254	0.0300	0.200	0.0770	88.6	75	125			
Cadmium	0.200	0.00100	0.200	0	99.8	75	125			
Calcium	13.5	0.300	5.00	8.96	91.4	75	125			
Chromium	0.205	0.00500	0.200	0.00931	97.8	75	125			
Cobalt	0.198	0.00500	0.200	0	98.9	75	125			
Lead	0.198	0.00100	0.200	0.00503	96.6	75	125			
Lithium	0.193	0.0100	0.200	0.0175	88.0	75	125			
Molybdenum	0.192	0.00500	0.200	0	96.2	75	125			
Selenium	0.191	0.00500	0.200	0	95.4	75	125			
Thallium	0.193	0.00150	0.200	0	96.7	75	125			

Sample ID: **2308306-07A MS**	Batch ID: **111925**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 12:07:00 PM**	Prep Date: **8/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.157	0.00250	0.200	0	78.4	75	125			
Arsenic	0.200	0.00500	0.200	0.00285	98.4	75	125			
Barium	0.316	0.0100	0.200	0.115	101	75	125			
Beryllium	0.185	0.00100	0.200	0.000417	92.1	75	125			
Boron	0.264	0.0300	0.200	0.0770	93.4	75	125			
Cadmium	0.199	0.00100	0.200	0	99.5	75	125			
Calcium	14.0	0.300	5.00	8.96	100	75	125			
Chromium	0.207	0.00500	0.200	0.00931	98.6	75	125			
Cobalt	0.201	0.00500	0.200	0	100	75	125			
Lead	0.201	0.00100	0.200	0.00503	97.8	75	125			
Lithium	0.203	0.0100	0.200	0.0175	92.7	75	125			
Molybdenum	0.191	0.00500	0.200	0	95.5	75	125			
Selenium	0.194	0.00500	0.200	0	97.2	75	125			
Thallium	0.196	0.00150	0.200	0	98.0	75	125			

Sample ID: **2308306-07A MSD**	Batch ID: **111925**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 12:10:00 PM**	Prep Date: **8/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.154	0.00250	0.200	0	76.9	75	125	1.86	15	
Arsenic	0.198	0.00500	0.200	0.00285	97.6	75	125	0.851	15	
Barium	0.316	0.0100	0.200	0.115	100	75	125	0.095	15	
Beryllium	0.185	0.00100	0.200	0.000417	92.4	75	125	0.329	15	
Boron	0.270	0.0300	0.200	0.0770	96.3	75	125	2.11	15	
Cadmium	0.198	0.00100	0.200	0	99.2	75	125	0.382	15	
Calcium	14.0	0.300	5.00	8.96	99.9	75	125	0.041	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230830B

Sample ID: **2308306-07A MSD** Batch ID: **111925** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_230830B** Analysis Date: **8/30/2023 12:10:00 PM** Prep Date: **8/29/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.205	0.00500	0.200	0.00931	97.9	75	125	0.736	15	
Cobalt	0.200	0.00500	0.200	0	100	75	125	0.267	15	
Lead	0.198	0.00100	0.200	0.00503	96.3	75	125	1.50	15	
Lithium	0.204	0.0100	0.200	0.0175	93.1	75	125	0.377	15	
Molybdenum	0.192	0.00500	0.200	0	95.8	75	125	0.325	15	
Selenium	0.195	0.00500	0.200	0	97.7	75	125	0.553	15	
Thallium	0.193	0.00150	0.200	0	96.7	75	125	1.30	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230830B

Sample ID: **ICV-230830** Batch ID: **R128907** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_230830B** Analysis Date: **8/30/2023 10:07:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0983	0.00250	0.100	0	98.3	90	110			
Arsenic	0.0985	0.00500	0.100	0	98.5	90	110			
Barium	0.0978	0.0100	0.100	0	97.8	90	110			
Beryllium	0.0974	0.00100	0.100	0	97.4	90	110			
Boron	0.103	0.0300	0.100	0	103	90	110			
Cadmium	0.0989	0.00100	0.100	0	98.9	90	110			
Calcium	2.53	0.300	2.50	0	101	90	110			
Chromium	0.0981	0.00500	0.100	0	98.1	90	110			
Cobalt	0.0993	0.00500	0.100	0	99.3	90	110			
Lead	0.0951	0.00100	0.100	0	95.1	90	110			
Lithium	0.0970	0.0100	0.100	0	97.0	90	110			
Molybdenum	0.0945	0.00500	0.100	0	94.5	90	110			
Selenium	0.0979	0.00500	0.100	0	97.9	90	110			
Thallium	0.0950	0.00150	0.100	0	95.0	90	110			

Sample ID: **LCVL-230830** Batch ID: **R128907** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_230830B** Analysis Date: **8/30/2023 10:23:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00197	0.00250	0.00200	0	98.4	80	120			
Arsenic	0.00492	0.00500	0.00500	0	98.4	80	120			
Barium	0.00480	0.0100	0.00500	0	96.0	80	120			
Beryllium	0.000976	0.00100	0.00100	0	97.6	80	120			
Boron	0.0229	0.0300	0.0200	0	114	80	120			
Cadmium	0.00103	0.00100	0.00100	0	103	80	120			
Calcium	0.102	0.300	0.100	0	102	80	120			
Chromium	0.00487	0.00500	0.00500	0	97.3	80	120			
Cobalt	0.00497	0.00500	0.00500	0	99.4	80	120			
Lead	0.000962	0.00100	0.00100	0	96.2	80	120			
Lithium	0.00983	0.0100	0.0100	0	98.3	80	120			
Molybdenum	0.00483	0.00500	0.00500	0	96.5	80	120			
Selenium	0.00495	0.00500	0.00500	0	99.1	80	120			
Thallium	0.000985	0.00150	0.00100	0	98.5	80	120			

Sample ID: **CCV1-230830** Batch ID: **R128907** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_230830B** Analysis Date: **8/30/2023 11:10:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	99.2	90	110			
Arsenic	0.201	0.00500	0.200	0	101	90	110			
Barium	0.200	0.0100	0.200	0	99.9	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230830B

Sample ID: **CCV1-230830**	Batch ID: **R128907**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 11:10:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.186	0.00100	0.200	0	93.2	90	110			
Boron	0.196	0.0300	0.200	0	98.2	90	110			
Cadmium	0.199	0.00100	0.200	0	99.4	90	110			
Calcium	4.94	0.300	5.00	0	98.7	90	110			
Chromium	0.195	0.00500	0.200	0	97.4	90	110			
Cobalt	0.201	0.00500	0.200	0	100	90	110			
Lead	0.194	0.00100	0.200	0	97.0	90	110			
Lithium	0.181	0.0100	0.200	0	90.7	90	110			
Molybdenum	0.196	0.00500	0.200	0	98.1	90	110			
Selenium	0.200	0.00500	0.200	0	99.9	90	110			
Thallium	0.194	0.00150	0.200	0	96.8	90	110			

Sample ID: **CCV2-230830**	Batch ID: **R128907**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 12:12:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.6	90	110			
Arsenic	0.201	0.00500	0.200	0	100	90	110			
Barium	0.200	0.0100	0.200	0	99.8	90	110			
Beryllium	0.187	0.00100	0.200	0	93.4	90	110			
Boron	0.198	0.0300	0.200	0	99.1	90	110			
Cadmium	0.200	0.00100	0.200	0	100	90	110			
Calcium	4.80	0.300	5.00	0	96.0	90	110			
Chromium	0.197	0.00500	0.200	0	98.5	90	110			
Cobalt	0.204	0.00500	0.200	0	102	90	110			
Lead	0.194	0.00100	0.200	0	97.1	90	110			
Lithium	0.184	0.0100	0.200	0	92.0	90	110			
Molybdenum	0.198	0.00500	0.200	0	99.2	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.195	0.00150	0.200	0	97.3	90	110			

Sample ID: **CCV3-230830**	Batch ID: **R128907**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 12:50:00 PM**	Prep Date:

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

Sample ID: **CCV4-230830**	Batch ID: **R128907**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 2:29:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_230830B

Sample ID: **CCV4-230830**	Batch ID: **R128907**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_230830B**	Analysis Date: **8/30/2023 2:29:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.77	0.300	5.00	0	95.5	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230823A

The QC data in batch 111843 applies to the following samples: 2308306-01B, 2308306-02B, 2308306-03B, 2308306-04B, 2308306-05B, 2308306-06B, 2308306-07B, 2308306-08B, 2308306-09B, 2308306-10B

Sample ID: **DCS3-111843** Batch ID: **111843** TestNo: **E300** Units: **mg/L**
SampType: **DCS3** Run ID: **IC4_230823A** Analysis Date: **8/23/2023 7:33:36 PM** Prep Date: **8/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.966	1.00	1.000	0	96.6	70	130			
Fluoride	0.433	0.400	0.4000	0	108	70	130			
Sulfate	2.65	3.00	3.000	0	88.5	70	130			

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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230823B

The QC data in batch 111843 applies to the following samples: 2308306-01B, 2308306-02B, 2308306-03B, 2308306-04B, 2308306-05B, 2308306-06B, 2308306-07B, 2308306-08B, 2308306-09B, 2308306-10B

Sample ID: **MB-111843** Batch ID: **111843** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC4_230823B** Analysis Date: **8/23/2023 5:58:36 PM** Prep Date: **8/23/2023**

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-111843** Batch ID: **111843** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC4_230823B** Analysis Date: **8/23/2023 6:17:36 PM** Prep Date: **8/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.85	1.00	10.00	0	98.5	90	110			
Fluoride	4.16	0.400	4.000	0	104	90	110			
Sulfate	29.8	3.00	30.00	0	99.4	90	110			

Sample ID: **LCSD-111843** Batch ID: **111843** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC4_230823B** Analysis Date: **8/23/2023 6:36:36 PM** Prep Date: **8/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.88	1.00	10.00	0	98.8	90	110	0.290	20	
Fluoride	4.18	0.400	4.000	0	105	90	110	0.538	20	
Sulfate	30.0	3.00	30.00	0	99.9	90	110	0.499	20	

Sample ID: **2308306-04BMS** Batch ID: **111843** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_230823B** Analysis Date: **8/23/2023 10:05:36 PM** Prep Date: **8/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2860	100	2000	1005	92.6	90	110			
Fluoride	2110	40.0	2000	0	106	90	110			
Sulfate	2430	300	2000	487.2	97.4	90	110			

Sample ID: **2308306-04BMSD** Batch ID: **111843** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_230823B** Analysis Date: **8/23/2023 10:24:36 PM** Prep Date: **8/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2860	100	2000	1005	92.6	90	110	0.051	20	
Fluoride	2120	40.0	2000	0	106	90	110	0.304	20	
Sulfate	2420	300	2000	487.2	96.8	90	110	0.499	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230823B

Sample ID: **2308306-08BMS**	Batch ID: **111843**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC4_230823B**	Analysis Date: **8/23/2023 11:02:36 PM**	Prep Date: **8/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3800	100	2000	2244	77.6	90	110			S
Fluoride	2090	40.0	2000	0	105	90	110			
Sulfate	2070	300	2000	191.5	93.8	90	110			

Sample ID: **2308306-08BMSD**	Batch ID: **111843**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC4_230823B**	Analysis Date: **8/23/2023 11:21:36 PM**	Prep Date: **8/23/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3790	100	2000	2244	77.3	90	110	0.125	20	S
Fluoride	2090	40.0	2000	0	104	90	110	0.170	20	
Sulfate	2070	300	2000	191.5	94.0	90	110	0.153	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230823B

Sample ID: **ICV-230823**	Batch ID: **R128829**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC4_230823B**	Analysis Date: **8/23/2023 5:20:36 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.7	1.00	25.00	0	98.6	90	110			
Fluoride	10.4	0.400	10.00	0	104	90	110			
Sulfate	75.4	3.00	75.00	0	101	90	110			

Sample ID: **CCV1-230823**	Batch ID: **R128829**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230823B**	Analysis Date: **8/24/2023 12:56:36 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.98	1.00	10.00	0	99.8	90	110			
Fluoride	4.26	0.400	4.000	0	107	90	110			
Sulfate	29.9	3.00	30.00	0	99.8	90	110			

Sample ID: **CCV2-230823**	Batch ID: **R128829**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230823B**	Analysis Date: **8/24/2023 5:22:36 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			
Fluoride	4.27	0.400	4.000	0	107	90	110			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Sample ID: **CCV3-230823**	Batch ID: **R128829**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230823B**	Analysis Date: **8/24/2023 9:48:36 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.83	1.00	10.00	0	98.3	90	110			
Fluoride	4.18	0.400	4.000	0	105	90	110			
Sulfate	29.5	3.00	30.00	0	98.3	90	110			

Sample ID: **CCV4-230823**	Batch ID: **R128829**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230823B**	Analysis Date: **8/24/2023 12:39:36 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.84	1.00	10.00	0	98.4	90	110			
Fluoride	4.16	0.400	4.000	0	104	90	110			
Sulfate	29.3	3.00	30.00	0	97.8	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230825A

The QC data in batch 111900 applies to the following samples: 2308306-06B

Sample ID: **MB-111900**	Batch ID: **111900**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 10:46:44 AM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								

Sample ID: **LCS-111900**	Batch ID: **111900**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 11:05:44 AM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.44	1.00	10.00	0	94.4	90	110			

Sample ID: **LCSD-111900**	Batch ID: **111900**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 11:24:44 AM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.45	1.00	10.00	0	94.5	90	110	0.131	20	

Sample ID: **2308306-06BMS**	Batch ID: **111900**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 4:17:17 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2430	100	2000	577.1	92.7	90	110			

Sample ID: **2308306-06BMSD**	Batch ID: **111900**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 4:36:17 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2440	100	2000	577.1	93.0	90	110	0.230	20	

Sample ID: **2308342-02DMS**	Batch ID: **111900**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 5:14:17 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2120	100	2000	238.5	93.9	90	110			

Sample ID: **2308342-02DMSD**	Batch ID: **111900**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 5:33:17 PM**	Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2110	100	2000	238.5	93.8	90	110	0.044	20	

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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_230825A

Sample ID: **ICV-230825**	Batch ID: **R128864**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 10:08:44 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.2	1.00	25.00	0	96.9	90	110			

Sample ID: **CCV1-230825**	Batch ID: **R128864**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_230825A**	Analysis Date: **8/25/2023 9:02:17 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.63	1.00	10.00	0	96.3	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: 2308306
Project: Luminant-OGSES FGD Ponds CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_230825A

The QC data in batch 111896 applies to the following samples: 2308306-01B, 2308306-02B, 2308306-03B, 2308306-04B, 2308306-05B, 2308306-06B, 2308306-07B, 2308306-08B, 2308306-09B, 2308306-10B

Sample ID: **MB-111896** Batch ID: **111896** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_230825A** Analysis Date: **8/25/2023 5:10:00 PM** Prep Date: **8/25/2023**

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-111896** Batch ID: **111896** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_230825A** Analysis Date: **8/25/2023 5:10:00 PM** Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	757	10.0	745.6	0	102	90	113			

Sample ID: **2308304-01D-DUP** Batch ID: **111896** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230825A** Analysis Date: **8/25/2023 5:10:00 PM** Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2230	50.0	0	2270				2.00	5	

Sample ID: **2308304-02D-DUP** Batch ID: **111896** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_230825A** Analysis Date: **8/25/2023 5:10:00 PM** Prep Date: **8/25/2023**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2180	50.0	0	2095				3.98	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: 2308306
Project: Luminant-OGSES FGD 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

October 05, 2023

DHL Analytical, Inc.

Sample Delivery Group:	L1650062
Samples Received:	08/25/2023
Project Number:	
Description:	

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

Entire Report Reviewed By:

Donna Eidson
Project Manager

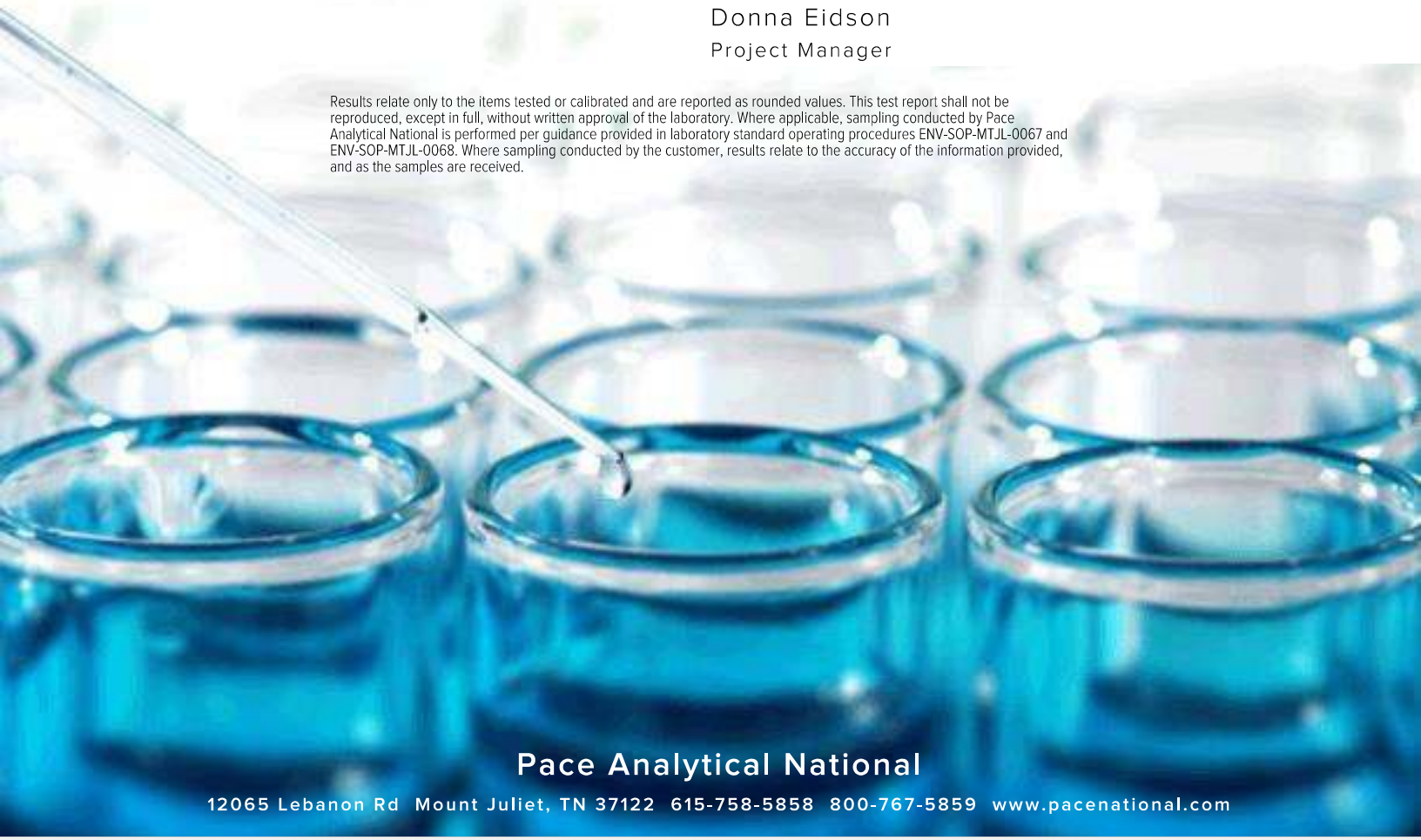


TABLE OF CONTENTS

FGD-6 L1650062-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/21/23 08:10	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN

FGD-4 L1650062-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/21/23 09:05	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN

FGD-3 L1650062-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/21/23 10:00	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN

FGD-2 L1650062-04 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/21/23 10:50	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN

FGD-5 L1650062-05 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/21/23 11:50	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN

FGD-11 L1650062-06 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/21/23 13:10	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2126899	1	09/06/23 10:43	09/18/23 17:26	RGT	Mt. Juliet, TN

FGD-12 L1650062-07 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/21/23 14:15	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/21/23 18:42	RRE	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 18:42	RGT	Mt. Juliet, TN

FGD-8 L1650062-08 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/22/23 09:15	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/21/23 18:42	RRE	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 18:42	RGT	Mt. Juliet, TN

FGD-1 L1650062-09 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/22/23 10:25	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/21/23 18:42	RRE	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 18:42	RGT	Mt. Juliet, TN

DUP-1 L1650062-10 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/22/23 10:25	08/25/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2122341	1	08/28/23 12:48	09/07/23 21:22	ALG	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/21/23 18:42	RRE	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 18:42	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	1.34		0.257	0.430	09/07/2023 21:22	WG2122341
(T) Barium	*118*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*90.5*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.98		0.407	0.509	09/18/2023 17:26	WG2126899

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.638		0.315	0.272	09/18/2023 17:26	WG2126899
(T) Barium-133	*97.2*			*30.0-143*	*09/18/2023 17:26*	WG2126899

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.607		0.244	0.431	09/07/2023 21:22	WG2122341
(T) Barium	*119*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*97.0*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.49		0.470	0.523	09/18/2023 17:26	WG2126899

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.886		0.402	0.296	09/18/2023 17:26	WG2126899
(T) Barium-133	*67.6*			*30.0-143*	*09/18/2023 17:26*	WG2126899

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.0120	U	0.233	0.432	09/07/2023 21:22	WG2122341
(T) Barium	*116*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*91.4*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.799		0.410	0.504	09/18/2023 17:26	WG2126899

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.799		0.337	0.259	09/18/2023 17:26	WG2126899
(T) Barium-133	*118*			*30.0-143*	*09/18/2023 17:26*	WG2126899

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.28		0.206	0.332	09/07/2023 21:22	WG2122341
(T) Barium	*107*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*105*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.61		0.357	0.490	09/18/2023 17:26	WG2126899

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.328	J	0.291	0.361	09/18/2023 17:26	WG2126899
(T) Barium-133	*86.5*			*30.0-143*	*09/18/2023 17:26*	WG2126899

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.0895	U	0.197	0.371	09/07/2023 21:22	WG2122341
(T) Barium	*109*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*101*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.147	U	0.317	0.531	09/18/2023 17:26	WG2126899

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.147	J	0.248	0.380	09/18/2023 17:26	WG2126899
(T) Barium-133	*77.9*			*30.0-143*	*09/18/2023 17:26*	WG2126899

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	4.48		0.282	0.368	09/07/2023 21:22	WG2122341
(T) Barium	*116*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*93.6*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	8.40		0.768	0.439	09/18/2023 17:26	WG2126899

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	3.92		0.714	0.240	09/18/2023 17:26	WG2126899
(T) Barium-133	*109*			*30.0-143*	*09/18/2023 17:26*	WG2126899

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	5.89		0.451	0.633	09/07/2023 21:22	WG2122341
(T) Barium	*79.9*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*109*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	7.42		0.651	0.704	09/21/2023 18:42	WG2127425

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.53		0.470	0.307	09/21/2023 18:42	WG2127425
(T) Barium-133	*131*			*30.0-143*	*09/21/2023 18:42*	WG2127425

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	7.50		0.401	0.506	09/07/2023 21:22	WG2122341
(T) Barium	*101*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*102*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	18.4		1.35	0.611	09/21/2023 18:42	WG2127425

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	10.9		1.29	0.342	09/21/2023 18:42	WG2127425
(T) Barium-133	*136*			*30.0-143*	*09/21/2023 18:42*	WG2127425

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.547		0.279	0.497	09/07/2023 21:22	WG2122341
(T) Barium	*106*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*110*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	3.04		0.769	0.684	09/21/2023 18:42	WG2127425

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	2.50		0.717	0.470	09/21/2023 18:42	WG2127425
(T) Barium-133	*72.2*			*30.0-143*	*09/21/2023 18:42*	WG2127425

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.03		0.236	0.401	09/07/2023 21:22	WG2122341
(T) Barium	*112*			*30.0-143*	*09/07/2023 21:22*	WG2122341
(T) Yttrium	*101*			*30.0-136*	*09/07/2023 21:22*	WG2122341

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	3.53		0.693	0.512	09/21/2023 18:42	WG2127425

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	2.50		0.652	0.318	09/21/2023 18:42	WG2127425
(T) Barium-133	*85.2*			*30.0-143*	*09/21/2023 18:42*	WG2127425

Method Blank (MB)

(MB) R3972187-1 09/07/23 21:22

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.214	J	0.216	0.391
(T) Barium	*132*		*132*	
(T) Yttrium	*82.8*		*82.8*	

L1650231-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1650231-02 09/07/23 21:22 • (DUP) R3972187-5 09/07/23 21:22

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	0.491	0.364	0.654	0.201	0.316	0.577	1	83.8	0.602	U	20	3
(T) Barium	*100*			*129*	*129*							
(T) Yttrium	*101*			*102*	*102*							

Laboratory Control Sample (LCS)

(LCS) R3972187-2 09/07/23 21:22

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.46	109	80.0-120	
(T) Barium			*118*		
(T) Yttrium			*94.0*		

L1650231-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1650231-01 09/07/23 21:22 • (MS) R3972187-3 09/07/23 21:22 • (MSD) R3972187-4 09/07/23 21:22

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	0.896	20.8	17.3	119	98.3	1	70.0-130			18.3		20
(T) Barium		*121*			*120*	*129*							
(T) Yttrium		*100*			*90.1*	*93.7*							

Method Blank (MB)

(MB) R3976652-1 09/18/23 17:25

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.00563	U	0.0760	0.138
(T) Barium-133	*53.5*		*53.5*	

L1650062-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1650062-05 09/18/23 17:26 • (DUP) R3976652-5 09/18/23 17:25

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-226	0.147	0.248	0.380	0.0514	0.310	0.622	1	96.2	0.240	U	20	3
(T) Barium-133	*77.9*			*41.7*	*41.7*							

Laboratory Control Sample (LCS)

(LCS) R3976652-2 09/18/23 17:25

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.74	94.7	80.0-120	
(T) Barium-133			*66.3*		

L1649189-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649189-01 09/18/23 17:25 • (MS) R3976652-3 09/18/23 17:25 • (MSD) R3976652-4 09/18/23 17:25

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	1.90	22.9	21.0	105	95.7	1	75.0-125			8.47		20
(T) Barium-133		*58.3*			*59.7*	*49.6*							

Method Blank (MB)

(MB) R3977534-1 09/21/23 18:42

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0139	U	0.105	0.198
(T) Barium-133	*37.3*		*37.3*	

L1650762-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1650762-07 09/21/23 23:31 • (DUP) R3977534-5 09/21/23 18:42

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-226	0.512	0.296	0.293	0.134	0.245	0.369	1	117	0.985	J	20	3
(T) Barium-133	*99.8*			*89.8*	*89.8*							

Laboratory Control Sample (LCS)

(LCS) R3977534-2 09/21/23 18:42

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	5.93	118	80.0-120	
(T) Barium-133			*35.1*		

L1650062-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1650062-10 09/21/23 18:42 • (MS) R3977534-3 09/21/23 18:42 • (MSD) R3977534-4 09/21/23 18:42

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	2.50	19.5	23.1	85.1	103	1	75.0-125			16.8		20
(T) Barium-133		*85.2*			*48.3*	*48.3*							

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

C041

Work Order: 2308306

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

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

L1650062 23-Aug-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228	Ra-226				
					E904.0	M7500 Ra B M				
FGD-6	Aqueous	01C	08/21/23 08:10 AM	1LHDPEHNO3		1				
FGD-6	Aqueous	01D	08/21/23 08:10 AM	1LHDPEHNO3	1					01
FGD-4	Aqueous	02C	08/21/23 09:05 AM	1LHDPEHNO3		1				
FGD-4	Aqueous	02D	08/21/23 09:05 AM	1LHDPEHNO3	1					02
FGD-3	Aqueous	03C	08/21/23 10:00 AM	1LHDPEHNO3		1				
FGD-3	Aqueous	03D	08/21/23 10:00 AM	1LHDPEHNO3	1					03
FGD-2	Aqueous	04C	08/21/23 10:50 AM	1LHDPEHNO3		1				
FGD-2	Aqueous	04D	08/21/23 10:50 AM	1LHDPEHNO3	1					-04
FGD-5	Aqueous	05C	08/21/23 11:50 AM	1LHDPEHNO3		1				
FGD-5	Aqueous	05D	08/21/23 11:50 AM	1LHDPEHNO3	1					05
FGD-11	Aqueous	06C	08/21/23 01:10 PM	1LHDPEHNO3		1				
FGD-11	Aqueous	06D	08/21/23 01:10 PM	1LHDPEHNO3	1					06
FGD-12	Aqueous	07C	08/21/23 02:15 PM	1LHDPEHNO3		1				
FGD-12	Aqueous	07D	08/21/23 02:15 PM	1LHDPEHNO3	1					07
FGD-8	Aqueous	08C	08/22/23 09:15 AM	1LHDPEHNO3		1				
FGD-8	Aqueous	08D	08/22/23 09:15 AM	1LHDPEHNO3	1					08
FGD-1	Aqueous	09C	08/22/23 10:25 AM	1LHDPEHNO3		1				09

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

PH-10BDH4321 TRC-2352362
CR6-20221V pH<2

Sample Receipt Checklist

COC Seal Present/Intact:	X 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:	X Y N		

12 970 R4D 03 A88 0195

		Date/Time			Date/Time
Relinquished by:	[signature]	8/23/23 1700	**Received by:**	GRACE BARRON [signature]	08.25.23 1000
Relinquished by:			**Received by:**		

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

CHAIN-OF-CUSTODY RECORD

Work Order: 2308306

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

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

L1650062 **23-Aug-23**

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228	Ra-226				
					E904.0	M7500 Ra B M				
FGD-1	Aqueous	09D	08/22/23 10:25 AM	1LHDPEHNO3	1					-09
DUP-1	Aqueous	10C	08/22/23 10:25 AM	1LHDPEHNO3		1				
DUP-1	Aqueous	10D	08/22/23 10:25 AM	1LHDPEHNO3	1					-10

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

		Date/Time			Date/Time
Relinquished by:	[signature]	8/23/23 1700	**Received by:**	GRACE BARRON [signature]	08.25.23 1000
Relinquished by:			**Received by:**		

APPENDIX B

ALTERNATE SOURCE DEMONSTRATION

Alternate Source Demonstration

Oak Grove Steam Electric Station

FGD Ponds - Robertson County, Texas

Submitted to:

Oak Grove Management Company LLC

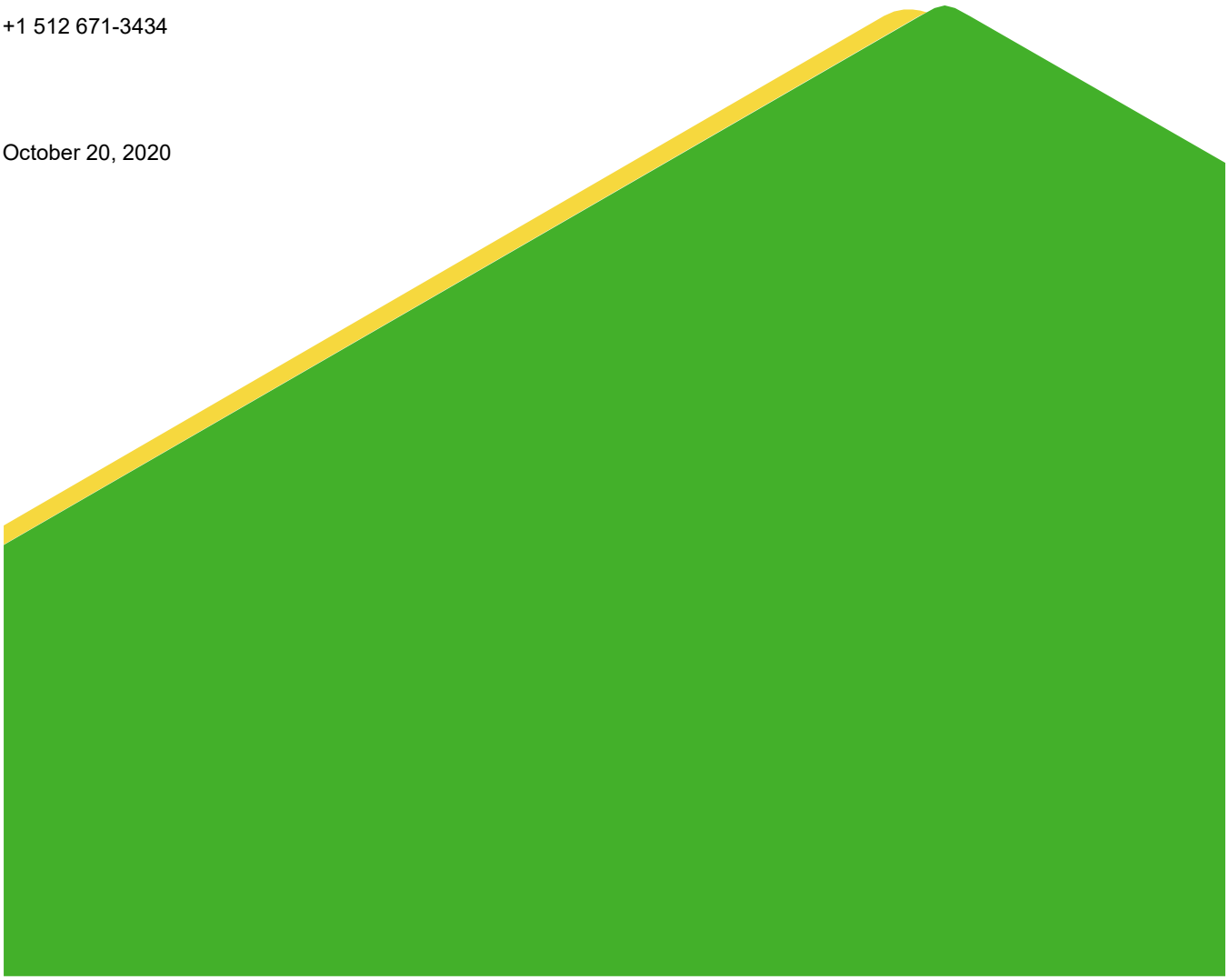
Submitted by:

Golder Associates Inc.

2201 Double Creek Dr, Suite 4004, Round Rock, Texas, USA 78664

+1 512 671-3434

October 20, 2020



Executive Summary

In accordance with the United States Environmental Protection Agency (US EPA) Coal Combustion Residual (CCR) Rule (40 C.F.R. Part 257 Subpart D; 80 Fed. Reg. 21302 (April 17, 2015) (CCR Rule or The Rule), this Alternate Source Demonstration (ASD) was prepared to document that a source other than the FGD Ponds at the Oak Grove Steam Electric Station (the Site) caused a Statistically Significant Level (SSL) of lithium identified in monitoring well FGD-5 during the first semi-annual assessment monitoring event in 2020.

The following lines of evidence support the conclusion that the SSL of lithium in groundwater samples collected from FGD-5 of the FGD Ponds (FDG Pond A, FDG Pond B and FDG Pond C) monitoring well network is not caused by a release of CCR porewater/leachate, but instead results from an alternate source:

- The range of lithium concentrations in samples collected from FGD-5 (0.145 to 0.170 mg/L) is similar to that of samples in upgradient wells FGD-8 and FGD-11 (max 0.149 mg/L since 2015). The groundwater at FGD-5 is of the sodium-chloride type, which is the same type as the upgradient wells (FGD-8 and FGD-11), whereas samples from the FGD ponds indicate water of a magnesium-chloride dominant water type, indicating different water types for the groundwater system and FGD ponds.
- Concentrations of CCR tracers boron, chloride and sulfate, and ratios of boron to lithium differ significantly between FGD pond water and groundwater in the vicinity of FGD-5. Therefore, lithium in groundwater at FGD-5 cannot have originated from CCR porewater as selective dilution of lithium cannot occur.
- FGD-5 is downgradient from FGD Pond C and cross-gradient (and at times upgradient) from FGD Pond A and B. FGD Pond C has only been in operation since 2016. However, lithium concentrations in groundwater at FGD-5 have remained consistent since 2015 (0.145 to 0.170 mg/L). Therefore, lithium concentrations were already elevated in groundwater at FGD-5 prior to ash additions to FGD Pond C, which is the only FGD pond upgradient of FGD-5. Since FGD-5 is not directly downgradient from FGD Ponds A or B, it would not receive porewater from these ponds unless diluted with natural groundwater flowing to FGD-5 from upgradient areas. In groundwater samples collected from FGD-5, concentrations of CCR tracers (boron, sulfate and chloride) that are elevated in FGD Pond A and B water are similar to concentrations in background wells FGD-8 and FGD-11. Furthermore, lithium SSLs have not been observed in CCR monitoring wells directly downgradient of FGD Pond A or B (e.g., FGD-2, FGD-3, FGD-4 and FGD-6), or CCR monitoring wells FGD-1 and FGD-12, which are downgradient and more proximal to FGD Pond C than FGD-5. Thus, it is highly unlikely that lithium measured in FGD-5 groundwater originates from a release from any of the FGD ponds.
- Lithium is naturally occurring in soils at the Site. Sequential extraction of lithium from soil samples indicate total lithium concentrations ranging from 9 to 20 mg/kg, with the majority (76 to 97%) of lithium present in the non-environmentally available acid/sulfide and residual/refractory fractions.

In accordance with §257.95(g)(3), this ASD demonstrates that a source other than the FGD Ponds caused the SSL of lithium identified at monitoring well FGD-5.

Table of Contents

Certification

This document and all attachments were prepared by Golder Associates Inc. under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that the alternative source demonstration at the referenced facility meets the requirements of 40 C.F.R. § 257.94(e)(2) of the CCR Rule.

Golder Associates Inc.

Patrick J. Behling, P.E.
Principal Engineer

Roberta Russell, P.G.
Senior Geologist

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (US EPA) Coal Combustion Residual (CCR) Rule (40 C.F.R. Part 257 Subpart D; 80 Fed. Reg. 21302 (April 17, 2015) (CCR Rule or The Rule), this Alternate Source Demonstration (ASD) was prepared to document that a source other than the FGD Ponds at the Oak Grove Steam Electric Station (the Site) caused a Statistically Significant Level (SSL) of lithium identified in monitoring well FGD-5 during the first semi-annual assessment monitoring event in 2020. This document satisfies the requirements of § 257.95(g)(3)(ii) which allows the owner or operator to demonstrate that a source other than the CCR Unit has caused an SSL and that the SSL was the result of an alternate source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

As documented by this report, the SSL for lithium at the FGD Pond monitoring well FGD-5 is attributed to naturally occurring sources in subsurface aquifer materials and is not caused by the CCR unit.

2.0 SITE DESCRIPTION AND BACKGROUND

Oak Grove Management Company LLC owns OGSES located approximately 10 miles north of Franklin, Robertson County, Texas (Exhibit 1). The OGSES consists of two 800-megawatt power generation units which burn lignite and coal. CCR, including fly ash, bottom ash, and gypsum are generated as part of OGSES unit operations. Currently, CCRs generated at the OGSES are managed by Luminant in part within the FGD Pond Area (PBW, 2017a).

The FGD-A Pond, FGD-B Pond, and FGD-C Pond (collectively referred to as the “FGD Ponds”) are located approximately 2,500 feet northwest of the power generation units at the Site (Exhibit 1). FGD-A Pond and FGD-B Pond were placed in service during approximately 2007. Use of FGD-C Pond began in 2016 (PBW, 2017a).

2.1 FGD Pond Area Monitoring Network

The monitoring well network for the FGD Pond Area consists of 9 monitoring wells (FGD-1, FGD-2, FGD-3, FGD-4, FGD-5, FGD-6, FGD-8, FGD-11 and FGD-12) screened within the uppermost groundwater-bearing unit. Two wells, FGD-8 and FGD-11, are considered background monitoring wells. Monitoring well locations are shown on Exhibit 1.

2.2 Geologic and Hydrogeologic Setting

The FGD Ponds are located in the outcrop area of the Eocene-aged Wilcox Group (Barnes, 1970). Previous boring investigations indicate the geology in the FGD Pond Area primarily consists of an upper zone of relatively thick, interbedded sand and clay strata and a lower zone of interbedded silty to clayey sand and well sorted sand. The uppermost groundwater-bearing unit at the Site occurs in the lower zone of interbedded silty to clayey sand (PBW, 2017a).

3.0 STATISTICAL ANALYSIS METHODS

The following sections summarize the assessment monitoring at the FGD Pond Area, present the statistical analysis method for evaluation of assessment monitoring constituents (i.e., Appendix IV parameters) as they pertain to this ASD, discuss the test methods used for soil samples, and describe the geochemical evaluation.

During assessment monitoring, concentrations of Appendix IV constituents are compared to an applicable Groundwater Protection Standard (GWPS). As specified in 40 C.F.R. § 257.95(h), the GWPS is the higher of the

Maximum Contaminant Level (MCL) or the background concentration. For lithium, the GWPS is the background concentration of 0.15 mg/L, which is calculated as the upper prediction limit (UPL) of data collected from upgradient wells during the background period, prior to the start of the detection and assessment monitoring period.

Statistical analysis of the data was performed in accordance with the Statistical Analysis Plan for CCR Groundwater Monitoring (PBW, 2017b) and the USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-Unified Guidance (USEPA, 2009). The statistical analysis included an evaluation of confidence intervals for each of the Appendix IV parameter data sets for each well to evaluate whether constituent concentrations were present at concentrations above GWPSs.

Figure 1 shows the lithium concentrations in FGD-5 since 2015 compared to the GWPS. The calculated lower and upper confidence limits for lithium based on sample data collected from FGD-5 are 0.152 mg/L and 0.156 mg/L, respectively. An SSL was indicated at FGD-5 because the lower confidence limit based on the lithium data set from FGD-5 exceeded the GWPS of 0.152 mg/L. As indicated on Figure 1, lithium concentrations exceeded the GWPS in FGD-5 during two sampling events conducted in 2015, prior to the completion of FGD Pond C (in 2016), which is the only FGD pond that is directly upgradient of FGD-5. Furthermore, the highest sample concentration (0.170 mg/L) in FGD-5 occurred in November 2015, prior to the completion of FGD-C.

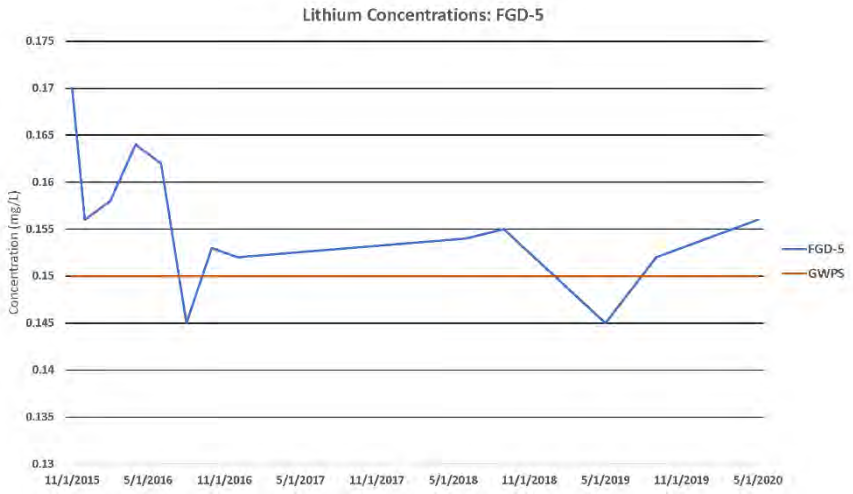


Figure 1: Lithium concentrations in groundwater samples collected from FGD-5.

3.1 Assessment Monitoring

Pursuant to 40 C.F.R. § 257.95(a), FGD Pond Area monitoring wells are sampled for all Appendix IV parameters. The 2015 through 2020 Appendix IV groundwater sample data were compared to the GWPS using confidence intervals.

3.2 Statistically Significant Levels

As stated in the Appendix IV SSL notification dated February 6, 2019, SSLs for cobalt and lithium were identified at the FGD Ponds during 2018 assessment monitoring completed in accordance with 40 C.F.R. § 257.95. No SSLs were identified for cobalt in subsequent semi-annual assessment monitoring completed during 2019 and 2020. No SSLs were identified for lithium in subsequent semi-annual assessment monitoring events in 2019;

however, an SSL notification for lithium was posted on August 21, 2020 based on the first 2020 semi-annual assessment monitoring event results.

3.3 Test Methods for Soil

3.3.1 Sequential Extraction

Chemical analysis of soils for total metals and sequential extraction analysis was conducted on three soil samples collected from FGD Pond Area within the groundwater-bearing unit (Appendix A). The sequential extraction procedure (SEP) consists of a seven-step metals extraction from solids to determine their potential environmental stability. The seven-step SEP is defined by specific extraction steps as illustrated and described (based on a modified Tessier et al. 1979 method) in Figure 2.

SEQUENTIAL EXTRACTION PROCEDURE				
ENVIRONMENTALLY AVAILABLE (Increasing Availability)	Step 1	Increasing Extraction Strength	Exchangeable Fraction:	This extraction includes trace elements that are electrostatically adsorbed to overburden minerals
	Step 2		Carbonate Fraction:	This extraction targets trace elements that are adsorbed or otherwise bound to carbonate minerals
	Step 3		Non-Crystalline Materials Fraction:	This extraction targets trace elements that are complexed by amorphous minerals
	Step 4		Metal Hydroxide Fraction:	This extraction targets trace elements bound to hydroxides of iron, manganese, and/or aluminum
	Step 5		Organic Fraction:	This extraction targets trace elements strongly bound via chemisorption to organic material
NON-ENVIRONMENTALLY AVAILABLE	Step 6		Acid/Sulfide Fraction:	The extraction is used to identify trace elements precipitated as sulfide minerals
	Step 7		Residual Fraction:	Trace elements remaining in the overburden after the previous extractions will be distributed between silicates, phosphates, and refractory oxide

Figure 2: Overview of sequential extraction procedure.

Steps 1 through 7 represent an increasing amount of target metals that can be removed into solution from the solid phase. For instance, metals bound in the carbonate fraction are much more likely to become mobile due to changes in groundwater chemistry than metals bound in a sulfide or residual fraction. The total concentration of a metal measured from all seven steps can be compared to the concentration determined from the total metal analysis for compositional accountability. Metals extracted in Steps 1 through 5 are considered environmentally available, whereas metals extracted in Steps 6 and 7 are present in non-environmentally available fractions and are not expected to be released under conditions typically encountered in aquifers, except in the case of acidification or other excursions from typical groundwater conditions (Tessier et al., 1979).

4.0 ALTERNATE SOURCE DEMONSTRATION

The May 2020 SSL of lithium in groundwater at the monitoring well FGD-5 is not caused by a release of CCR porewater/leachate but instead results from an alternate source. The following lines of evidence support this conclusion:

- **The range of lithium concentrations in samples collected from FGD-5 is similar to that of samples in background wells. Additionally, the FGD pond water is a magnesium-chloride type water whereas water at FGD-5 is of the sodium-chloride type, which is the same type as background wells.**

Lithium concentrations in groundwater samples from FGD-5 range from 0.145 to 0.170 mg/L, which is similar to the upper range of concentrations in background well FGD-8 (max of 0.149 mg/L). In addition, as shown on the Piper diagram presented on Figure 3, the groundwater at FGD-5 is a sodium-chloride type, which is the same water type of the groundwater encountered within the background wells FGD-8 and FGD-11. The FGD pond water samples from FGD Pond A and FGD Pond B are the magnesium-chloride type. Because the lithium concentrations and water chemistry in groundwater samples collected from FGD-5 are similar to those encountered in background wells, it is more likely that groundwater at FGD-5 is representative of background conditions, including the presence of naturally-occurring lithium in groundwater. Groundwater and pond water ASD data are summarized in Table 1.

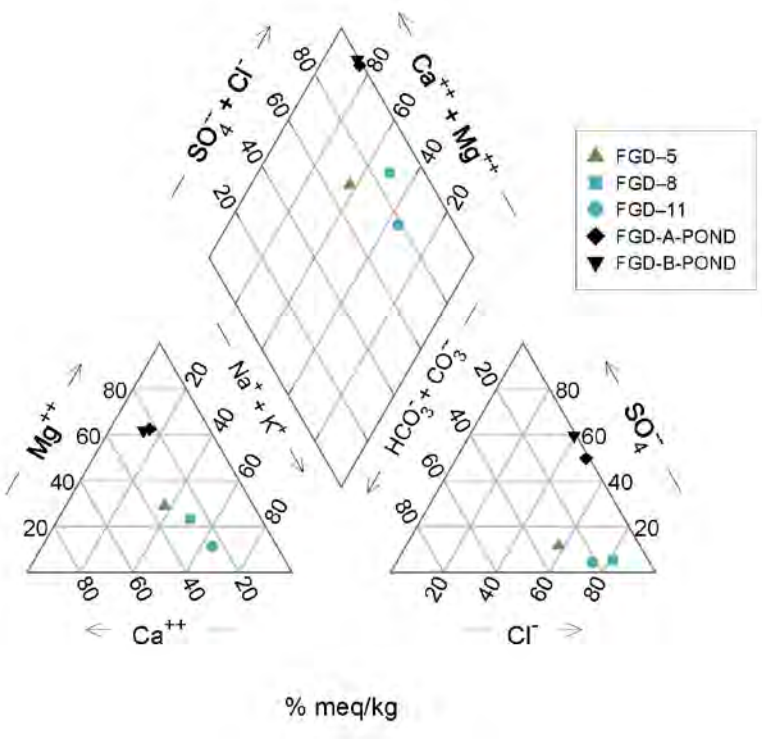


Figure 3: Piper diagram showing water chemistry of FGD-5, FGD-8, FGD-11 and FGD-A Pond and FGD-B Pond samples.

- **Concentrations of CCR tracers boron, chloride and sulfate, and ratios of boron to lithium differ significantly between FGD pond water and groundwater in the vicinity of FGD-5.**

Boron has been historically elevated in FGD pond samples (>72 mg/L). However, boron in groundwater samples collected from FGD-5 has never exceeded 0.2 mg/L since 2015 (when sampling started). Boron at well FGD-5 has also remained well below the maximum measured in background wells FGD-8 and FGD-11 (0.635 mg/L). Similarly, sulfate (max 83.8 mg/L) and chloride (max 307 mg/L) concentrations in FGD-5 are low compared to FGD pond samples (max of 4,680 mg/L and 3,440 mg/L, respectively). These differences are shown graphically in the ternary diagram presented in Figure 3. It should be noted that lithium concentrations in FGD pond water samples are generally similar to FGD-5. However, if lithium in groundwater at FGD-5 originated from the FGD ponds, sulfate, chloride and boron would also be expected to be comparatively higher. Additionally, the ratio of lithium to boron in FGD pond samples was approximately 1:500, while the ratio in groundwater from FGD-5 was approximately 1:1. Therefore, lithium at FGD-5 did not originate from CCR porewater as selective dilution of lithium cannot occur, assuming conservative transport.

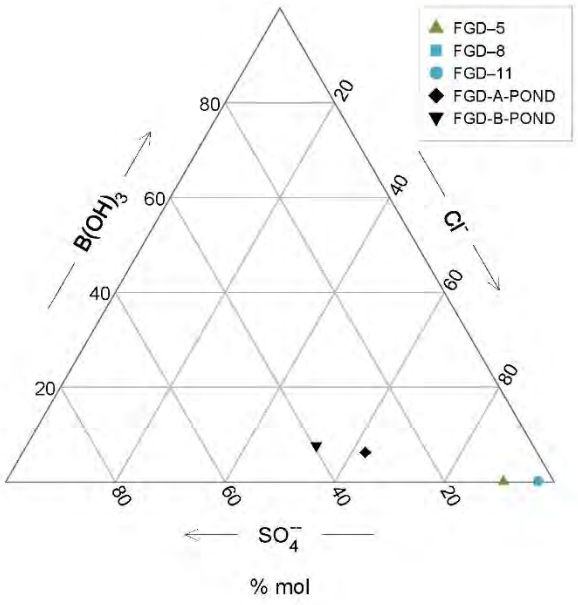


Figure 4: Ternary diagram showing relative molar concentrations of boron, chloride and sulfate for FGD ponds, FGD-5, and background wells FGD-8 and FGD-11.

- **FGD-5 is down-gradient from FGD Pond C, which has only been in operation since 2016. However, lithium in groundwater at FGD-5 has remained consistent since sampling began in 2015.**

Monitoring well FGD-5 is cross-gradient (and at times upgradient) to FGD Ponds A and B and directly down-gradient from FGD Pond C (Exhibit 2). FGD-5 has been sampled since 2015 and, as shown on Figure 1, lithium concentrations have remained consistently between 0.145 and 0.170 mg/L. If the lithium occurrence were due to a plume originating from FGD Pond C, its concentrations would be expected to increase. FGD Pond C was not in operation until 2016; thus, lithium concentrations were already within ranges normal for FGD-5 before CCR was placed in FGD Pond C. Since FGD-5 is cross-gradient to FGD Ponds A and B, any porewater reaching FGD-5 from FGD Ponds A or B would be significantly diluted with natural groundwater flowing to FGD-5 from upgradient areas. Furthermore, lithium SSLs have not been observed in CCR monitoring wells directly downgradient of FGD Pond A or B (e.g., FGD-2, FGD-3, FGD-4 and FGD-6), or CCR monitoring wells FGD-1 and FGD-12, which are downgradient and more proximal to FGD Pond C than FGD-5. As discussed previously, concentrations of boron,

chloride and sulfate, which are mobile constituents and elevated in FGD Pond water, are similar to concentrations in background wells FGD-8 and FGD-11. Thus, it is very unlikely that lithium measured in FGD-5 groundwater originates from FGD Ponds A or B.

- **Lithium is naturally occurring at the Site based on sequential extraction of lithium from soil.**

Total lithium concentrations in the three soil samples range from 9 to 20 mg/kg, which is within the range of naturally-occurring lithium in the Earth's crust and soils (18 to 65 mg/kg and 5 to 130 mg/kg, respectively; Smith and Huyck (1999)). Most of the lithium (between 76 and 97% of the total) is sequestered in the acid sulfide and refractory component of the soil material (SEP Steps 6 and 7). The environmentally-available fraction of lithium (which could contribute to concentrations observed at FGD-5) is less than 24% of the total, the largest of which is represented by the metal hydroxide phase.

5.0 ALTERNATE SOURCE DEMONSTRATION SUMMARY

The evaluation presented in this document demonstrates the statistically significant level of lithium identified in groundwater is due to the presence of naturally-occurring lithium and not caused by releases from the CCR unit. The following lines of evidence demonstrate the natural occurrence of lithium in groundwater at FGD-5:

- FGD-5 lithium concentrations are similar in range to concentrations in background wells. Additionally, the water type at FGD-5 is the same as background wells and different from FGD pond water.
- Concentrations of near-conservative CCR tracers boron, chloride and sulfate, and ratios of boron to lithium differ significantly between FGD pond water and groundwater in the vicinity of FGD-5.
- FGD-5 is located downgradient from FGD Pond C. However, lithium concentrations in FGD-5 have remained consistent since before FGD Pond C was put in operation.
- Lithium is naturally occurring at the Site based on sequential extraction of lithium from soil samples collected in the uppermost groundwater-bearing unit.

Based on these findings, the FGD Ponds are not the source for the SSL of lithium in FGD-5 samples. Instead, the SSL can be attributed to the presence of naturally-occurring lithium in subsurface aquifer materials

6.0 CONCLUSION

In accordance with 40 C.F.R. § 257.95(g)(3), this ASD addresses the SSL of lithium at FGD-5. Review of geochemical data indicates that the exceedance of lithium identified at FGD-5 is not the result of a release from the associated ash ponds at OGSES FGD Pond Area but can be attributed to the presence of naturally-occurring lithium in subsurface aquifer materials

7.0 REFERENCES

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USEPA. Federal Register. Volume 80. No. 74. Friday April 17, Part II. Environmental Protection Agency. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule/ [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER] (2015).

Table

Table 1
Analytical Results
Groundwater and Pond Samples
Oak Grove Steam Electric Station FGD Pond Area

Sample Location	Sample Date	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	Alkalinity mg/L	Chloride mg/L	Sulfate mg/L	Fluoride mg/L	Boron mg/L	Lithium mg/L	Cobalt mg/L	Iron mg/L
FGD-1	5/16/2019	19.5	11.2	2.11	49.4	52.8	62.4	78.7	0.362 J	0.0803	0.0442	0.003	0.186
FGD-2	5/16/2019	38.9	16.7	2.57	198	157	260	70.7	0.383 J	0.105	0.0228	0.003	0.0799
FGD-3	5/16/2019	60.1	33.6	2.5	277	533	117	182	0.776	0.117	0.057	0.0052	0.126
FGD-4	5/16/2019	41.7	18.6	1.62	160	201	205	41.7	0.327 J	0.0733	0.0325	0.003	0.103
FGD-5	5/16/2019	77.7	50	3.46	123	237	287	67.2	0.579	0.108	0.145	0.003	0.03
FGD-6	5/16/2019	20.3	6.61	0.706	225	262	170	51.3	0.669	0.116	0.0068 J	0.0132	4.86
FGD-8	5/16/2019	314	204	19.2	792	516	2040	173	0.1	0.0687	0.0086 J	0.0146	263
FGD-11	5/16/2019	85	30.6	4.13	328	256	566	50.9	0.38 J	0.108	0.0145	0.003	1.28
FGD-12	5/16/2019	6.79	2.97	1.55	20.1	36.6	15.6	15	<0.100	0.0723	0.0221	0.003	0.425
FGD-A-POND	6/6/2019	487	809	82.1	270	58.6	1510	3260	17.2	72.1	0.167	0.003	0.03
FGD-B-POND	6/6/2019	458	796	86.9	287	68	1470	3040	17.5	73.3	0.172	0.003	0.03
FGD-1	5/11/2020	37.8	17.1	2.56	82	67.6	146	79.5	0.231 J	0.121	0.0548	0.0495	1.09
FGD-2	5/11/2020	217	74.2	5.73	507	114	1150	286	<0.100	0.605	0.028	0.003	0.0636
FGD-3	5/11/2020	42.3	23.5	2.14	230	434	70.2	129	0.8	0.152	0.0498	0.00332	0.0395
FGD-4	5/11/2020	40.6	14.7	1.53	204	247	198	52.9	0.3 J	0.145	0.0166	0.003	0.12
FGD-5	5/11/2020	100	52	3.64	125	232	307	83.8	0.413	0.165	0.156	0.003	0.0483
FGD-6	5/11/2020	27.4	7.17	0.743	235	275	189	70.7	0.292 J	0.109	0.0088 J	0.003	0.582
FGD-8	5/11/2020	381	198	19.9	801	518	2240	188	0.1	0.129	0.0152	0.0084	220
FGD-11	5/11/2020	103	28.5	4.42	306	230	560	43.3	0.365 J	0.166	0.0132	0.003	0.225
FGD-12	5/11/2020	15.6	8.03	5.31	22.1	34.6	19.3	19.9	<0.100	0.149	0.0371	0.00883	32.5
FGD-A-POND	5/11/2020	895	1490	195	563	134	3440	4680	20.6	104	0.422	0.00625	0.15
FGD-B-POND	5/11/2020	696	1020	106	351	68.8	1940	3930	15.6	84.4	0.182	0.003	0.17

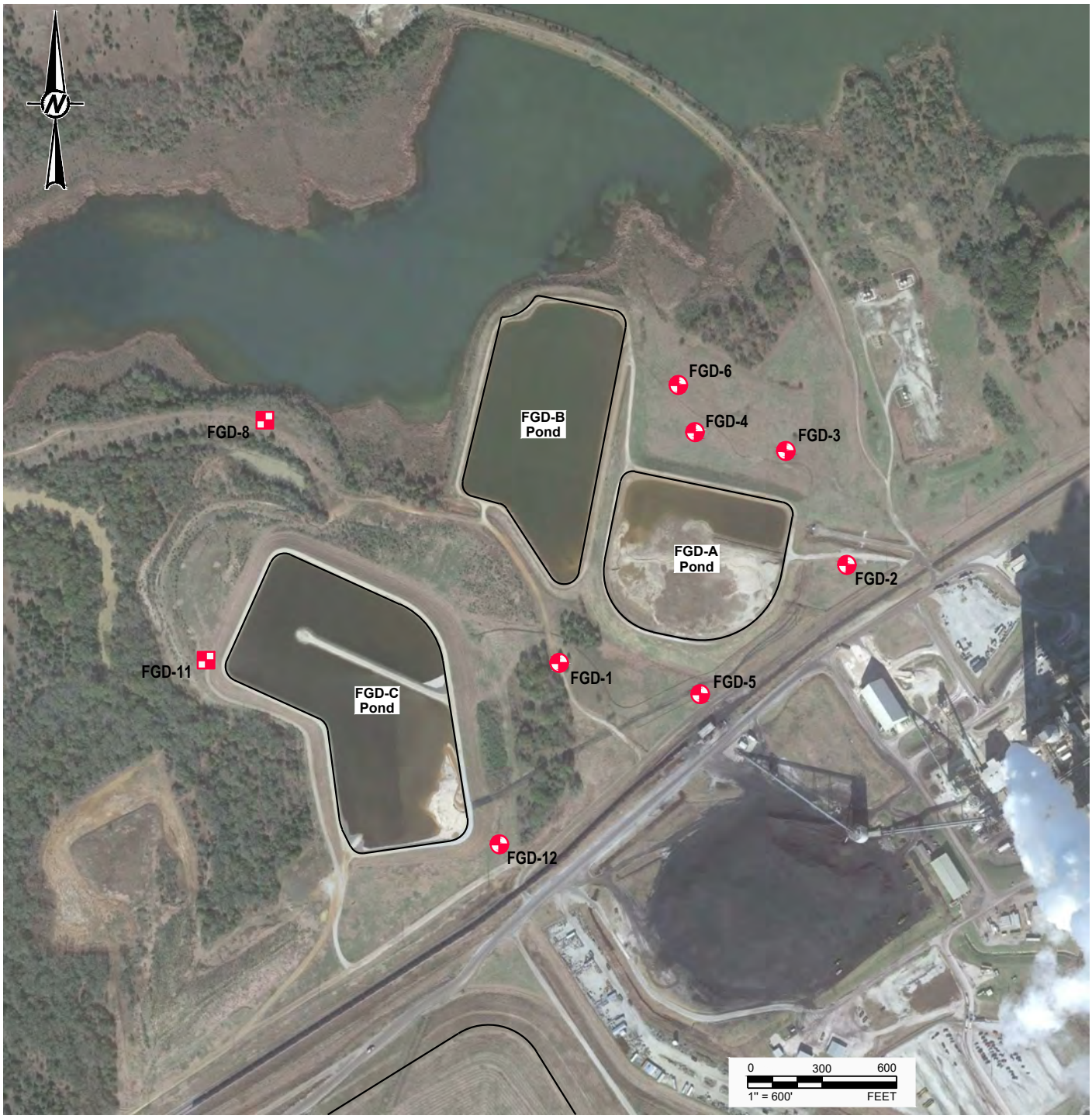
Notes:
mg/L - milligrams per liter
SU - standard units
J -estimated value

Table 1
Analytical Results
Groundwater and Pond Samples
Oak Grove Steam Electric Station FGD Pond Area

Sample Location	Sample Date	Iron (Fe3+) mg/L	Iron (Fe2+) mg/L	Selenium mg/L	Nitrate-N mg/L	Phosphorus mg/L	pH SU	Eh mV	TDS mg/L
FGD-1	5/16/2019	0.186	0.05	0.002	0.1	0.473	6.63	-32	320
FGD-2	5/16/2019	0.0799	0.05	0.0214	1.54	0.237	6.86	-91	729
FGD-3	5/16/2019	0.126	0.05	0.0423	1.41	0.096	6.73	-56	1100
FGD-4	5/16/2019	0.103	0.05	0.002	0.1	0.251	6.57	-41	651
FGD-5	5/16/2019	0.05	0.05	0.002	0.859	0.176	6.46	-31	801
FGD-6	5/16/2019	4.86	0.05	0.002	0.1	0.714	6.85	-28	710
FGD-8	5/16/2019	61	202	0.00274	0.107	0.219	6.67	-42	3970
FGD-11	5/16/2019	1.28	0.05	0.002	0.1	0.2	6.83	-48	1350
FGD-12	5/16/2019	0.425	0.05	0.002	1.42	0.168	6.52	-19	140
FGD-A-POND	6/6/2019	0.05	0.05	1.3	1.87	0.03	6.52	--	7410
FGD-B-POND	6/6/2019	0.00427	0.05	1.2	3.24	0.03	6.57	--	7240
FGD-1	5/11/2020	0.732	0.358	0.002	0.1	0.37	6.95	-55	448
FGD-2	5/11/2020	0.0636	0.05	0.0208	2.52	0.052	6.61	-27	2300
FGD-3	5/11/2020	0.05	0.05	0.00993	0.535	0.053	6.62	16	777
FGD-4	5/11/2020	0.12	0.05	0.002	0.1	0.139	6.62	-46	702
FGD-5	5/11/2020	0.05	0.05	0.002	0.563	0.03	6.82	-15	836
FGD-6	5/11/2020	0.582	0.05	0.002	0.129	0.076	6.75	-17	746
FGD-8	5/11/2020	68	152	0.0021	1.64	0.03	6.69	-14	4090
FGD-11	5/11/2020	0.225	0.05	0.002	0.1	0.064	6.74	-45	1300
FGD-12	5/11/2020	32.5	0.05	0.00678	1.22	0.056	6.59	-33	198
FGD-A-POND	5/11/2020	0.15	0.05	4.71	6.27	0.03	6.59	--	13200
FGD-B-POND	5/11/2020	0.17	0.05	0.681	2.23	0.03	6.64	--	8890

Notes:
mg/L - milligrams per liter
SU - standard units
J -estimated value

Exhibits



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- BACKGROUND CCR MONITORING WELL

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 12/9/18.

CLIENT
LUMINANT

PROJECT
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

TITLE
SITE LOCATION MAP

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-23
DESIGNED	AJD
PREPARED	AJD
REVIEWED	WFV
APPROVED	WFV

PROJECT NO. 19122262 | REV. 0 | EXHIBIT 1

LEGEND

- CCR MONITORING WELL
- BACKGROUND CCR MONITORING WELL
- CCR DELINEATION WELL
- (410.06) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 400 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 1 FT)

NOTE(S)

1. NATURE AND EXTENT DELINEATION IS NOT NECESSARY BASED ON THE UPDATED STATISTICAL EVALUATION.

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 12/9/18.

CLIENT
LUMINANT

PROJECT
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

TITLE
FGD PONDS
POTENTIOMETRIC SURFACE MAP
MAY 2020

CONSULTANT
GOLDER

YYYY-MM-DD	2020-09-30
DESIGNED	AJD
PREPARED	AJD
REVIEWED	WFV
APPROVED	WFV

PROJECT NO. 19134019 | REV. 0 | EXHIBIT 2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

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Last Edited By: adiamond Date: 2020-09-30 Time:1:50:53 PM | Printed By: adiamond Date: 2020-09-30 Time:1:51:28 PM
Path: \\texarkanadata\Projects - Round Rock_2019\19134019 - Luminant\PRODUCTION\1 - Oak Grove\ | File Name: FIG X - FGD Ponds POT Surface Map (May 2020).dwg

APPENDIX A

Sequential Extraction Results

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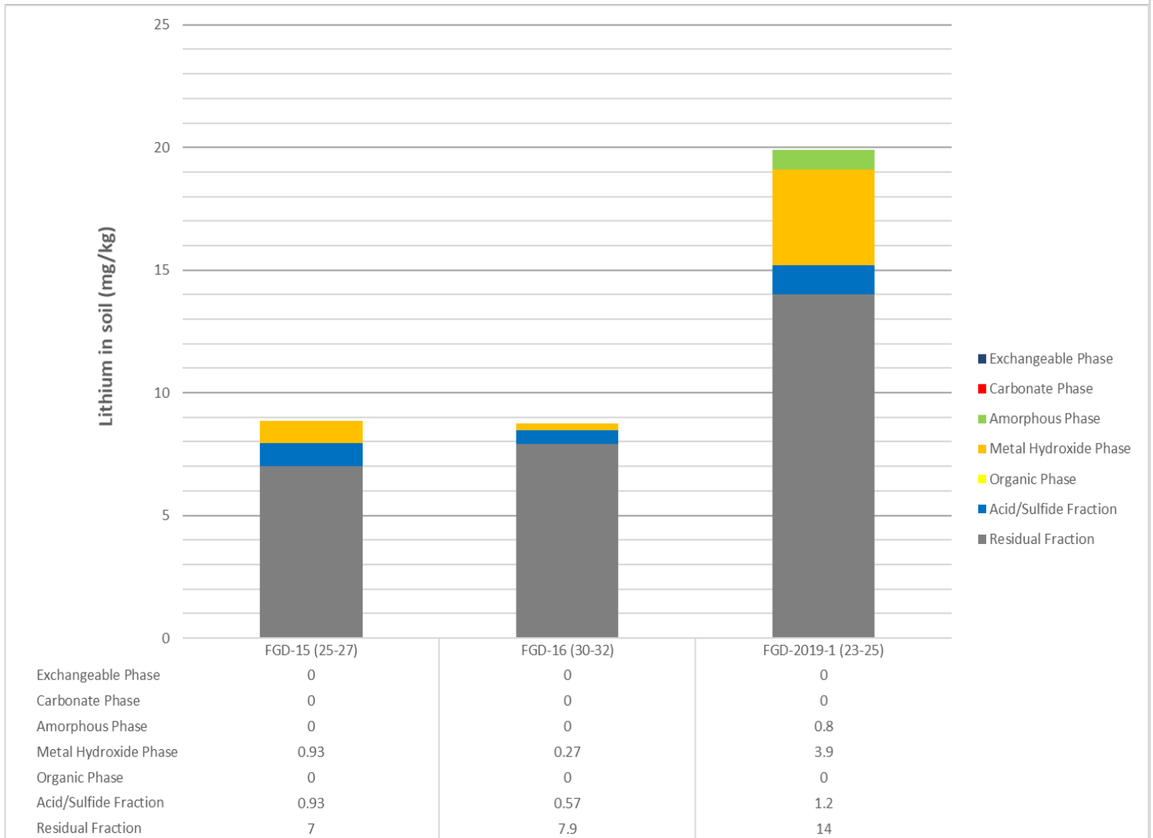
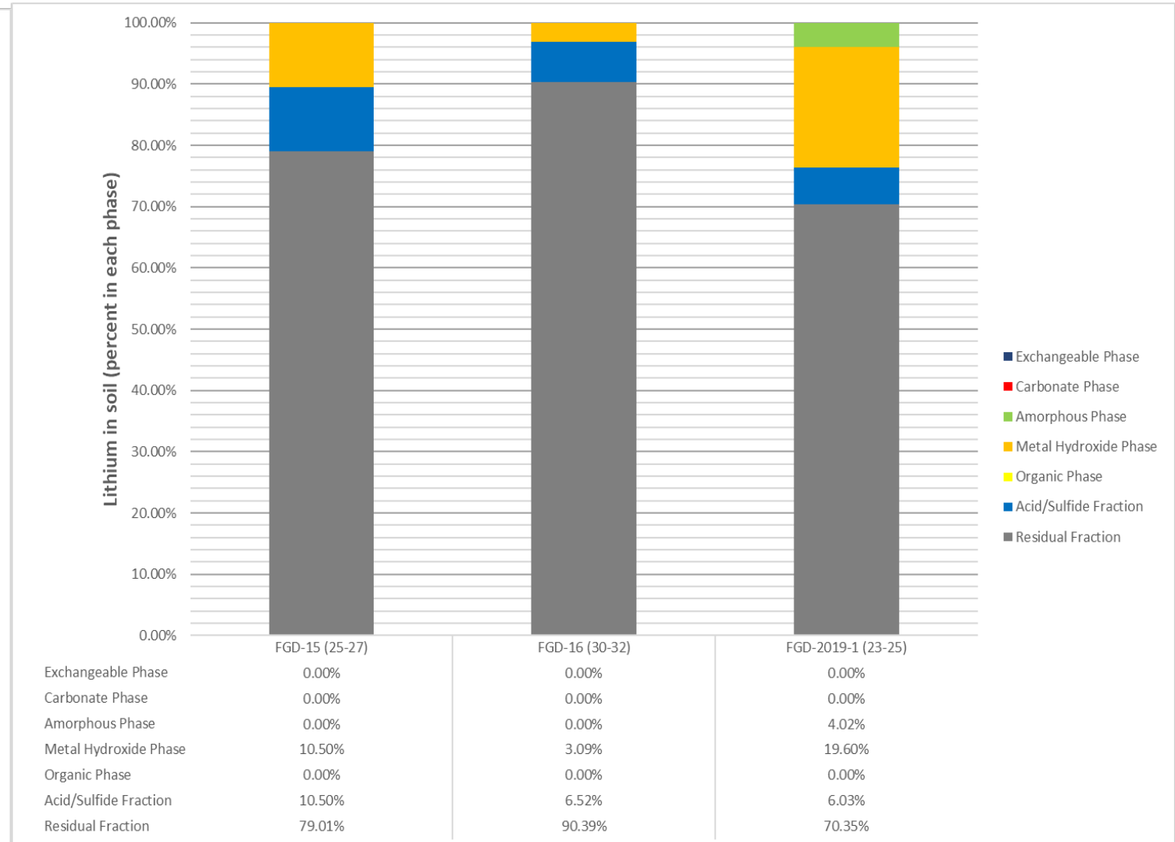


	FGD-15 (25-27)	FGD-16 (30-32)	FGD-2019-1 (23-25)
Exchangeable Phase	0	0	0
Carbonate Phase	0	0	0
Amorphous Phase	0	0	0.8
Metal Hydroxide Phase	0.93	0.27	3.9
Organic Phase	0	0	0
Acid/Sulfide Fraction	0.93	0.57	1.2
Residual Fraction	7	7.9	14

Borehole and depth below ground surface (Lithium in mg/kg soil)



	FGD-15 (25-27)	FGD-16 (30-32)	FGD-2019-1 (23-25)
Exchangeable Phase	0.00%	0.00%	0.00%
Carbonate Phase	0.00%	0.00%	0.00%
Amorphous Phase	0.00%	0.00%	4.02%
Metal Hydroxide Phase	10.50%	3.09%	19.60%
Organic Phase	0.00%	0.00%	0.00%
Acid/Sulfide Fraction	10.50%	6.52%	6.03%
Residual Fraction	79.01%	90.39%	70.35%

Borehole and depth below ground surface (Lithium in percent of total)

CLIENT
LUMINANT OAK GROVE SES
FGD POND AREA

CONSULTANT
GOLDER

PROJECT
ASSESSMENT OF CORRECTIVE MEASURES
GEOCHEMICAL ASSESSMENT

TITLE
SEQUENTIAL EXTRACTION

PROJECT NO.	PHASE	REV.	FIGURE
19134019	1000	A	

APPENDIX C

APPENDIX IV CONFIDENCE INTERVAL GRAPHS

EXPLANATION

95% Upper confidence limit

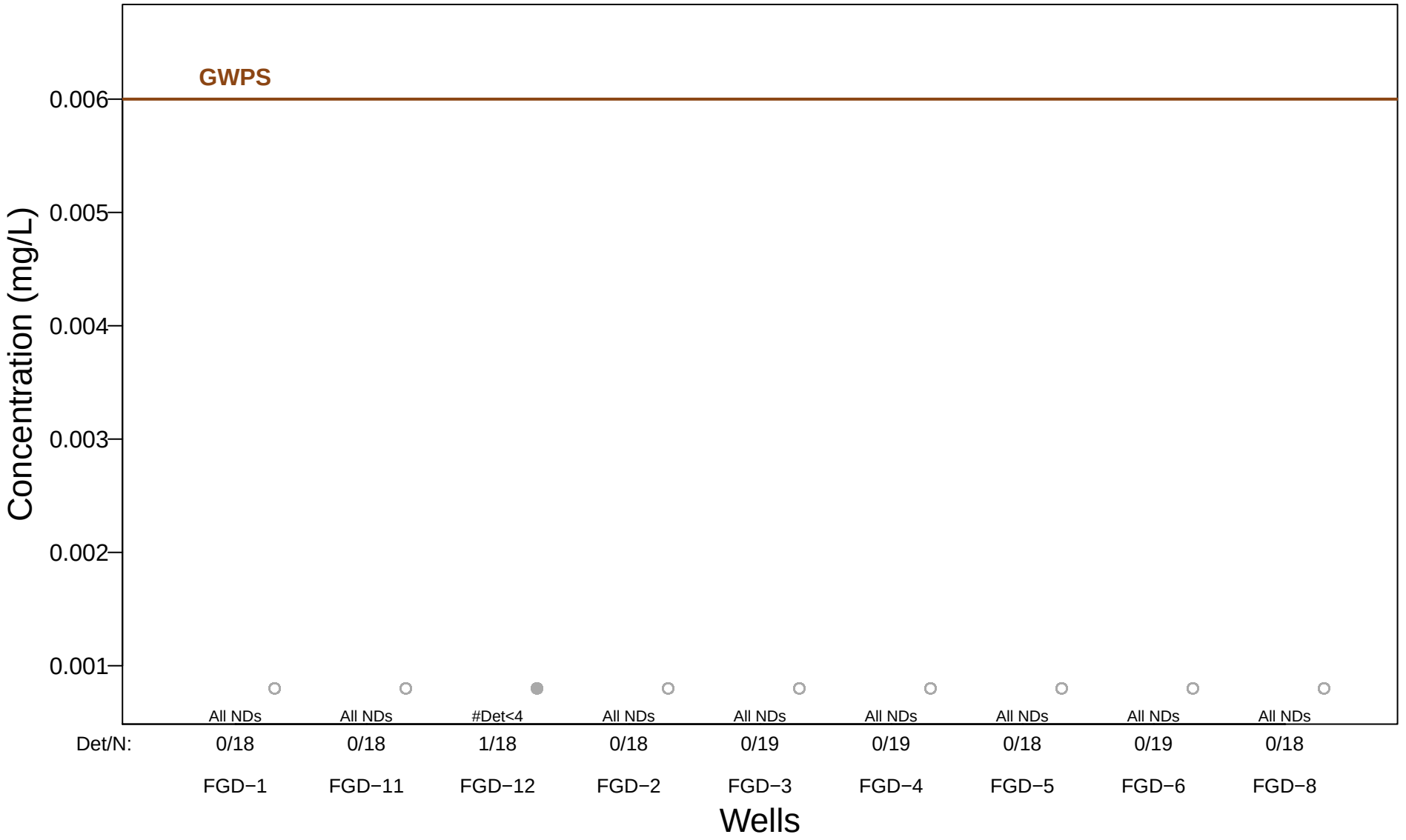
95% Lower confidence limit

Detected sample concentration

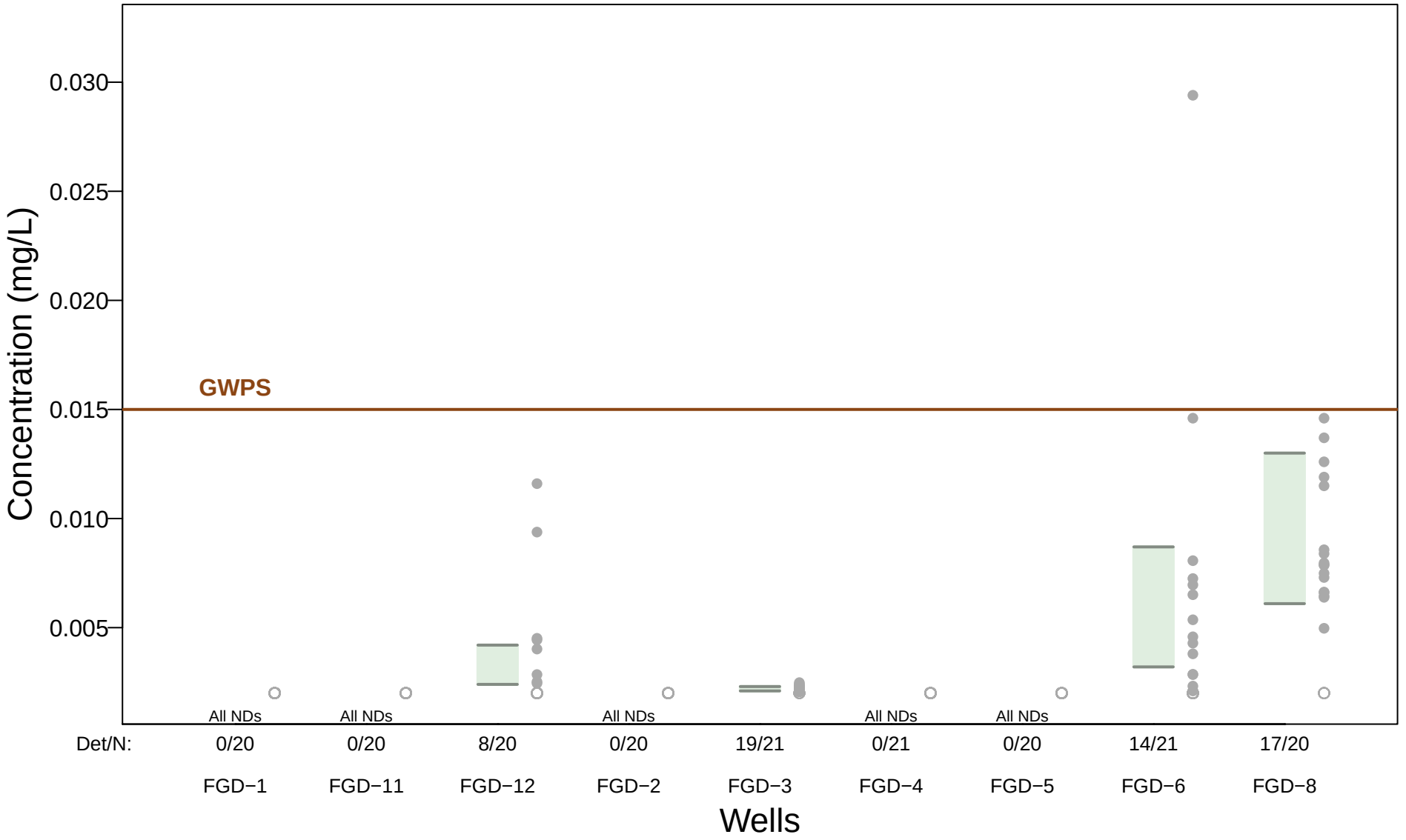
Non-detect sample result (concentration set to laboratory reporting limit)

Note: An SSL is indicated if the lower confidence limit exceeds the GWPS.

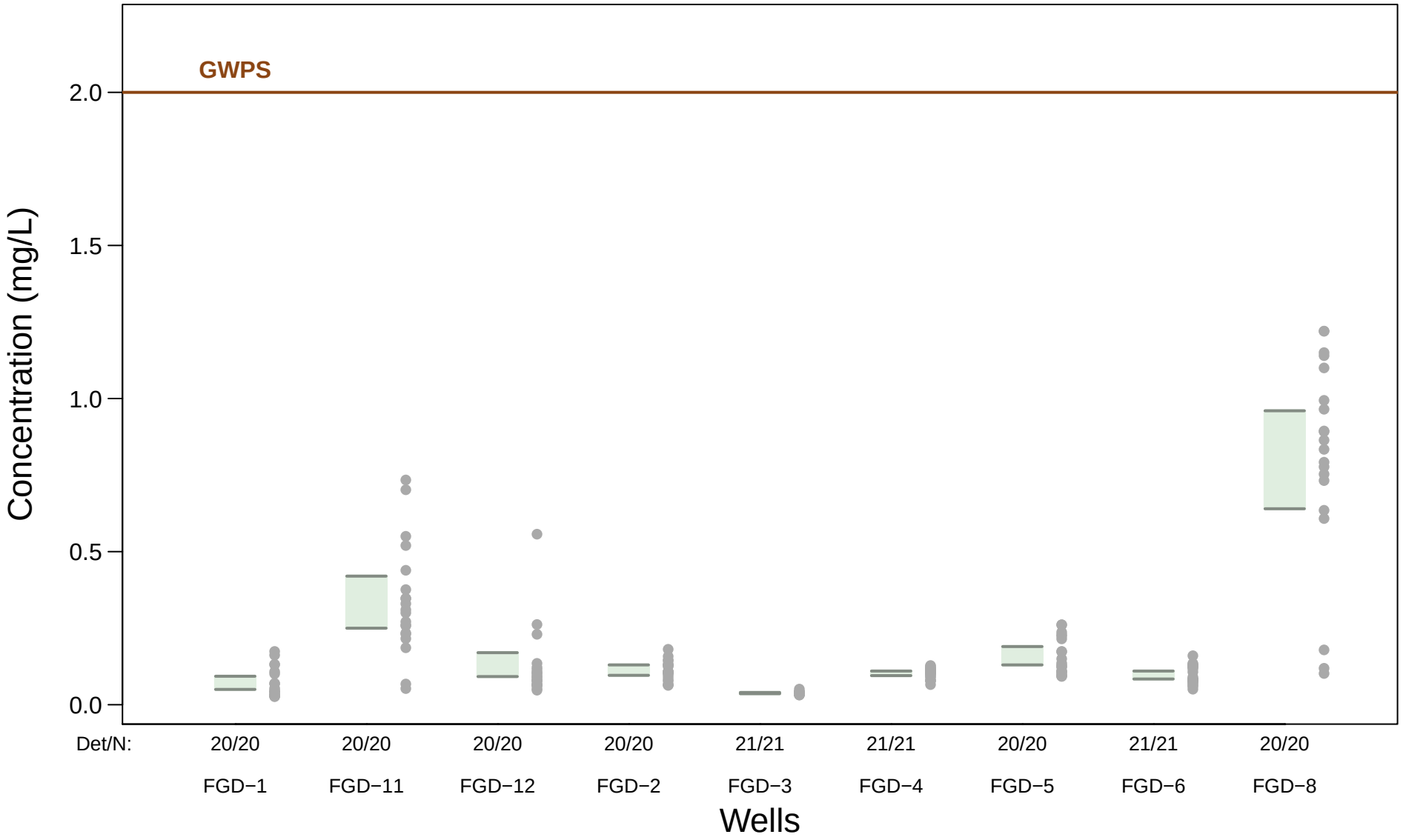
Antimony – 95% Confidence Intervals



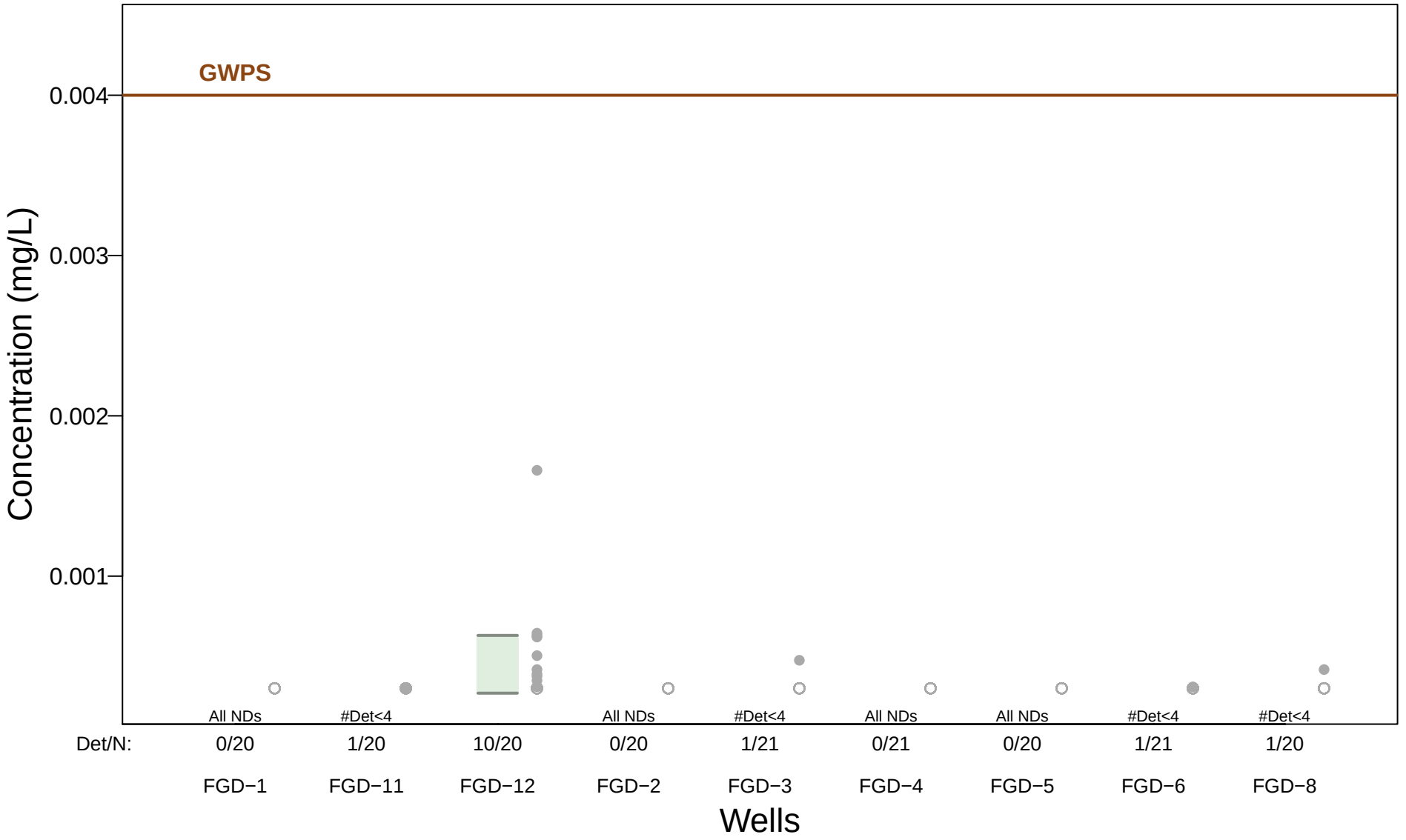
Arsenic – 95% Confidence Intervals



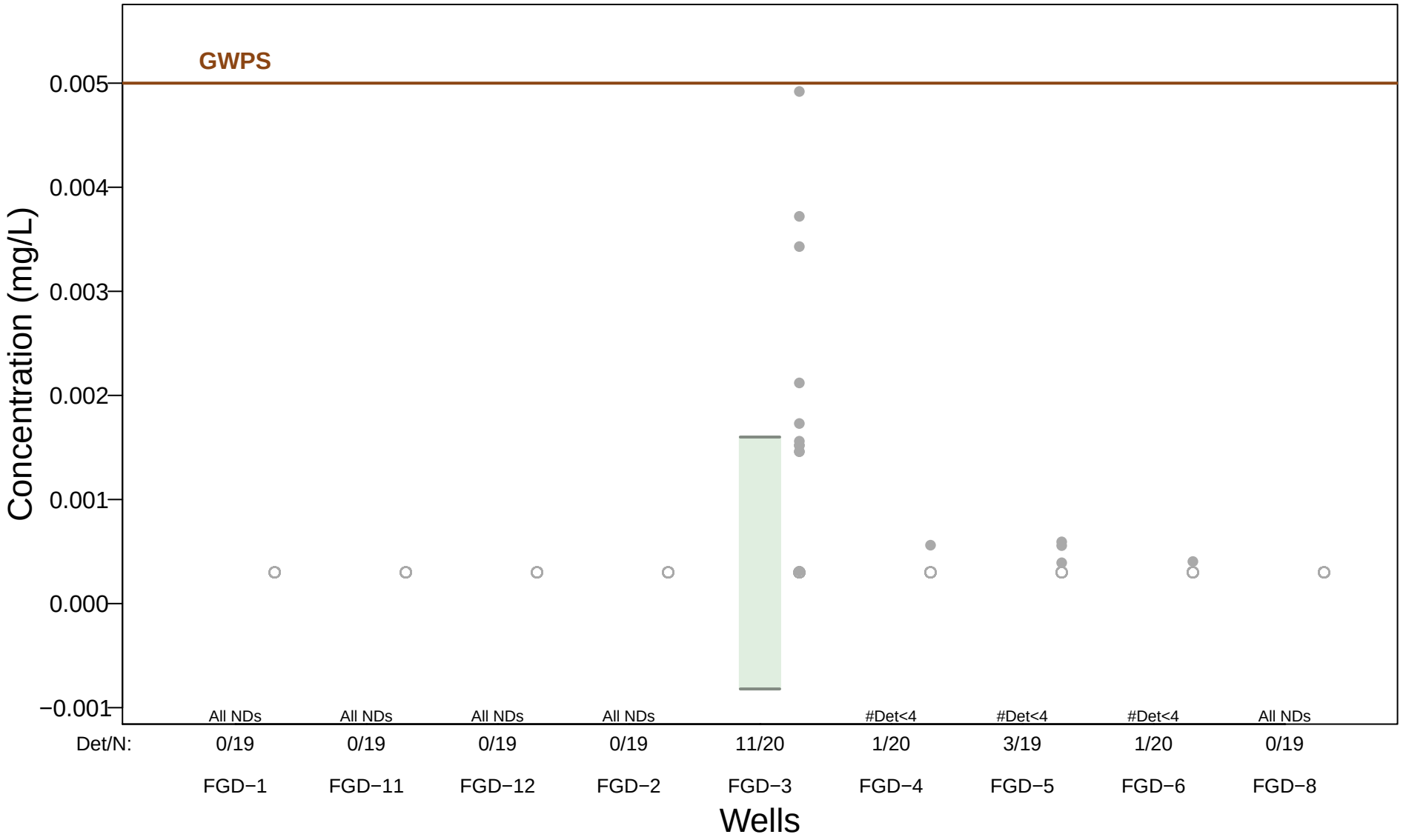
Barium – 95% Confidence Intervals



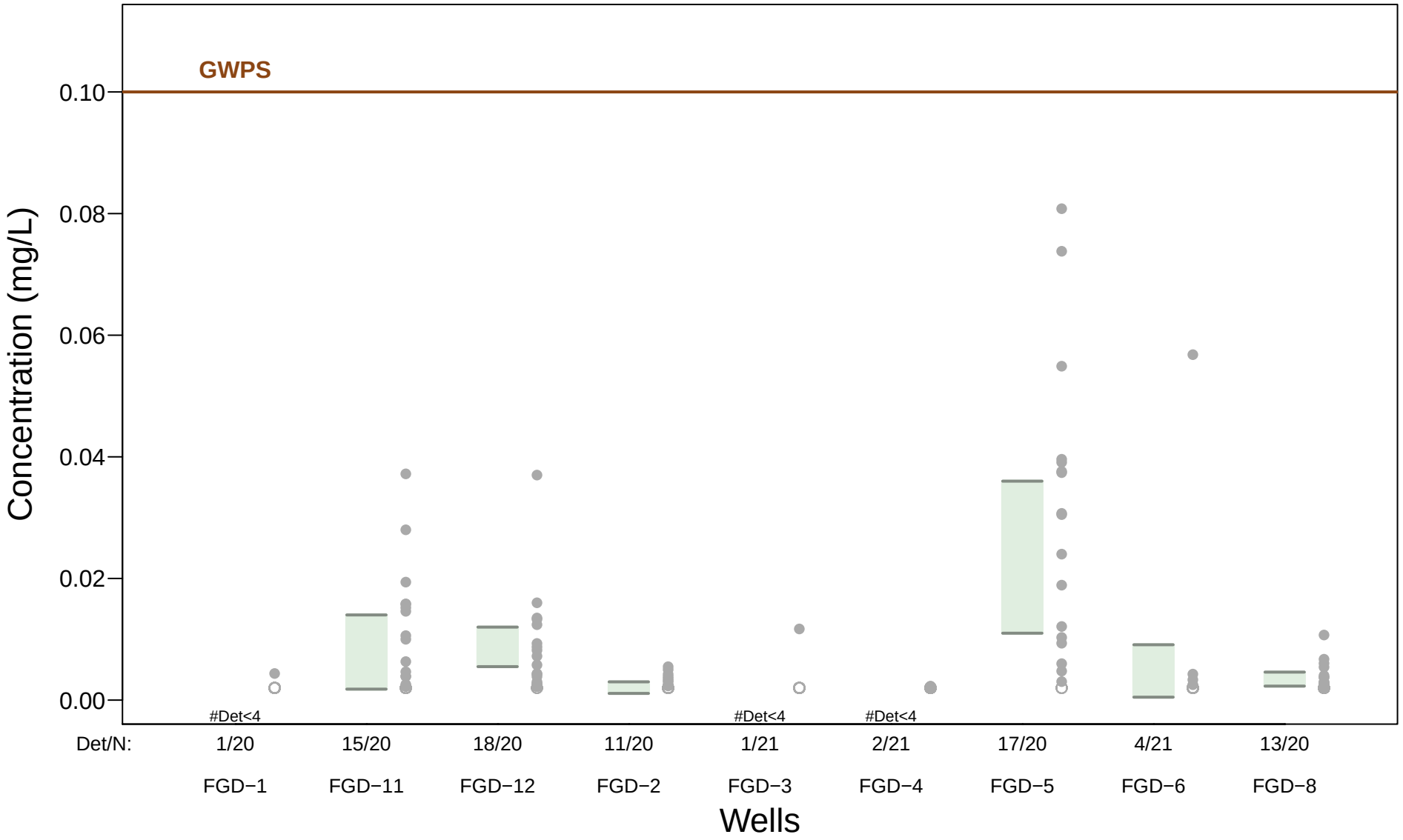
Beryllium – 95% Confidence Intervals



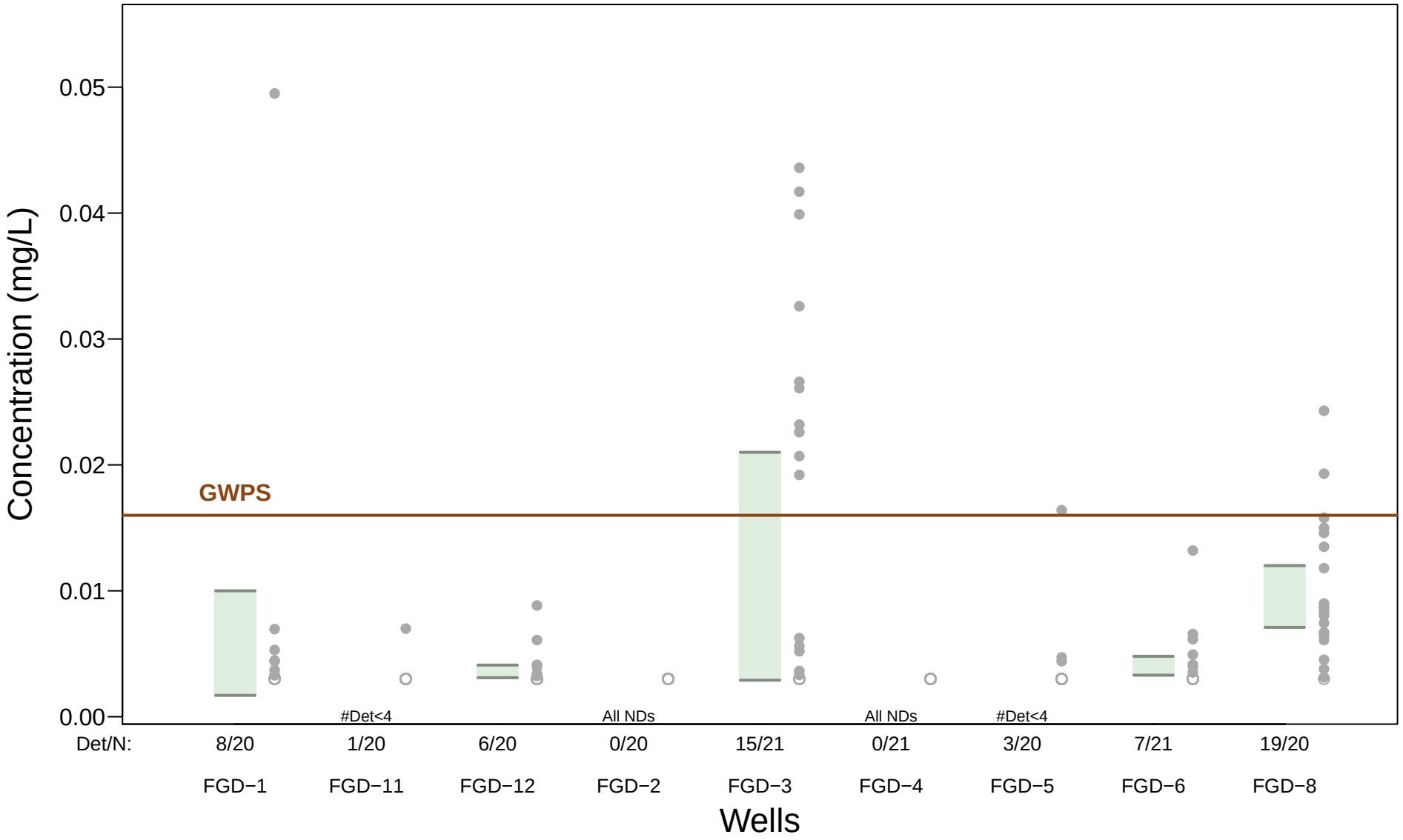
Cadmium – 95% Confidence Intervals



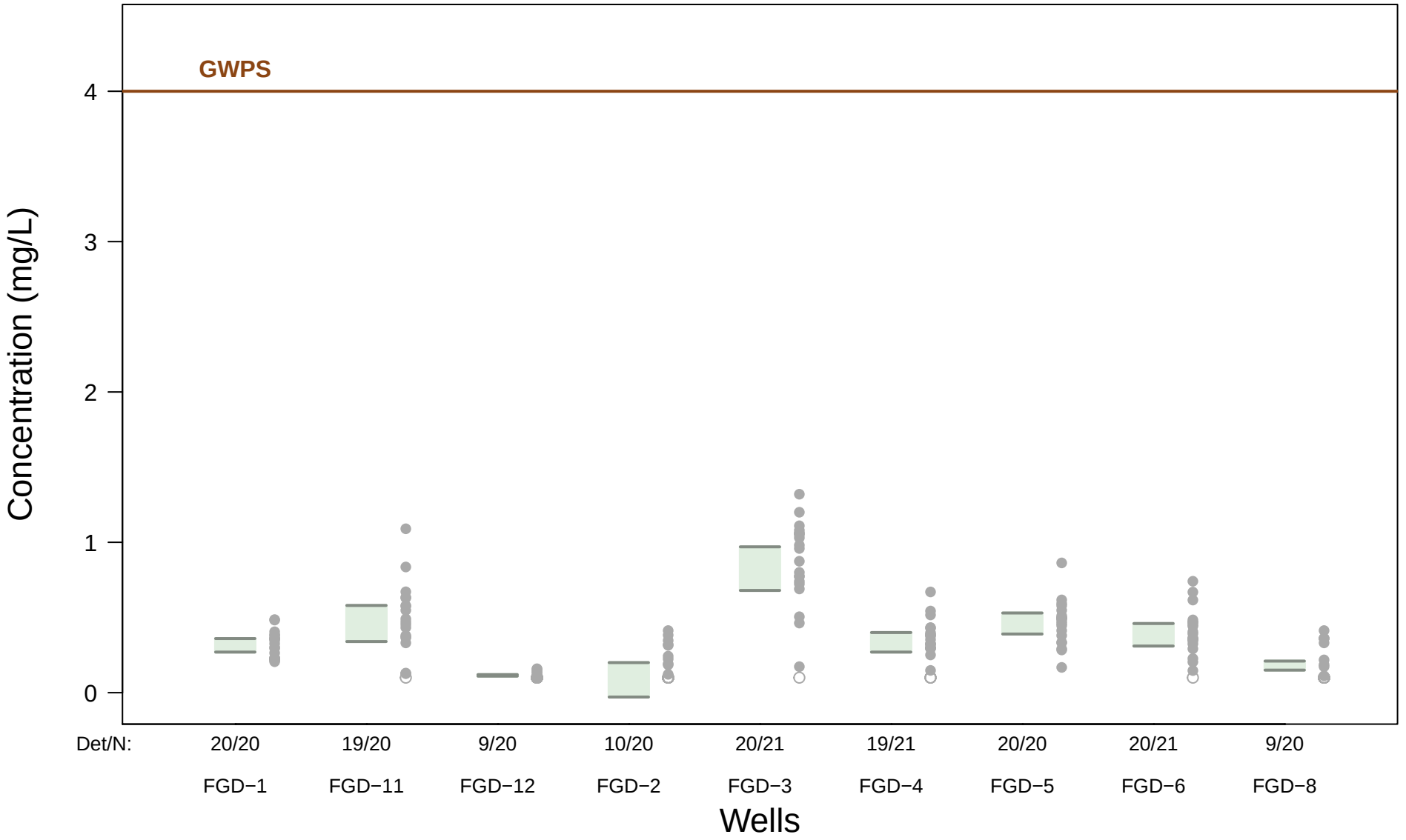
Chromium – 95% Confidence Intervals



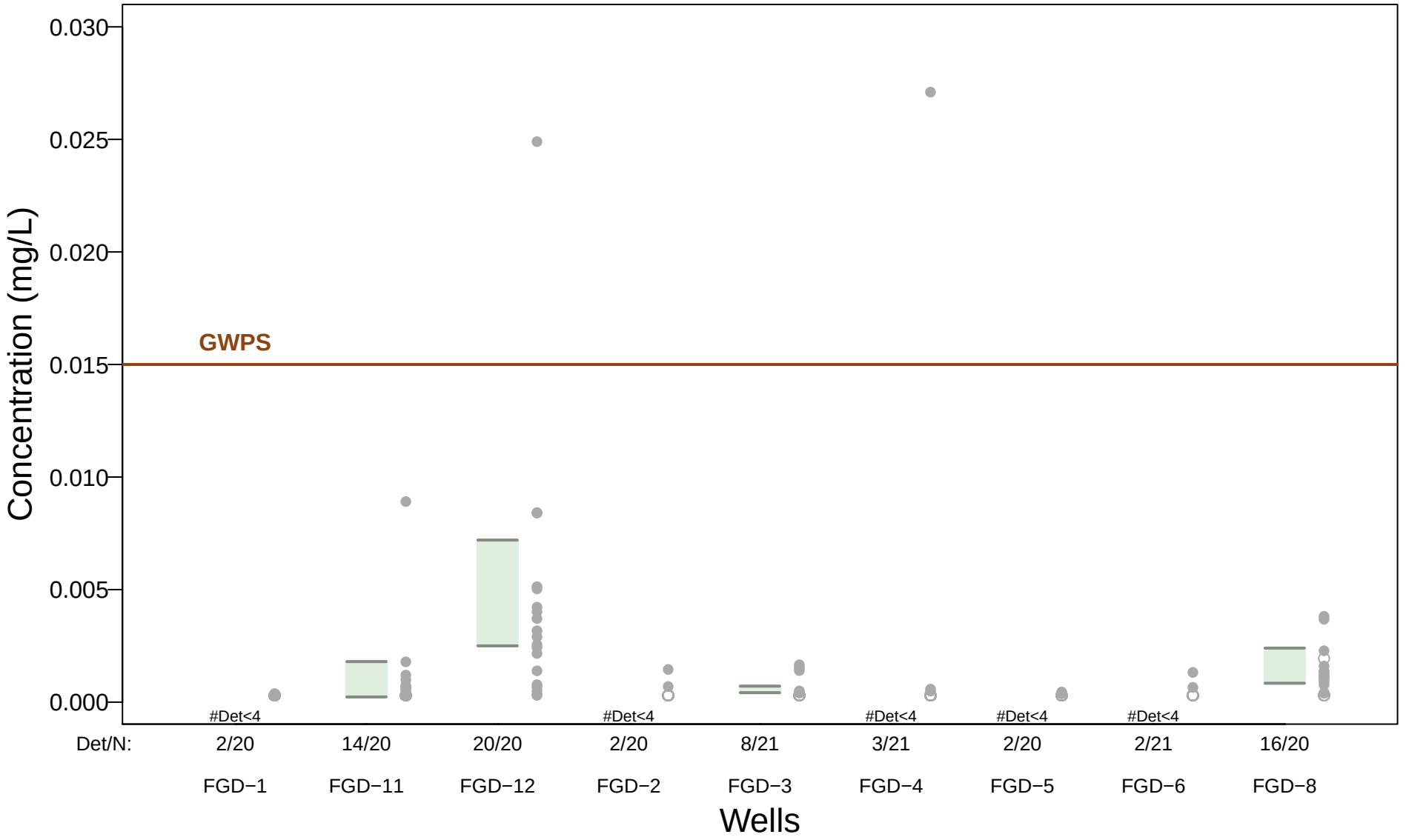
Cobalt – 95% Confidence Intervals



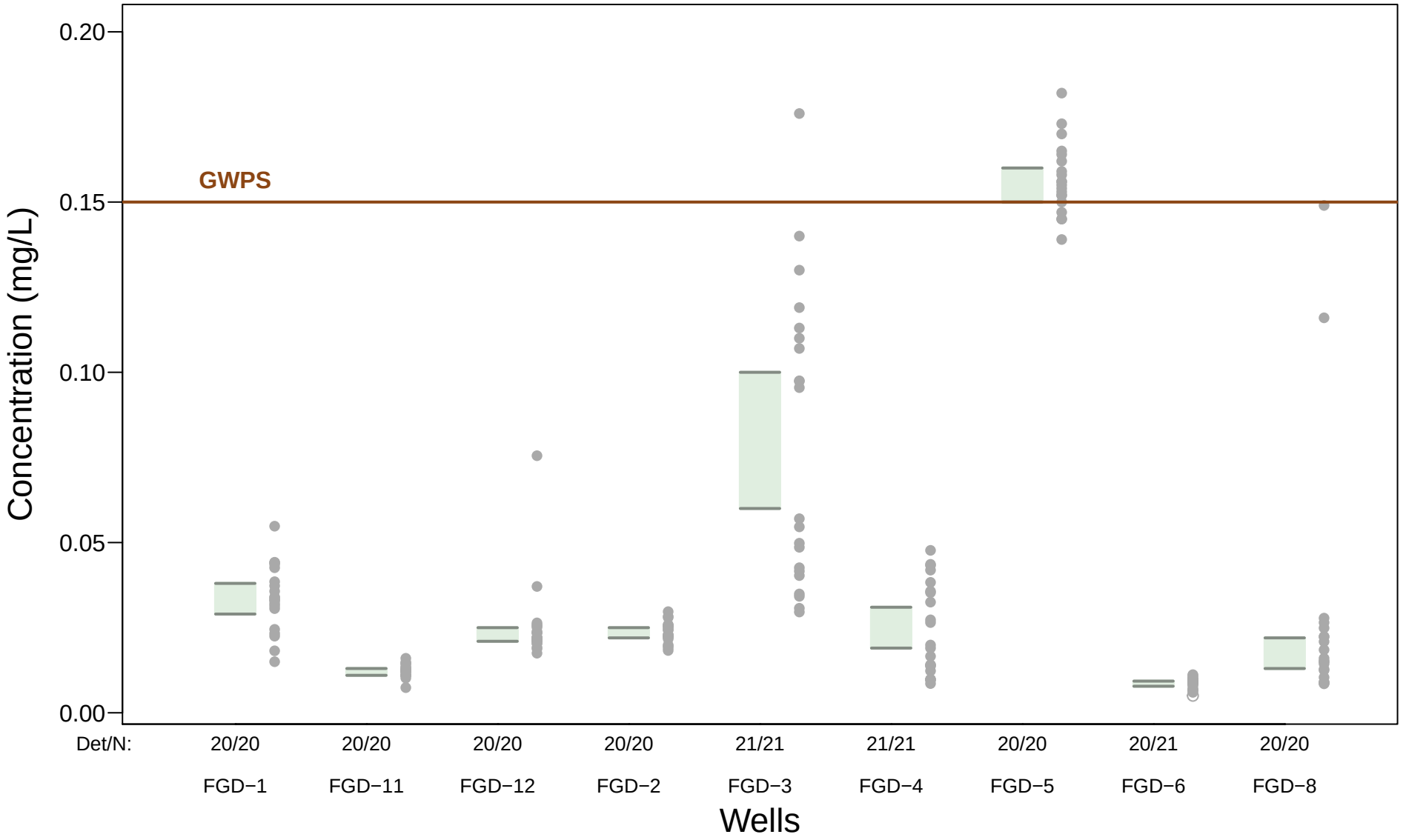
Fluoride (Appendix IV) – 95% Confidence Intervals



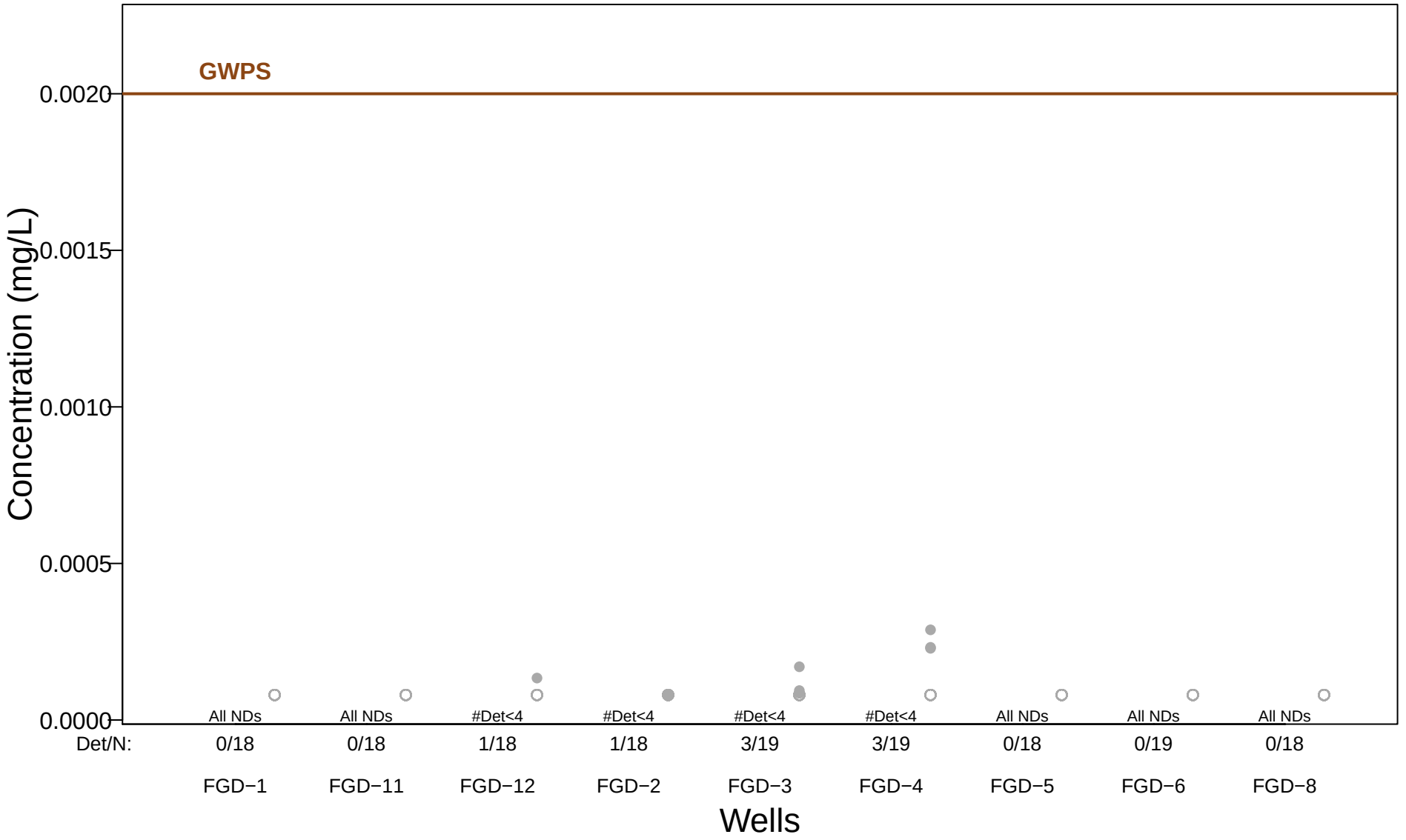
Lead − 95% Confidence Intervals



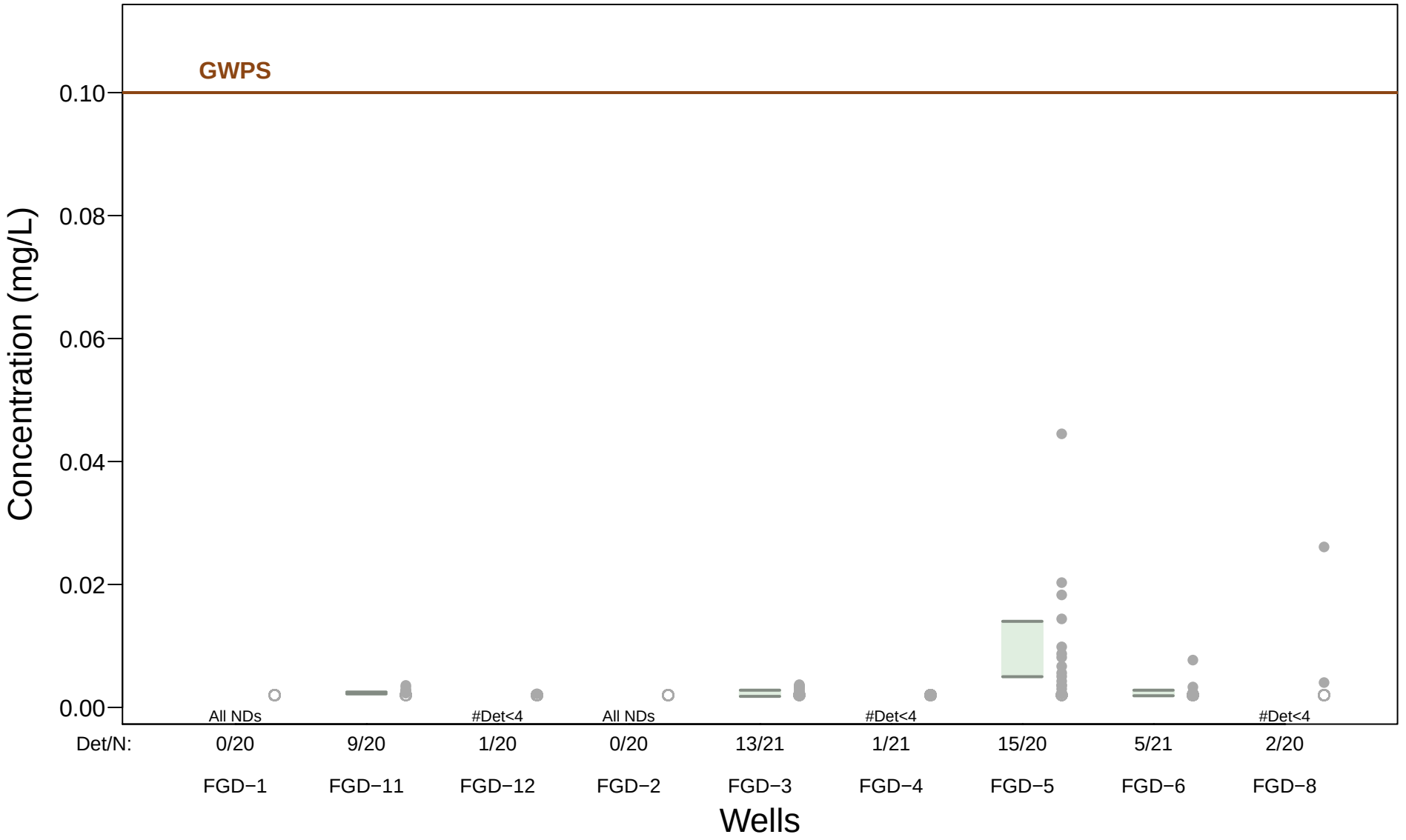
Lithium − 95% Confidence Intervals



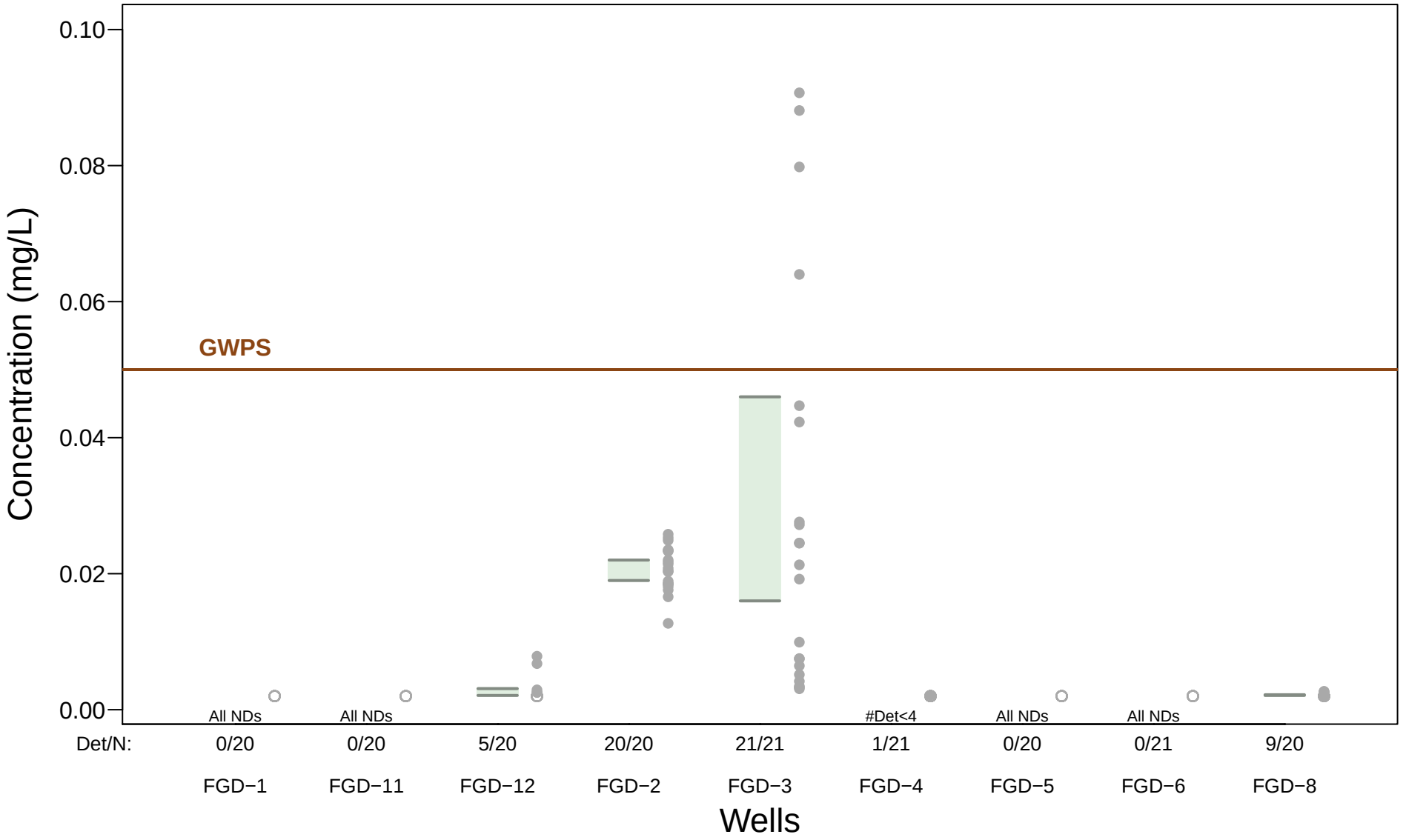
Mercury – 95% Confidence Intervals



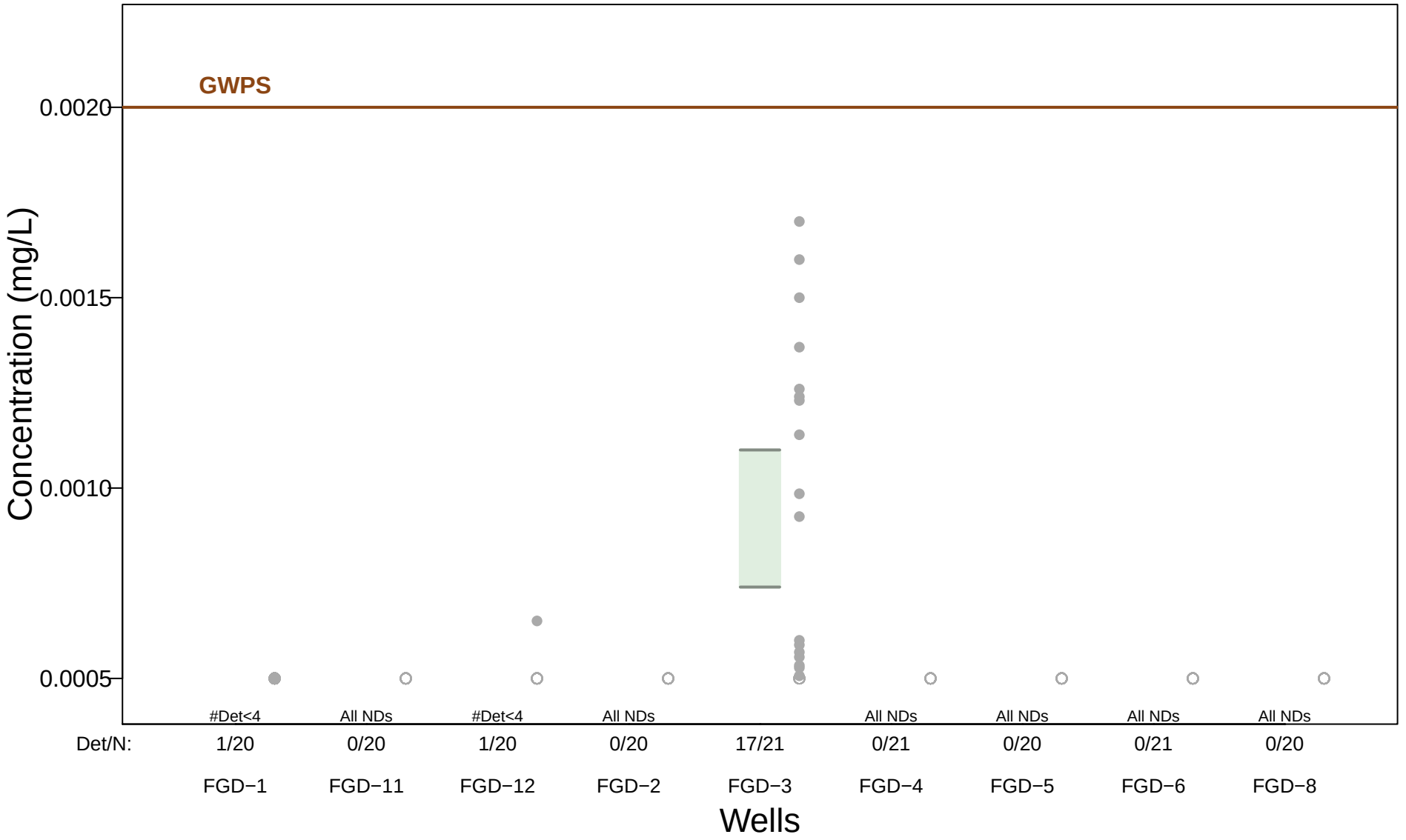
Molybdenum – 95% Confidence Intervals



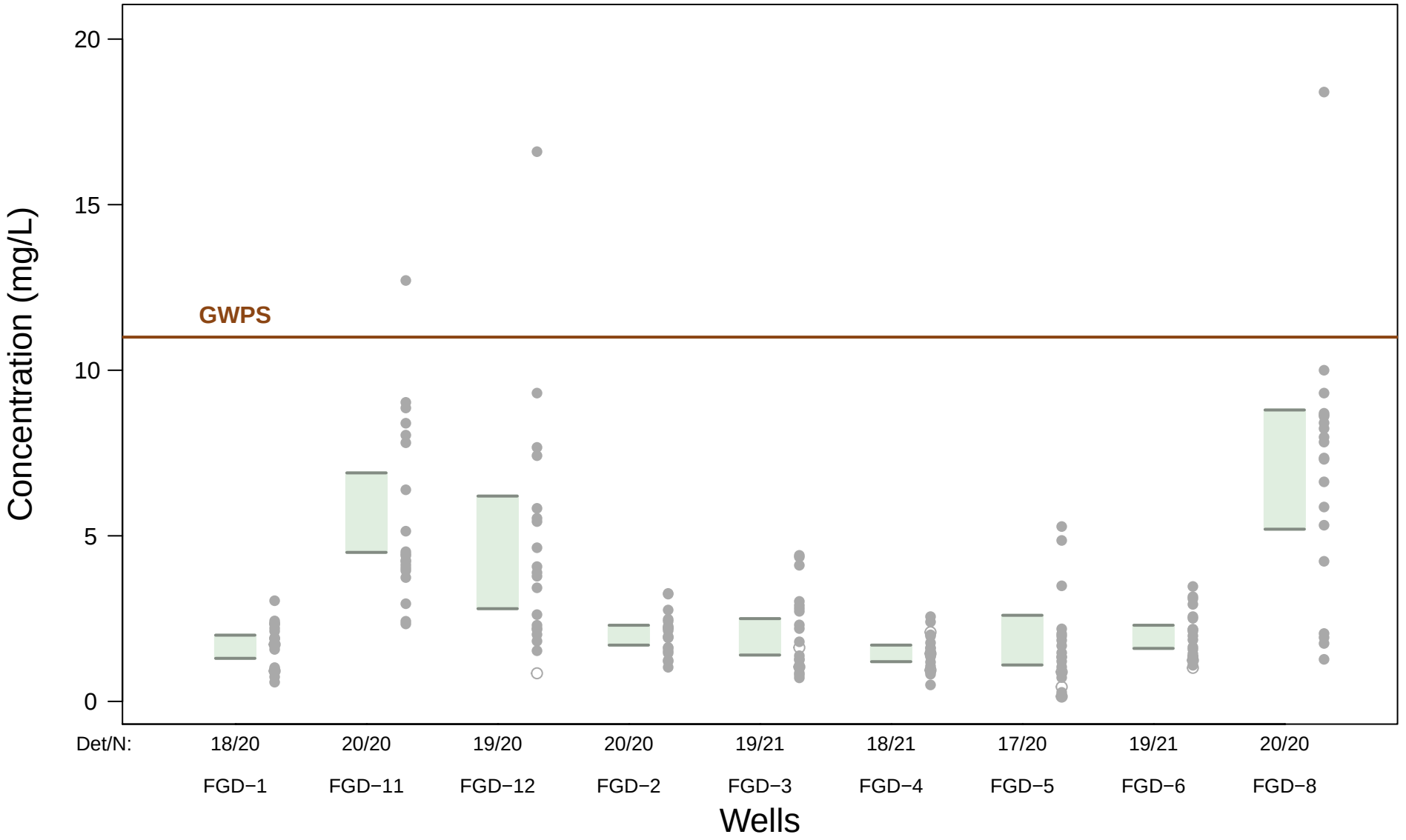
Selenium – 95% Confidence Intervals



Thallium – 95% Confidence Intervals

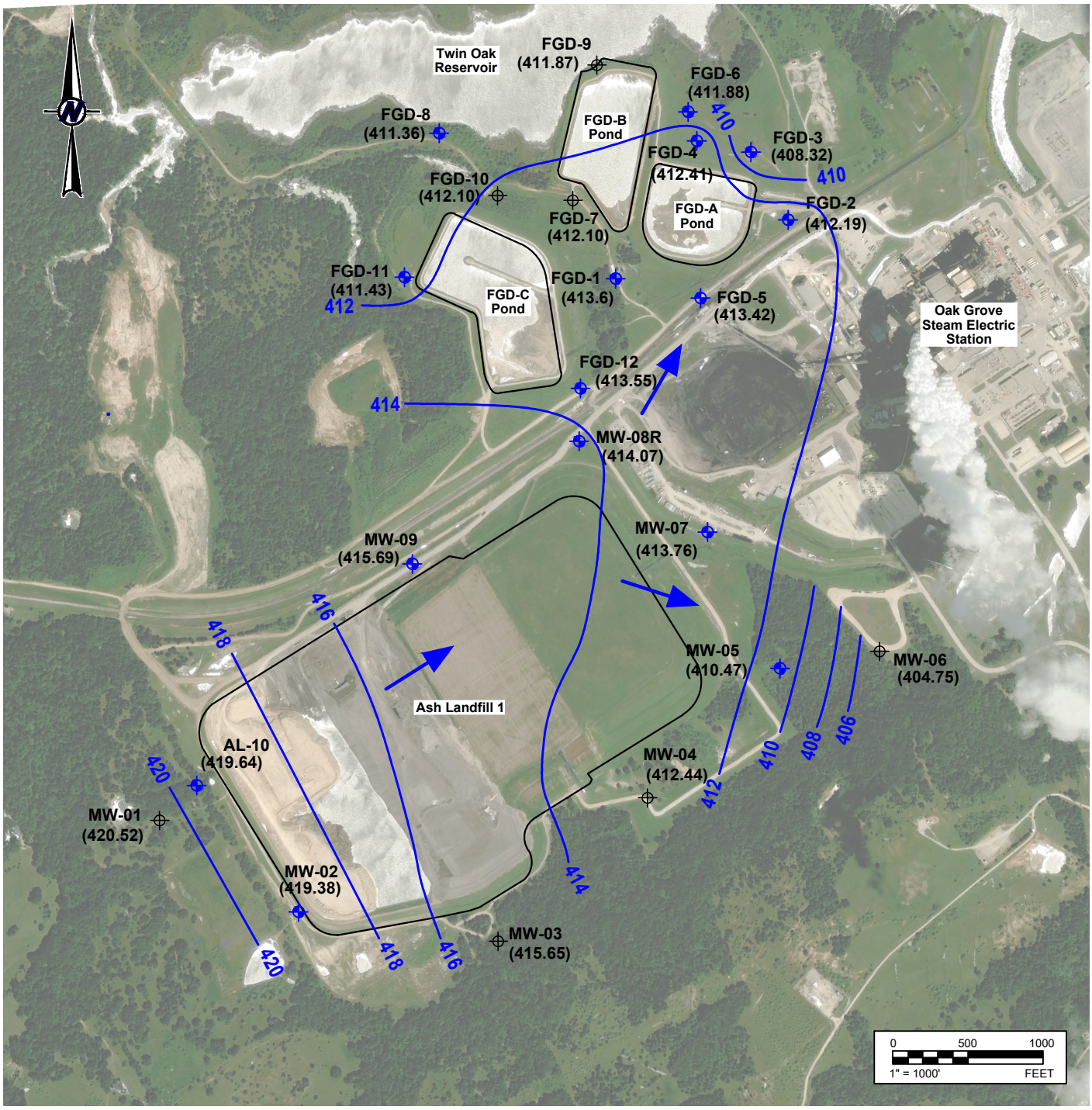


Radium−226/228 combined − 95% Confidence Intervals



APPENDIX D

GROUNDWATER POTENTIOMETRIC SURFACE MAPS



LEGEND

- NON-CCR MONITORING WELL
- CCR MONITORING WELL
- *(414.49)* GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 400 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 2 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

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

REFERENCE(S)

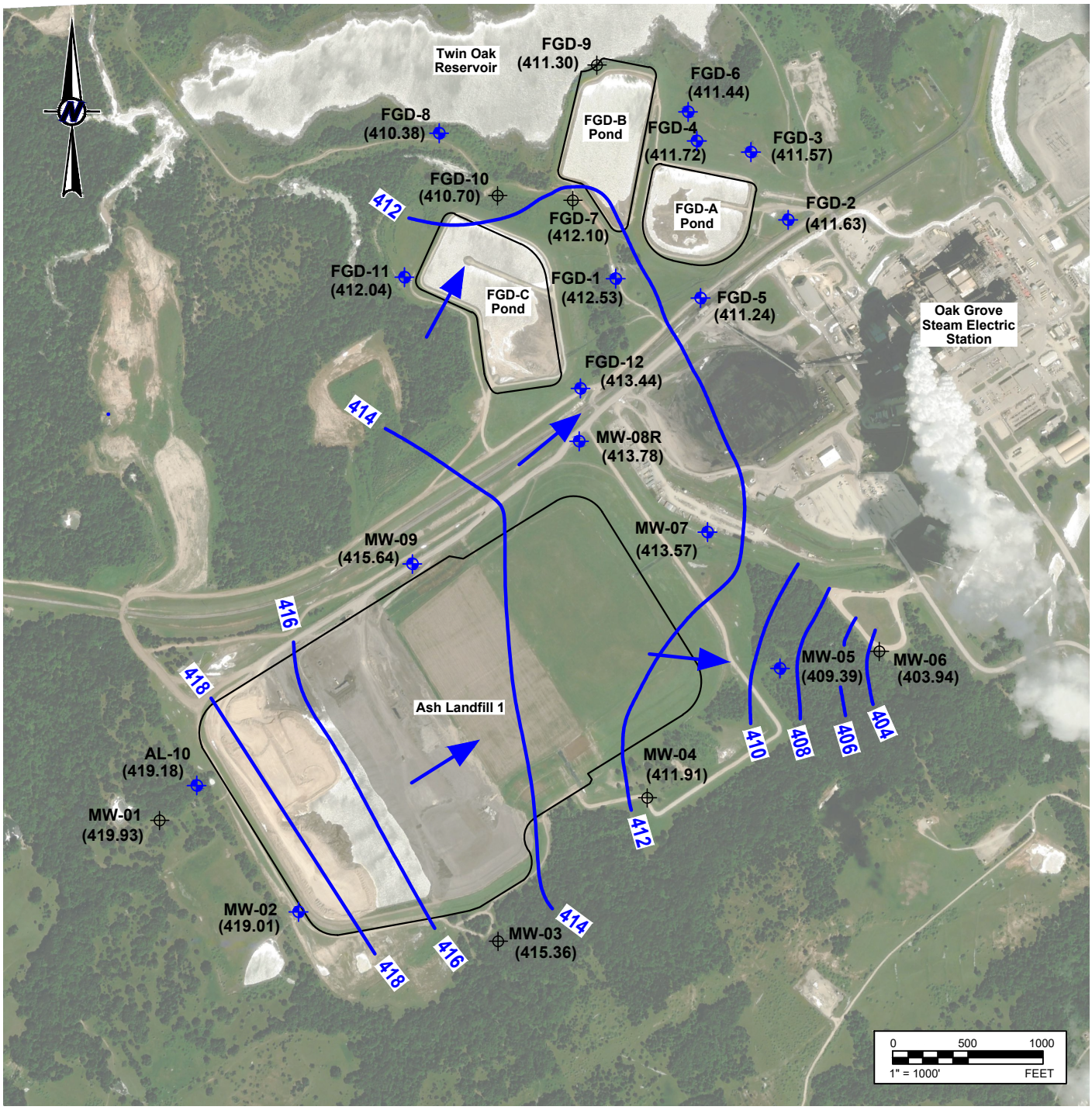
BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED JANUARY 2021

LUMINANT
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

Figure D.1
ASH LANDFILL AND FGD PONDS
POTENTIOMETRIC SURFACE MAP - MAY 2023

PROJECT: 23643.05	BY: SLB	DATE: 12/5/2023	CHECKED: WV

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



LEGEND

- NON-CCR MONITORING WELL
- CCR MONITORING WELL
- *(414.49)* GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 400 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 2 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
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

Figure D.2
ASH LANDFILL AND FGD PONDS
POTENTIOMETRIC SURFACE MAP - AUGUST 2023

PROJECT: 23643.05	BY: SLB	DATE: 12/5/2023	CHECKED: WV

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