2022 Annual Groundwater Monitoring and Corrective Action Report

Martin Lake Steam Electric Station A1 Area Landfill - Panola County, Texas

Prepared for:

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ACRONYMS AND ABBREVIATIONS

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

EXECUTIVE SUMMARY

WSP Golder has prepared this report on behalf of Luminant Generation Company LLC (Luminant) to satisfy the 2022 annual groundwater monitoring and corrective action reporting requirements of 40 C.F.R. Part 257 and 30 T.A.C. Chapter 352 for the A1 Area Landfill (the "CCR unit") at the Martin Lake Steam Electric Station (MLSES) in Panola County, Texas. The CCR unit and CCR monitoring well network are shown on Figure 1.

At the beginning and end of the 2022 reporting period, the CCR unit was operating under an Assessment Monitoring Program as described in §257.95. The Assessment Monitoring Program was established on July 16, 2018. Concentrations of Appendix IV constituents at statistically significant levels (SSLs) above groundwater protection standards (GWPSs) were identified in January 2019 for arsenic, barium, cobalt, and lithium at the A1 Area Landfill. An Assessment of Corrective Measures (ACM) was initiated on April 8, 2019 and was completed on September 5, 2019 in accordance with §257.96 to address the Appendix IV SSLs. A public meeting was held on November 13, 2019, pursuant to §257.96(e), to discuss the results of the ACM. A Remedy Selection Report (Golder 2022a) was completed in January 2022 in accordance with the requirements of §257.97. MNA with source control measures was selected as the remedy to address the Appendix IV constituents observed at SSLs. A Site-specific feasibility study to evaluate MNA as a potential groundwater remedy for the Appendix IV constituents observed at SSLs was performed in accordance with guidance and best practices promulgated by the USEPA (USEPA 2007a and 2007b) and Interstate Technology and Regulatory Council (ITRC 2010). Summary reports documenting the MNA feasibility study were included as attachments to the Remedy Selection Report.

During 2022, SSLs above GWPSs were observed at A1 Area Landfill only for cobalt in wells BMW-20 and BMW-27.

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*) has been 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

WSP Golder collected the initial Detection Monitoring Program groundwater samples from the A1 Area Landfill CCR monitoring well network in September 2017. The evaluation of those data was completed in 2018 using procedures described in the Statistical Analysis Plan (Golder 2022b) to identify statistically significant increases (SSIs) of Appendix III parameters over background concentrations. The Detection Monitoring Program sampling dates and parameters are summarized in the following table:

Detection Monitoring Program Summary

Sampling Dates	Parameters	SSIs	Assessment Monitoring Program Established
September 25-26, 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 A1 Area Landfill in July 2018 in accordance with §257.94(e)(2). WSP Golder collected the initial Assessment Monitoring Program groundwater samples 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, and the laboratory analytical reports are provided in Attachment 1. Appendix III and Appendix IV analytical data are summarized in Tables 3 and 4, respectively. Using the Appendix IV data collected during the assessment period through September 2018, SSLs above GWPSs were initially identified for arsenic, barium, cobalt, and lithium in 2019. 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 (arsenic, barium, cobalt, and lithium), pursuant to §257.96.

Statistical analysis of the data through 2022 was performed in accordance with the Statistical Analysis Plan (Golder 2022b) and USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-Unified Guidance (USEPA 2009). The statistical analysis included an evaluation of confidence intervals for each of the Appendix IV parameter data sets to evaluate whether constituent concentrations were present at concentrations

above GWPSs. Cobalt was the only Appendix IV parameter identified at an SSL above GWPSs during the 2022 Assessment Monitoring period. Graphical representations of the statistical analyses are provided in Attachment 2.

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

Assessment Monitoring Program Summary

Sampling Dates	Analytical Data Receipt Date	Parameters Collected	SSL(s)	SSL(s) Determination Date	Corrective Measures Assessment Initiated	Corrective Measures Assessment Completed
June 11-12, 2018	July 21, 2018	Appendix III Appendix IV	NA	NA	NA	NA
September 13-14, 2018	October 12, 2018	Appendix III Appendix IV	As, Ba, Co, Li	January 7, 2019	April 8, 2019	September 5, 2019
May 15, 2019	June 18, 2019	Appendix III Appendix IV	Co	September 5, 2019	NA	NA
September 4 and 9, 2019	October 14, 2019	Appendix III Appendix IV	Co	January 8, 2020	NA	NA
May 20-22, 2020	June 24, 2020	Appendix III Appendix IV	Co	August 17, 2020	NA	NA
September 29-30, 2020	October 27, 2020	Appendix III Appendix IV	Co	December 7, 2020	NA	NA
June 14-15, 2021	July 19, 2021	Appendix III Appendix IV	Co	July 19, 2021	NA	NA
October 6-7, 2021	November 15, 2021	Appendix III Appendix IV	Co	January 10, 2022	NA	NA
May 26, 2022	July 13, 2022	Appendix III Appendix IV	Co	August 1, 2022	NA	NA
September 22-23, 2022	November 9, 2022	Appendix III Appendix IV	Co	December 24, 2022	NA	NA

Notes:

NA: Not Applicable

3.0 KEY ACTIONS COMPLETED IN 2022

Assessment Monitoring Program groundwater monitoring events were completed in May and September 2022. The number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and the analytical results for the groundwater samples are summarized in Table 3 (Appendix III parameters) and Table 4 (Appendix IV parameters). A map showing the CCR unit and monitoring wells is provided as Figure 1. No CCR wells were installed or decommissioned in 2022.

Water elevations measured in the CCR wells during the 2022 semi-annual groundwater sampling events were used to develop groundwater potentiometric surface maps, which are presented in Attachment 3. The inferred direction of groundwater flow was generally from the northeast to the southwest, south, and southeast during both semi-annual groundwater sampling events in 2022 at an approximate rate of 11 feet per year.

As noted in Section 2.0, an ACM for the Appendix IV parameters identified at SSLs above GWPSs in 2018 (arsenic, barium, cobalt, and lithium) was completed in September 2019 to assess potential corrective measures alternatives. A public meeting was held on November 13, 2019, pursuant to §257.96(e), to discuss the results of the ACM. A Remedy Selection Report (Golder 2022a) was completed in January 2022 in accordance with the requirements of §257.97. MNA with source control measures (capping) was selected as the remedy to address the Appendix IV constituents observed at SSLs. A Site-specific feasibility study to evaluate MNA as a potential groundwater remedy for the Appendix IV constituents observed at SSLs was performed in accordance with guidance and best practices promulgated by the USEPA (USEPA 2007a and 2007b) and Interstate Technology and Regulatory Council (ITRC 2010). Summary reports documenting the MNA feasibility study were included as attachments to the Remedy Selection Report. Based on the results of the MNA feasibility study, the following was concluded regarding the Appendix IV constituents identified at SSLs:

- Physical and chemical attenuation of arsenic, barium, cobalt, and lithium is occurring at the Site. Concentrations of these constituents in groundwater are stable or decreasing and the aquifer has adequate capacity to attenuate these constituents in a reasonable timeframe. Geochemical modeling indicates that attenuation will be efficient and stable in the long term. Therefore, MNA with source control measures is considered an effective corrective measure for the Site.

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

control measures and MNA as a remedy will be assessed based on the evaluation of sample concentrations against GWPSs and an evaluation of long-term trends in the sample data.

During 2022, SSLs above GWPSs were observed at the A1 Area Landfill for cobalt in wells BMW-20 and BMW-27. Notification of the observed SSLs were submitted to the executive director via email as required under 30 TAC § 352.951(d) on August 5, 2022, for the May sampling event, and January 6, 2023 for the September sampling event. SSLs above GWPS were not observed for any of the other Appendix IV constituents in 2022. A time series plot of cobalt concentrations in BMW-20 and BMW-27 is provided in Attachment 4. The time series plot shows that cobalt concentrations have been stable or decreasing in BMW-20 and BMW-27 since about 2019. Furthermore, cobalt concentrations in BMW-27 have been below the GWPS in all samples collected from 2019 onward. Cobalt concentrations have also been below the GWPS in all samples collected from well BMW-32, which was installed downgradient of BMW-20 and BMW-27 in 2019 to delineate the cobalt SSLs in those wells. These data support the findings of the MNA feasibility study; specifically, that the source control and MNA remedy is effective at addressing SSLs above GWPSs at the Site.

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

The Assessment Monitoring Program will continue based on the SSLs of cobalt identified at the Site in 2022.

4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the CCR groundwater monitoring program in 2022.

5.0 KEY ACTIVITIES PLANNED FOR 2023

The following key activities are planned for 2023:

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

6.0 REFERENCES

Golder, 2019. CCR Assessment of Corrective Measures, Martin Lake Steam Electric Station – A1 Area Landfill, Panola County, Texas. September.

Golder, 2022a. Remedy Selection Report, Martin Lake Steam Electric Station – A1 Area Landfill, Panola County, Texas. January 18.

Golder, 2022b. Statistical Analysis Plan – Revision No. 1, Martin Lake Steam Electric Station – A1 Area Landfill, Panola 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.

Pastor, Behling & Wheeler, LLC (PBW), 2017. Statistical Analysis Plan, Martin Lake Steam Electric Station A1 Area Landfill. October 2017.

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

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

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

Signature Page

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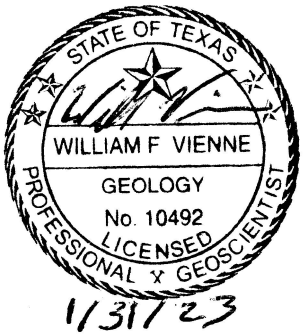
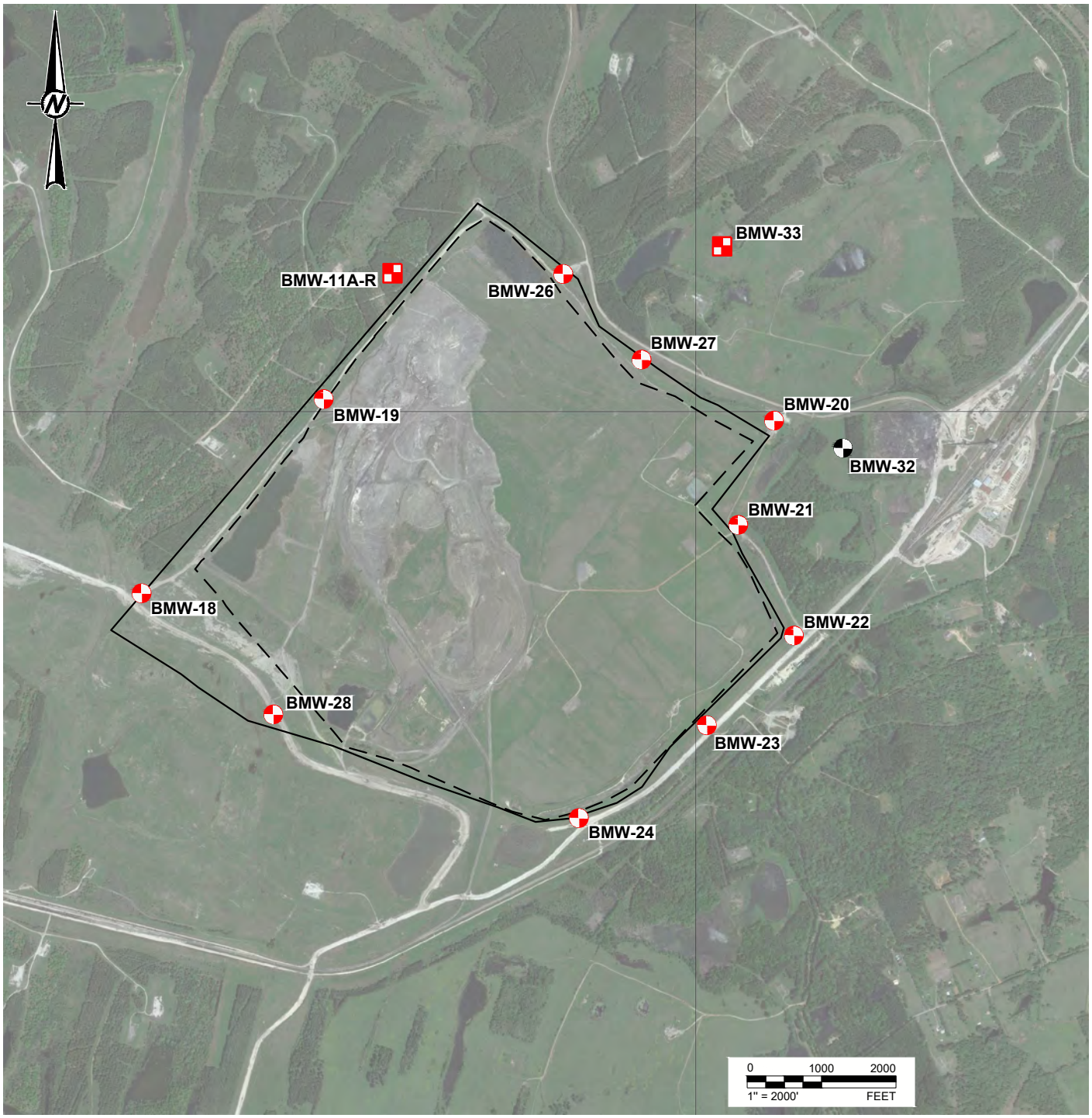


FIGURES



LEGEND

- DEED RESTRICTION BOUNDARY
- WASTE BOUNDARY
- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL
- CCR DELINEATION MONITORING WELL

STATE OF TEXAS
WILLIAM F. VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
1/31/23

REFERENCE(S)

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

CLIENT
LUMINANT

PROJECT
MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

TITLE
DETAILED SITE PLAN - A1 AREA LANDFILL

CONSULTANT

wsp

YYYY-MM-DD	2022-12-06
DESIGNED	AJD
PREPARED	AJD
REVIEWED	WFV
APPROVED	WFV

PROJECT NO.	CONTROL	REV.	FIGURE
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TABLES

Table 1
Statistical Background Values
MLSES A1 Area Landfill

Parameter	Statistical Background Value
Boron (mg/L)	0.546
Calcium (mg/L)	276
Chloride (mg/L)	35.5
Fluoride (mg/L)	0.4
field pH (s.u.)	5.81 7.58
Sulfate (mg/L)	1,100
Total Dissolved Solids (mg/L)	2,850

Table 2
Groundwater Protection Standards
MLSES A1 Area Landfill

Parameter	Groundwater Protection Standard
Antimony (mg/L)	0.006
Arsenic (mg/L)	0.0164
Barium (mg/L)	2
Beryllium (mg/L)	0.004
Cadmium (mg/L)	0.005
Chromium (mg/L)	0.1
Cobalt (mg/L)	0.0124
Fluoride (mg/L)	4
Lead (mg/L)	0.015
Lithium (mg/L)	0.103
Mercury (mg/L)	0.002
Molybdenum (mg/L)	0.1
Selenium (mg/L)	0.05
Thallium (mg/L)	0.002
Radium 226+228 (pCi/L)	10.7

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

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								
BMW-11-AR	10/29/15	0.332	91.5	11.3	<0.100	6.97	243	923
	12/30/15	0.285	92.3	2.39	0.26 J	6.87	114	642
	02/25/16	0.44	136	18.8	0.123 J	6.52	382	1,450
	04/07/16	0.391	151	17.5	<0.100	6.34	334	1,290
	06/09/16	0.417	182	19.8	<0.100	6.63	603	1,700
	08/11/16	0.389	170	20.8	<0.100	6.68	682	1,790
	10/26/16	0.316	99.7	15.8	<0.100	6.85	495	1,590
	12/14/16	0.409	201	19.8	<0.100	6.65	665	1,970
	09/25/17	0.448	199	15.2	<0.100	6.97	561	1,620
	06/12/18	0.634	173	8.37	0.323 J	6.82	320	1,080
	09/14/18	0.455	175	19.7	0.353 J	5.86	538	1,720
	05/15/19	0.374	138	6.11	0.198 J	6.84	324	970
	09/04/19	0.368	149	6.41	0.170 J	6.82	356	1,090
	05/20/20	0.289	114	4.43	<0.100	6.89	266	907
	09/29/20	0.349	148	6.37	0.408	6.42	275	1,240
	06/14/21	0.32	143	5.36	0.208 J	6.73	330	903
	10/06/21	0.318	158	5.83	<0.100	6.77	334	978
	05/26/22	0.331	119	7.46	0.169 J	6.73	285	1060
	09/23/22	0.383	167	17.2	<0.100	6.43	458	1410
BMW-33	06/13/19	--	97.5	83.8	0.342 J	--	256	1,100
	09/09/19	0.269	95.8	79.5	0.145 J	--	232	1,040
	05/21/20	0.241	112	67.7	<0.100	6.76	202	1,020
	09/30/20	0.228	131	60.9	0.410	6.73	184	1,000
	06/15/21	0.208	118	66.4	0.235 J	6.52	210	980
	10/07/21	0.179	138	67.8	<0.100	6.57	188	1040
	05/26/22	0.183	112	58.1	0.147 J	6.52	168	1060
	09/23/22	0.195	132	73.6	<0.100	6.59	174	945
Downgradient Wells								
BMW-18	10/30/15	0.41	7.2	26.6	0.148 J	6.65	97	768
	12/30/15	0.322	346	7.14	0.101 J	6.77	1,570	2,470
	02/26/16	0.406	9.49	17.1	0.164 J	6.91	90	508
	04/07/16	0.423	7.08	16.3	0.117 J	6.52	87	489
	06/09/16	0.429	7.32	18.7	0.128 J	6.64	101	498
	08/11/16	0.415	7.02	18.5	<0.100	6.81	100	493
	10/26/16	0.45	6.55	18.1	0.158 J	6.67	94.3	534
	12/14/16	0.411	9.26	17.6	0.134 J	6.77	94.1	493
	09/25/17	0.437	6.49	16.9	0.128 J	6.87	87.2	476
	06/12/18	0.636	14.4	18.2	0.176 J	6.82	87.2	464
	09/14/18	0.423	6.06	18.6	0.201 J	5.70	81.3	476
	05/15/19	0.443	7.91	20	0.229 J	6.65	89.9	473
	09/04/19	0.435	7.72	19.2	0.203 J	6.51	91.8	478
	05/20/20	0.476	9.13	17.8	0.144	6.87	82.3	477
	09/30/20	0.447	6.62	19.0	0.387 J	6.78	81.1	469
	06/15/21	0.463	6.67	19.3	0.231 J	6.58	87.1	467
	10/07/21	0.388	6.26	20	0.477	6.53	86.4	467
	05/26/22	0.401	7.27	19.2	0.209 J	6.65	79.6	469
	09/23/22	0.432	7.23	21.0	0.205 J	6.72	86.4	469

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

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)
BMW-19	10/29/18	0.385	417	16.2	<0.100	6.77	2,070	4,060
	12/30/15	0.4	441	11.4	0.127 J	6.49	2,100	3,260
	02/25/16	0.458	504	8.4	<0.100	6.14	2,330	2,960
	04/07/16	0.424	480	8.46	<0.100	6.71	2,270	3,740
	06/09/16	0.444	489	8.04	<0.100	6.32	2,390	4,180
	08/11/16	0.419	458	8.26	<0.100	6.95	2,370	3,780
	10/26/16	0.417	443	8.26	<0.100	6.97	2,210	4,410
	12/14/16	0.427	481	7.2	<0.100	6.75	2220	3,660
	09/25/17	0.481	496	6.11	<0.100	6.95	2,360	3,670
	06/12/18	0.667	539	6.08	<0.100	6.92	2,080	3,660
	09/13/18	0.460	514	6.86	0.40	6.26	2,330	4,010
	05/15/19	0.474	388	4.66	0.189 J	6.88	1,760	3,090
	09/04/19	0.430	434	5.93	<0.1	6.74	2,010	3,320
	05/20/20	0.487	445	5.54	<0.100	6.74	2,020	3,470
	09/29/20	0.460	484	5.39	<0.100	6.63	1790	3,480
	06/15/21	0.45	391	5.72	<0.100	6.86	1770	2980
	06/15/21 DUP	0.496	399	6.03	<0.100	6.86	1600	2980
	10/07/21	0.424	466	4.72	<0.100	6.70	1720	3090
	05/26/22	0.426	432	6.2	<0.100	6.59	1900	3480
	09/23/22	0.466	497	8.00	<0.100	6.46	2270	3620
BMW-20	10/23/15	0.139 J	71.2	64.8	<0.100	6.28	223	804
	12/30/15	0.144	96	36.4	0.12 J	6.32	443	987
	02/25/16	0.202	157	30.7	<0.100	5.70	131	888
	04/07/16	0.0787	80	30	<0.100	6.22	219	600
	06/09/16	0.129	128	37.5	<0.100	6.24	557	1,220
	08/11/16	0.106	107	39.4	<0.100	6.86	602	1,310
	10/26/16	0.113	93.5	48.2	<0.100	6.93	801	1,610
	12/13/16	0.0687	62.8	42.8	<0.100	6.64	335	757
	09/26/17	0.0973	116	33.5	<0.100	6.73	472	986
	06/11/18	0.0912	149	35.9	0.144 J	6.67	654	1,160
	09/13/18	0.0773	91.1	48.8	<0.100	5.26	831	1,360
	05/15/19	0.979	146	426	0.418	6.71	474	2,030
	09/04/19	0.101	136	50.7	<0.100	6.74	1160	1,830
	05/20/20	0.179	162	35.8	<0.100	6.81	797	1,450
	09/29/20	0.111	143	46.3	<0.100	6.55	966	1,540
	06/14/21	0.13	187	42.7	0.109 J	6.84	1210	1810
	10/06/21	0.0998	151	47.2	<0.100	6.69	1060	1660
	05/26/22	0.0968	125	35.8	<0.100	6.89	455	1080
	09/22/22	0.102	132	46.5	<0.100	6.32	734	1220

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

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)
BMW-21	10/23/15	0.973	157	496	<0.100	7.28	484	2,510
	12/30/15	0.951	142	365	0.126 J	7.08	444	2,020
	02/25/16	1.01	148	393	<0.100	6.64	462	1,990
	04/07/16	0.99	158	373	<0.100	7.02	454	2,190
	06/09/16	1.17	155	415	<0.100	7.09	477	2,230
	08/11/16	1.04	143	425	<0.100	6.66	484	1,860
	10/26/16	1.14	145	399	<0.100	6.85	434	2,170
	12/13/16	0.993	149	426	<0.100	6.93	483	2,170
	09/26/17	1.02	138	364	<0.100	6.76	417	1,850
	06/11/18	1.01	168	402	0.233 J	6.75	457	1,990
	09/13/18	0.987	151	418	0.136 J	6.64	474	2,100
	05/15/19	0.994	147	428	0.366 J	6.92	474	1,980
	09/04/19	0.0409	152	426	<0.1	6.73	477	2,090
	05/20/20	1.07	166	416	<0.100	6.87	457	1,910
	09/29/20	1.00	161	415	<0.100	6.84	444	2,030
	06/14/21	1.02	156	442	<0.100	6.64	507	2130
	10/06/21	0.938	168	459	<0.100	6.77	503	2080
	05/26/22	1.03	170	407	<0.100	6.71	444	2110
	09/22/22	0.952	173	448	<0.100	6.33	496	2090
BMW-22	10/23/15	2.76	209	377	<0.100	6.86	927	2,720
	12/30/15	2.54	150	215	0.186 J	6.92	670	1,870
	02/25/16	3.18	209	295	<0.100	6.27	949	2,430
	04/07/16	3.34	202	256	<0.100	6.84	839	2,230
	06/08/16	3.53	193	279	<0.100	6.84	890	2,340
	08/11/16	3.18	198	311	<0.100	6.25	946	2,520
	10/26/16	3.38	183	241	<0.100	6.89	803	2,600
	12/13/16	3.45	191	281	<0.100	6.73	896	2,370
	09/26/17	3.53	209	270	<0.100	6.82	860	2,250
	06/11/18	3.49	219	280	0.312 J	6.85	883	2,180
	09/13/18	3.28	188	296	0.205 J	6.34	919	2,310
	05/15/19	3.39	198	311	0.351 J	6.68	967	2,260
	09/09/19	3.65	208	307	<0.100	6.58	960	2,420
	05/20/20	3.67	205	290	<0.100	6.69	906	2,230
	09/29/20	3.49	223	281	<0.100	6.75	855	2,280
	06/14/21	3.29	214	308	<0.100	6.42	998	2250
	10/06/21	3.19	222	316	<0.100	6.67	966	2310
	05/26/22	3.21	218	273	<0.100	6.59	843	2320
	09/22/22	3.25	225	312	<0.100	6.54	932	2280

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

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)
BMW-23	10/23/15	1.19	102	287	<0.100	6.84	577	1,980
	12/30/15	1.25	95.2	214	0.122 J	6.76	529	1,500
	02/25/16	1.31	97.7	225	<0.100	6.16	527	1,520
	04/07/16	1.22	95.1	221	<0.100	6.63	503	1,510
	06/08/16	1.31	102	254	<0.100	6.71	558	1,720
	08/11/16	1.28	90.4	242	<0.100	6.15	539	1,430
	10/26/16	1.22	86.8	219	<0.100	6.85	467	1,700
	12/13/16	1.25	91.8	237	<0.100	6.63	510	1,870
	09/26/17	1.46	99.6	223	<0.100	6.65	482	1,550
	06/12/18	1.49	104	236	0.204 J	6.72	490	1,530
	09/13/18	1.34	91.7	236	0.190 J	6.25	482	1,560
	05/15/19	1.31	89.9	240	<0.100	6.84	613	1,640
	09/09/19	1.47	98.9	257	<0.100	6.65	503	1,680
	05/20/20	1.63	105	256	<0.100	6.63	494	1,580
	09/29/20	1.42	102	238	0.302 J	6.93	443	1,590
	06/14/21	1.67	110	283	<0.100	6.75	565	1700
	10/06/21	1.44	100	279	<0.100	6.64	517	1670
	05/26/22	1.67	107	251	<0.100	6.67	482	1700
	09/22/22	1.63	109	282	<0.100	6.39	522	1670
BMW-24	10/23/15	0.144 J	61.6	633	0.247 J	7.14	45	1,510
	12/30/15	0.347	58.8	404	0.391 J	7.07	125	1,210
	02/25/16	0.431	61.6	332	0.236 J	5.80	184	1,210
	04/07/16	0.532	63.4	224	0.109 J	7.07	240	1,100
	06/08/16	0.612	60.1	201	0.147 J	7.06	259	984
	08/11/16	0.248	58.5	481	0.225 J	5.84	97.8	1,150
	10/26/16	0.225	59.2	518	0.305 J	6.78	34.2	1,490
	12/13/16	0.225	62.5	518	0.3 J	6.78	33	1,480
	09/26/17	0.656	66.8	229	<0.100	6.82	242	940
	06/11/18	0.469	70.6	336	0.466	6.76	117	970
	09/13/18	0.197	59.5	488	0.769	6.45	40	1,090
	05/15/19	0.601	57.9	169	0.219 J	6.78	280	881
	09/09/19	0.247	56.4	501	0.534 J	6.65	16.4	985
	05/20/20	0.758	67.8	175	0.129 J	6.72	254	907
	09/29/20	0.205	58.8	482	0.725	6.57	4.48	1,000
	06/14/21	0.661	65.4	165	0.251 J	6.68	276	848
	10/06/21	0.212	57.9	474	0.312 J	6.58	6.72	1020
	05/26/22	0.618	80.3	191	0.160 J	6.68	255	952
	09/22/22	0.198	55.9	521	0.483	6.22	<1.00	1210

TABLE 3
APPENDIX III ANALYTICAL DATA
MLSES A1 AREA LANDFILL

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)
BMW-26	09/13/16	0.457	234	97.8	<0.100	6.51	671	2,120
	10/26/16	0.127	44.3	16.2	<0.100	6.87	140	414
	12/14/16	0.251	130	152	0.344 J	6.96	1210	2,050
	01/23/17	0.478	224	126	<0.100	6.33	669	1,950
	02/23/17	0.0683	52	23.9	0.106 J	6.22	20.4	209
	03/24/17	0.44	215	112	<0.100	6.68	610	1,690
	04/24/17	0.495	218	111	<0.100	6.37	576	2,210
	05/25/17	0.613	178	115	<0.100	6.82	613	2,110
	06/29/17	0.507	233	111	<0.100	--*	604	1,700
	09/25/17	0.514	71	112	<0.100	6.95	606	1,510
	06/12/18	0.726	96.5	120	<0.100	6.61	633	1,550
	09/13/18	0.474	230	125	<0.100	5.32	671	2,020
	05/15/19	0.449	200	135	<0.100	6.90	706	1,930
	09/04/19	0.473	262	140	<0.100	6.78	753	2,170
	05/20/20	0.547	252	131	<0.100	6.77	701	1,980
	09/29/20	0.522	265	130	<0.100	6.74	703	2,140
	06/14/21	0.488	235	140	<0.100	6.61	780	2040
	10/06/21	0.44	265	142	<0.100	6.78	769	2230
	05/26/22	0.502	187	127	<0.100	6.79	674	1890
	09/22/22	0.508	115	147	<0.100	6.41	726	1680
BMW-27	09/13/16	0.486	160	133	0.668	5.87	1,150	2,750
	10/26/16	0.548	196	102	<0.100	6.73	700	2,020
	12/14/16	0.529	211	101	<0.100	6.90	674	1,810
	01/23/17	0.393	152	143	0.573	5.62	1,280	2,260
	02/23/17	0.0832	52.4	24	0.252 J	6.40	20.6	239
	03/24/17	0.304	120	132	0.738	6.35	1,190	2,100
	04/24/17	0.34	132	130	0.663	6.22	1,150	2,290
	05/25/17	0.331	122	124	1.61	6.67	1,150	2,320
	06/29/17	0.39	144	129	0.717	--*	1,180	2,080
	09/25/17	0.336	128	126	0.254 J	6.89	1,160	2,110
	06/12/18	0.478	96.1	98.4	<0.100	6.87	522	1,420
	09/13/18	0.398	143	132	0.750	5.60	1,230	2,380
	05/15/19	0.46	190	129	<0.100	6.72	674	1,840
	09/04/19	0.463	257	141	<0.100	6.95	755	2,130
	05/20/20	0.46	213	108	<0.100	6.56	579	1,670
	09/29/20	0.464	268	134	<0.100	6.79	704	2,130
	06/14/21	0.351	177	107	<0.100	6.76	550	1490
	10/06/21	0.41	231	125	<0.100	6.52	666	1920
	05/26/22	0.343	93.7	66	<0.100	6.79	360	1040
	09/22/22	0.348	79.3	121	<0.100	6.59	578	1340

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb. (pCi/L)
Upgradient Wells																		
BMW-11-AR	10/29/15	<0.0008	0.0116	0.0659	<0.0003	<0.0003	<0.002	0.0124	<0.1	0.000391 J	0.0594	<0.00008	0.00496 J	<0.002	<0.0005	1.60	4.75	6.35
	12/30/15	<0.0008	0.00362 J	0.0433	<0.0003	<0.0003	<0.002	<0.003	0.26 J	0.000362 J	0.0589	<0.00008	0.00384 J	<0.002	<0.0005	1.66	3.19	4.85
	02/25/16	<0.0008	0.00608	0.0724	<0.0003	<0.0003	<0.002	0.0049 J	0.123 J	<0.0003	0.0276	<0.00008	0.00597	<0.002	<0.0005	2.43	3.80	6.23
	04/07/16	<0.0008	0.00614	0.0929	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0195	<0.00008	0.00444 J	<0.002	<0.0005	0.885	1.48	2.37
	06/09/16	<0.0008	0.00532	0.0891	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0187	<0.00008	0.00355 J	<0.002	<0.0005	0.47	<0.674	1.14
	08/11/16	<0.0008	0.00271 J	0.0772	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0147	<0.00008	0.00346 J	<0.002	<0.0005	0.810	2.42	3.23
	10/26/16	<0.0008	<0.002	0.0429	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0508	<0.00008	0.00363 J	<0.002	<0.0005	0.631	0.922	1.55
	12/14/16	<0.0008	0.0061	0.074	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.00347	0.0139	<0.00008	0.00303 J	<0.002	<0.0005	<0.821	<1.73	<2.551
	06/12/18	<0.0008	0.00444 J	0.0692	<0.0003	<0.0003	0.00295 J	<0.003	0.323 J	0.0017	0.0686	<0.00008	0.00340 J	<0.002	<0.0005	0.996	1.7	2.696
	09/14/18	--	0.0056	0.0735	--	--	<0.002	<0.003	0.353 J	0.00147	0.0196	--	0.00299 J	--	--	1.52	1.11	2.63
	05/15/19	<0.0008	0.00208 J	0.0399	<0.0003	<0.0003	<0.002	<0.003	0.198 J	<0.0003	0.0404	<0.00008	<0.002	<0.002	<0.0005	0.83	4.89	5.72
	09/04/19	--	<0.2	0.0393	--	--	--	<0.003	0.170 J	--	0.0411	--	<0.002	--	--	0.382	0.317	0.699
	05/20/20	<0.0008	0.00479 J	0.0439	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0348	<0.00008	<0.00200	<0.002	<0.0005	0.289	1.54	1.83
	09/29/20	--	0.0102	0.0517	<0.0003	<0.0003	<0.002	<0.003	0.408	<0.0003	0.0337	--	--	<0.002	--	0.209	1.59	1.8
	06/14/21	<0.0008	0.0029 J	0.0565	<0.0003	<0.0003	<0.002	<0.003	0.208 J	0.00132	0.032	<0.00008	<0.002	<0.002	<0.0005	0.434	0.712	1.15
	10/06/21	<0.0008	<0.002	0.0511	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0331	<0.00008	0.00212 J	<0.002	<0.0005	0.334	1.34	1.68
	05/26/22	<0.0008	0.00278 J	0.048	<0.0003	<0.0003	<0.002	<0.003	0.169 J	<0.0003	0.0205	<0.00008	0.00214 J	<0.002	<0.0005	0.329	1.73	2.06
	09/23/22	<0.0008	0.00715	0.0742	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0238	<0.00008	0.00275 J	<0.002	<0.0005	0.683	1.59	2.27
BMW-33	06/13/19	--	<0.002	--	--	--	--	0.0176	0.342 J	--	0.0206	--	--	--	--	--	--	--
	09/09/19	--	<0.002	0.285	--	--	--	0.0122	0.145 J	--	0.0177	--	0.00325 J	NA	NA	0.738	<0.809	0.738
	05/20/20	0.00102 J	<0.002	0.203	<0.0003	<0.0003	<0.002	0.0065	<0.1	<0.0003	0.0145	<0.00008	0.00207 J	<0.002	<0.0005	0.499	0.394	0.893
	09/30/20	--	<0.002	0.166	<0.0003	<0.0003	<0.002	0.00826	0.410	<0.0003	0.0135	--	--	<0.002	--	0.237	0.419	0.656
	06/15/21	<0.0008	<0.002	0.137	<0.0003	<0.0003	<0.002	0.0113	0.235 J	<0.0003	0.0124	<0.00008	<0.002	<0.002	<0.0005	0.190 J	0.597 J	0.786 J
	10/07/21	<0.0008	0.00247 J	0.130	<0.0003	<0.0003	<0.002	0.0115	<0.1	<0.0003	0.0126	<0.00008	<0.002	<0.002	<0.0005	0.522	1.30	1.82
	05/27/22	<0.0008	<0.002	0.112	<0.0003	<0.0003	<0.002	0.00435 J	0.147 J	<0.0003	0.0121	<0.00008	<0.002	<0.002	<0.0005	0.351	0.836	1.19
	09/23/22	<0.0008	<0.002	0.112	<0.0003	<0.0003	<0.002	0.00702	<0.100	<0.0003	0.0136	<0.00008	<0.002	<0.002	<0.0005	0.263	0.406	0.669
Downgradient Wells																		
BMW-18	10/30/15	<0.0008	<0.002	0.0401	<0.0003	<0.0003	0.00944	<0.003	0.148 J	<0.0003	0.14	<0.00008	<0.002	<0.002	<0.0005	0.526	<1.51	2.04
	12/30/15	<0.0008	<0.002	0.0168	<0.0003	<0.0003	<0.002	0.0129	0.101 J	<0.0003	0.0415	<0.00008	<0.002	<0.002	<0.0005	<0.405	<2.04	<2.445
	02/26/16	<0.0008	<0.002	0.0446	<0.0003	<0.0003	0.0021 J	<0.003	0.164 J	<0.0003	0.0156	<0.00008	<0.002	<0.002	<0.0005	<0.406	<1.9	<2.306
	04/07/16	<0.0008	<0.002	0.0306	<0.0003	<0.0003	<0.002	<0.003	0.117 J	<0.0003	0.0171	<0.00008	<0.002	<0.002	<0.0005	<0.109	<1.00	<1.109
	06/09/16	<0.0008	<0.002	0.0283	<0.0003	<0.0003	<0.002	<0.003	0.128 J	<0.0003	0.0152	<0.00008	<0.002	<0.002	<0.0005	<0.143	0.857	1.00
	08/11/16	<0.0008	<0.002	0.0291	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0147	<0.00008	<0.002	<0.002	<0.0005	<0.22	<1.07	<1.29
	10/26/16	<0.0008	<0.002	0.029	<0.0003	<0.0003	<0.002	<0.003	0.158 J	<0.0003	0.0156	<0.00008	<0.002	<0.002	<0.0005	<0.132	<0.534	<0.666
	12/14/16	<0.0008	<0.002	0.0384	<0.0003	<0.0003	<0.002	<0.003	0.134 J	<0.0003	0.0158	<0.00008	<0.002	<0.002	<0.0005	0.140	<1.99	2.13
	06/12/18	<0.0008	<0.002	0.0412	<0.0003	<0.0003	<0.002	<0.003	0.176 J	0.0013	0.0185	<0.00008	<0.002	<0.002	<0.0005	0.232	0.706	0.938
	09/14/18	--	<0.002	0.0277	--	--	<0.002	<0.003	0.201 J	<0.0003	0.0165	--	<0.002	--	--	<0.509	<0.589	<1.098
	05/15/19	<0.0008	<0.002	0.0362	<0.0003	<0.0003	<0.002	<0.003	0.229 J	<0.0003	0.016	<0.00008	<0.002	<0.002	<0.0005	<0.264	3.95	4.214
	09/04/19	--	<0.002	0.0337	--	--	--	<0.003	0.203 J	--	0.0128	--	<0.002	--	--	0.304	1.48	1.79
	05/20/20	<0.0008	<0.002	0.0431	<0.0003	<0.0003	<0.002	<0.003	0.144 J	<0.0003	0.0136	<0.00008	<0.002	<0.002	<0.0005	0.555	1.21	1.76
	09/30/20	--	<0.002	0.0315	<0.0003	<0.0003	<0.002	<0.003	0.387 J	<0.0003	0.0193	--	--	<0.002	--	0.0836	<0.927	0.0836
	06/15/21	<0.0008	<0.002	0.0306	<0.0003	<0.0003	<0.002	<0.003	0.231 J	<0.0003	0.0127	<0.00008	<0.002	<0.002	<0.0005	<0.282	<0.645	0.000
	10/07/21	<0.0008	<0.002	0.0295	<0.0003	<0.0003	<0.002	<0.003	0.477	<0.0003	0.0159	<0.00008	<0.002	<0.002	<0.0005	0.155 J	0.0602	0.215
	05/26/22	<0.0008	<0.002	0.0334	<0.0003	<0.0003	<0.002	<0.003	0.209 J	<0.0003	0.0152	<0.00008	<0.002	<0.002	<0.0005	0.155 J	0.274 U	0.430 J
	09/23/22	<0.000800	<0.00200	0.0331	<0.000300	<0.000300	<0.00200	<0.00300	0.205 J	<0.000300	0.0153	<0.0000800	<0.00200	<0.00200	<0.000500	0.212 J	0.0496 U	0.261 J

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb. (pCi/L)
BMW-19	10/29/18	<0.0008	<0.002	0.0231	<0.0003	<0.0003	<0.002	0.0161	<0.1	<0.0003	0.0545	<0.00008	<0.002	<0.002	<0.0005	0.395	<1.56	1.96
	12/30/15	<0.0008	<0.002	0.0222	<0.0003	<0.0003	<0.002	0.0166	0.127 J	<0.0003	0.0506	<0.00008	<0.002	<0.002	<0.0005	0.598	<2.89	3.49
	02/25/16	<0.0008	0.00235 J	0.0169	<0.0003	<0.0003	<0.002	0.0149	<0.1	<0.0003	0.0711	<0.00008	<0.002	<0.002	<0.0005	0.571	1.94	2.51
	04/07/16	<0.0008	<0.002	0.0178	<0.0003	<0.0003	<0.002	0.0137	<0.1	<0.0003	0.0591	<0.00008	<0.002	<0.002	<0.0005	<0.185	<0.715	<0.9
	06/09/16	<0.0008	<0.002	0.0158	<0.0003	<0.0003	<0.002	0.0141	<0.1	<0.0003	0.0644	<0.00008	<0.002	<0.002	<0.0005	<0.142	1.98	2.12
	08/11/16	<0.0008	0.00711	0.0158	<0.0003	<0.0003	<0.002	0.0128	<0.1	<0.0003	0.0568	<0.00008	<0.002	<0.002	<0.0005	0.927	<0.812	1.74
	10/26/16	<0.0008	<0.002	0.0144	<0.0003	<0.0003	<0.002	0.0104	<0.1	<0.0003	0.0495	<0.00008	<0.002	<0.002	<0.0005	<0.152	<0.48	<0.632
	12/14/16	<0.0008	0.00369 J	0.0171	<0.0003	<0.0003	<0.002	0.0125	<0.1	<0.0003	0.0584	<0.00008	<0.002	<0.002	<0.0005	0.309	0.827	1.14
	06/12/18	<0.0008	0.0428	0.0243	<0.0003	<0.0003	0.00267	0.0115	<0.1	0.00183	0.0734	<0.00008	<0.002	<0.002	<0.0005	<0.395	1.17	1.565
	09/13/18	--	0.00491 J	0.0132	--	--	<0.002	0.0125	0.404 J	<0.0003	0.0845	--	<0.002	--	--	<0.376	1.46	1.836
	05/15/19	<0.0008	<0.002	0.0104	<0.0003	<0.0003	<0.002	<0.003	0.189 J	<0.0003	0.0647	<0.00008	<0.002	<0.002	<0.0005	0.487	4.66	5.147
	09/04/19	--	<0.002	0.0117	--	--	--	<0.003	<0.1	--	0.0694	--	<0.002	--	--	<0.267	0.563	0.563
	05/20/20	<0.0008	<0.002	0.0109	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0783	<0.00008	0.00231 J	<0.002	<0.0005	0.0651	0.127	0.192
	09/29/20	--	<0.002	0.0137	<0.0003	<0.0003	<0.002	0.0187	<0.1	<0.0003	0.0742	--	--	<0.00200	--	<0.312	1.02	1.020
	06/15/21	<0.0008	<0.002	0.0149	<0.0003	<0.0003	<0.002	0.0083	<0.1	<0.0003	0.0689	<0.00008	<0.002	<0.002	<0.0005	<0.195	0.0156	0.0156
	6/15/21 DUP	<0.0008	0.00288 J	0.015	<0.0003	<0.0003	<0.002	0.00831	<0.1	<0.0003	0.0686	<0.00008	<0.002	<0.002	<0.0005	0.175 J	1.38	1.55
	10/07/21	<0.0008	0.00341 J	0.0151	<0.0003	<0.0003	<0.002	0.0117	<0.1	<0.0003	0.0727	<0.00008	<0.002	<0.002	<0.0005	0.229 J	1.51	1.74
	05/26/22	<0.0008	<0.002	0.0122	<0.0003	<0.0003	<0.002	0.00355 J	<0.1	<0.0003	0.0663	<0.00008	<0.002	<0.002	<0.0005	0.326	0.557 J	0.882
	09/23/22	<0.000800	0.00312 J	0.0122	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0850	<0.0000800	<0.00200	<0.00200	<0.000500	0.104 J	0.555	0.659
BMW-20	10/23/15	<0.0008	0.00236 J	0.0778	<0.0003	<0.0003	<0.002	0.0256	<0.1	0.0005 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.463	<1.89	2.35
	12/30/15	<0.0008	0.00344 J	0.0777	<0.0003	<0.0003	<0.002	0.051	0.12 J	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.816	<2.41	3.23
	02/25/16	<0.0008	0.00474 J	0.0989	<0.0003	<0.0003	<0.002	0.022	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	<0.61	2.85	3.46
	04/07/16	<0.0008	0.00411 J	0.0912	<0.0003	<0.0003	<0.002	0.0276	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.221	<1.08	1.30
	06/09/16	<0.0008	0.0103	0.0776	<0.0003	<0.0003	<0.002	0.054	<0.1	0.0007 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.51	<0.716	1.23
	08/11/16	<0.0008	<0.002	0.0637	<0.0003	<0.0003	<0.002	0.0513	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.322	1.40	1.72
	10/26/16	<0.0008	0.00444 J	0.0421	<0.0003	<0.0003	<0.002	0.0786	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.347	0.848	1.20
	12/13/16	<0.0008	0.00483 J	0.0377	<0.0003	<0.0003	<0.002	0.0451	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.246	1.15	1.40
	06/11/18	<0.0008	0.00473 J	0.0515	<0.0003	<0.0003	<0.002	0.0681	0.144 J	0.000476	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.74	0.865	1.605
	09/13/18	--	0.00473 J	0.0258	--	--	<0.002	0.0645	<0.100	0.000368 J	<0.005	--	<0.002	--	--	0.519	0.711	1.23
	05/15/19	<0.0008	0.00541	0.0412	<0.0003	<0.0003	<0.002	<0.003	0.418	<0.0003	0.0615	<0.00008	<0.002	<0.002	<0.0005	1.18	0.657	1.837
	09/04/19	--	0.00768	0.0261	--	--	--	0.108	<0.1	--	<0.005	--	<0.002	--	--	0.0996	1.62	1.72
	05/20/20	<0.0008	0.0126	0.0494	<0.0003	<0.0003	<0.002	0.0912	<0.1	0.000956 J	<0.005	<0.00008	<0.002	0.0044 J	<0.0005	0.5	2.15	2.65
	09/29/20	--	0.00837	0.0292	<0.0003	<0.0003	<0.002	0.101	<0.1	0.00159	0.0742	--	--	0.00204 J	--	0.152	0.548	0.7
	06/14/21	<0.0008	0.00234 J	0.0431	<0.0003	<0.0003	<0.002	0.0788	0.109 J	0.000323 J	0.00778 J	<0.00008	<0.002	<0.002	<0.0005	0.500	2.81	3.31
	10/06/21	<0.0008	0.00439 J	0.0273	<0.0003	<0.0003	<0.002	0.0963	<0.1	0.000947 J	0.00549 J	<0.00008	<0.002	<0.002	<0.0005	0.401	2.18	2.58
	05/26/22	<0.0008	0.00413 J	0.0523	<0.0003	<0.0003	<0.002	0.0487	<0.1	0.000304 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.379	1.05	1.41
	09/22/22	<0.000800	0.00662	0.0364	<0.000300	<0.000300	<0.00200	0.0746	<0.100	0.000940 J	<0.00500	<0.0000800	<0.00200	<0.00200	<0.000500	0.258 J	0.400 J	0.658
BMW-21	10/23/15	<0.0008	0.00324 J	0.0703	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0623	<0.00008	<0.002	<0.002	<0.0005	<0.436	<0.948	<1.384
	12/30/15	<0.0008	0.00247 J	0.0478	<0.0003	<0.0003	<0.002	<0.003	0.126 J	<0.0003	0.0602	<0.00008	<0.002	<0.002	<0.0005	0.584	<2.00	2.58
	02/25/16	<0.0008	0.00327 J	0.0471	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0602	<0.00008	<0.002	<0.002	<0.0005	0.735	2.13	2.87
	04/07/16	<0.0008	0.00337 J	0.0472	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0653	<0.00008	<0.002	<0.002	<0.0005	0.470	<2.78	3.25
	06/09/16	<0.0008	0.0034 J	0.0457	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0675	<0.00008	<0.002	<0.002	<0.0005	0.32	<0.917	1.24
	08/11/16	<0.0008	0.00373 J	0.0445	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0527	<0.00008	<0.002	<0.002	<0.0005	0.655	<0.728	1.38
	10/26/16	<0.0008	0.0037 J	0.0443	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0611	<0.00008	<0.002	<0.002	<0.0005	0.383	1.61	1.99
	12/13/16	<0.0008	0.00217 J	0.0438	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0631	<0.00008	<0.002	<0.002	<0.0005	0.213	1.00	1.21
	06/11/18	<0.0008	0.00373 J	0.0438	<0.0003	<0.0003	<0.002	<0.003	0.233 J	<0.0003	0.07	<0.00008	<0.002	<0.002	<0.0005	<0.239	<0.939	<1.178
	09/13/18	--	0.00353 J	0.0412	--	--	<0.002	<0.003	0.136 J	<0.0003	0.0646	--	<0.002	--	--	0.562	1.49	2.052
	05/15/19	<0.0008	0.00399 J	0.0412	<0.0003	<0.0003	<0.002	<0.003	0.366 J	<0.0003	0.0613	<0.00008	<0.002	<0.002	<0.0005	<0.322	1.07	1.392
	09/04/19	--	0.00378	0.0409	--	--	--	<0.003	<0.1	--	0.0683	--	<0.002	--	--	0.506	1.51	2.06
	05/20/20	<0.0008	0.00434 J	0.0421	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0632	<0.00008	<0.002	<0.002	<0.0005	0.562	1.76	2.32
	09/29/20	--	0.00814	0.0420	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0663	--	--	<0.00200	--	0.699	1.48	2.18
	06/14/21	<0.0008	0.004 J	0.0398	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0617	<0.0000800	<0.00200	<0.00200	<0.000500	0.555	1.62	2.18
	10/06/21	<0.0008	0.00790	0.0394	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0653	<0.0000800	<0.00200	<0.00200	<0.000500	0.609	1.77	2.38
	05/26/22	<0.0008	0.00413 J	0.0398	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0659	<0.0000800	<0.00200	<0.00200	<0.000500	0.662	1.47	2.13
	09/22/22	<0.000800	0.00589	0.0420	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0739	<0.0000800	<0.00200	<0.00200	<0.000500	0.449	0.903	1.35

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb. (pCi/L)
BMW-22	10/23/15	<0.0008	<0.002	0.106	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0675	<0.00008	<0.002	<0.002	<0.0005	1.59	2.11	3.70
	12/30/15	<0.0008	<0.002	0.084	<0.0003	<0.0003	<0.002	<0.003	0.186 J	<0.0003	0.0594	<0.00008	<0.002	<0.002	<0.0005	0.973	<1.55	2.52
	02/25/16	<0.0008	<0.002	0.0761	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0801	<0.00008	<0.002	<0.002	<0.0005	0.594	<1.93	2.52
	04/07/16	<0.0008	<0.002	0.072	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0773	<0.00008	<0.002	<0.002	<0.0005	0.480	1.46	1.94
	06/08/16	<0.0008	0.00206 J	0.0667	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0847	<0.00008	<0.002	<0.002	<0.0005	0.888	1.88	2.77
	08/11/16	<0.0008	<0.002	0.0679	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0675	<0.00008	<0.002	<0.002	<0.0005	0.607	1.93	2.54
	10/26/16	<0.0008	0.00216 J	0.0645	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0753	<0.00008	<0.002	<0.002	<0.0005	0.633	1.02	1.65
	12/13/16	<0.0008	0.00232 J	0.0655	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0689	<0.00008	<0.002	<0.002	<0.0005	<0.209	1.05	1.26
	06/11/18	<0.0008	<0.002	0.0638	<0.0003	<0.0003	<0.002	<0.003	0.312 J	<0.0003	0.089	<0.00008	<0.002	<0.002	<0.0005	0.522	<1.020	1.54
	09/13/18	--	<0.002	0.063	--	--	<0.002	<0.003	0.205 J	<0.0003	0.0882	--	<0.002	--	--	1.29	2.89	4.18
	05/15/19	<0.0008	<0.002	0.0618	<0.0003	<0.0003	<0.002	<0.003	0.351 J	<0.0003	0.0779	<0.00008	<0.002	<0.002	<0.0005	3.36	1.64	5.00
	09/09/19	--	<0.002	0.0599	--	--	--	<0.003	<0.100	--	0.0829	--	<0.002	--	--	0.954	1.85	2.81
	05/20/20	<0.0008	<0.002	0.0621	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0855	<0.00008	<0.002	<0.002	<0.0005	0.909	2.67	3.58
	09/29/20	--	<0.002	0.0598	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0837	--	--	<0.002	--	0.621	3.13	3.75
	06/14/21	<0.0008	<0.002	0.0609	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0776	<0.00008	<0.002	<0.002	<0.0005	0.415	1.64	2.05
	10/06/21	<0.0008	<0.002	0.0576	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0779	<0.00008	<0.002	<0.002	<0.0005	0.695	1.43	2.12
	05/26/22	<0.0008	<0.002	0.0626	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0830	<0.00008	<0.002	<0.002	<0.0005	1.22	2.21	3.43
	09/22/22	<0.000800	0.00206 J	0.0643	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0887	<0.0000800	<0.00200	<0.00200	<0.000500	0.900	2.14	3.04
BMW-23	10/23/15	<0.0008	<0.002	0.0519	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0802	<0.00008	<0.002	<0.002	<0.0005	1.19	<1.91	3.10
	12/30/15	<0.0008	<0.002	0.0462	<0.0003	<0.0003	<0.002	<0.003	0.122 J	<0.0003	0.0897	<0.00008	<0.002	<0.002	<0.0005	0.711	<2.62	3.33
	02/25/16	<0.0008	<0.002	0.0488	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0959	<0.00008	<0.002	<0.002	<0.0005	0.604	<1.78	2.38
	04/07/16	<0.0008	<0.002	0.0472	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.095	<0.00008	<0.002	<0.002	<0.0005	0.723	1.98	2.70
	06/08/16	<0.0008	<0.002	0.0497	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.103	<0.00008	<0.002	<0.002	<0.0005	0.654	1.29	1.94
	08/11/16	<0.0008	<0.002	0.0458	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.077	<0.00008	<0.002	<0.002	<0.0005	0.936	1.94	2.88
	10/26/16	<0.0008	<0.002	0.0437	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0856	<0.00008	<0.002	<0.002	<0.0005	0.472	1.76	2.23
	12/13/16	<0.0008	<0.002	0.0407	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0817	<0.00008	<0.002	<0.002	<0.0005	<0.225	0.704	0.93
	06/11/18	<0.0008	<0.002	0.0381	<0.0003	<0.0003	<0.002	<0.003	0.204 J	<0.0003	0.106	<0.00008	<0.002	<0.002	<0.0005	0.442	1.79	2.23
	09/13/18	--	<0.002	0.0414	--	--	<0.002	<0.003	0.190 J	<0.0003	0.0915	--	<0.002	--	--	0.774	1.23	2.00
	05/15/19	<0.0008	0.0024	0.0381	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0951	<0.00008	<0.002	<0.002	<0.0005	2.54	1	3.54
	09/09/19	--	<0.002	0.0382	--	--	--	<0.003	<0.100	--	0.0896	--	<0.002	--	--	0.583	2.4	2.98
	05/20/20	<0.0008	<0.002	0.039	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0927	<0.00008	<0.002	<0.002	<0.0005	0.669	2.27	2.93
	09/29/20	--	<0.002	0.0383	<0.000300	<0.000300	<0.00200	<0.00300	0.302 J	<0.000300	0.0861	--	--	<0.00200	--	0.687	0	0.687
	06/14/21	<0.0008	<0.002	0.0433	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0837	<0.00008	<0.002	<0.002	<0.0005	0.742	1.75	2.49
	10/06/21	<0.0008	<0.002	0.0367	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0827	<0.00008	<0.002	<0.002	<0.0005	0.59	1.77	2.36
	05/26/22	<0.0008	<0.002	0.0426	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0820					0.542	1.43	1.97
	09/22/22	<0.000800	<0.00200	0.0420	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0870	<0.0000800	<0.00200	<0.00200	<0.000500	0.651	1.97	2.62
BMW-24	10/23/15	<0.0008	0.00494 J	1.87	<0.0003	<0.0003	<0.002	0.00802	0.247 J	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	1.83	3.32	5.15
	12/30/15	<0.0008	0.00579	0.801	<0.0003	<0.0003	<0.002	0.0146	0.391 J	<0.0003	0.0161	<0.00008	<0.002	<0.002	<0.0005	0.485	<1.66	2.15
	02/25/16	<0.0008	0.00442 J	0.645	<0.0003	<0.0003	<0.002	0.0137	0.236 J	<0.0003	0.0267	<0.00008	<0.002	<0.002	<0.0005	1.20	<1.93	3.13
	04/07/16	<0.0008	0.00376 J	0.202	<0.0003	<0.0003	<0.002	0.0238	0.109 J	<0.0003	0.0415	<0.00008	<0.002	<0.002	<0.0005	<0.349	<1.58	<1.929
	06/08/16	<0.0008	0.00481 J	0.181	<0.0003	<0.0003	<0.002	0.0227	0.147 J	<0.0003	0.0475	<0.00008	<0.002	<0.002	<0.0005	0.360	1.26	1.62
	08/11/16	<0.0008	0.00414 J	1.26	<0.0003	<0.0003	<0.002	0.00707	0.225 J	<0.0003	0.00938 J	<0.00008	<0.002	<0.002	<0.0005	0.564	<0.942	1.51
	10/26/16	<0.0008	0.00364 J	1.88	<0.0003	<0.0003	<0.002	<0.003	0.305 J	<0.0003	0.00767 J	<0.00008	<0.002	<0.002	<0.0005	1.37	1.31	2.68
	12/13/16	<0.0008	0.00498 J	1.96	<0.0003	<0.0003	<0.002	0.0033 J	0.3 J	<0.0003	0.00914 J	<0.00008	<0.002	<0.002	<0.0005	0.270	1.16	1.43
	06/11/18	<0.0008	0.00266 J	0.487	<0.0003	<0.0003	<0.002	0.00633	0.466	<0.0003	0.0198	<0.00008	<0.002	<0.002	<0.0005	0.668	0.975	1.643
	09/13/18	--	<0.002	2.19	--	--	<0.002	0.00304 J	0.769	<0.0003	0.00764 J	--	<0.002	--	--	1.82	1.45	3.27
	05/15/19	<0.0008	0.00272 J	0.221	<0.0003	<0.0003	<0.002	0.000643	0.219 J	<0.0003	0.0512	<0.00008	<0.002	<0.002	<0.0005	1.45	<1.21	2.66
	09/09/19	--	<0.002	1.48	--	--	--	<0.003	0.534	--	0.00826 J	--	<0.002	--	--	0.584	1.41	2
	05/20/20	<0.0008	0.00207 J	0.244	<0.0003	<0.0003	<0.002	0.0109	0.129 J	<0.0003	0.046	<0.00008	<0.002	<0.002	<0.0005	0.532	<2.45	2.99
	09/29/20	--	<0.00200	1.85	<0.000300	<0.000300	<0.00200	<0.00300	0.725	<0.000300	0.00563 J	--	--	<0.00200	--	1.24	0.892	2.14
	06/14/21	<0.0008	<0.002	0.212	<0.0003	<0.0003	<0.002	0.00512	0.251 J	<0.0003	0.0497	<0.00008	<0.002	<0.002	<0.0005	0.486	1.77	2.26
	10/06/21	<0.000800	<0.00200	1.60	<0.000300	<0.000300	<0.00200	<0.00300	0.312 J	<0.000300	0.00545 J	<0.000400	<0.00200	<0.00200	<0.000500	1.04	2.85	3.89
	05/26/22	<0.0008	<0.0002	0.176	<0.0003	<0.0003	<0.002	0.00834	0.160 J	<0.0003	0.0499	<0.00008	<0.002	<0.002	<0.0005	0.401	0.678	1.08
	09/22/22	<0.000800	<0.00200	1.88	<0.000300	<0.000300	<0.00200	<0.00300	0.483	<0.000300	<0.00500	<0.0000800	<0.00200	<0.00200	<0.000500	0.894	1.05	1.95

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb. (pCi/L)
BMW-26	09/13/16	<0.0008	0.017	0.0425	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0944	<0.00008	0.00215 J	<0.002	<0.0005	0.154	<1.02	1.17
	10/26/16	<0.0008	0.00318 J	0.0731	<0.0003	<0.0003	<0.002	0.004 J	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.175	<0.695	0.87
	12/14/16	<0.0008	<0.002	0.0424	<0.0003	0.00082 J	<0.002	0.236	0.344 J	<0.0003	0.0527	<0.00008	<0.002	<0.002	<0.0005	0.177	<1.29	1.47
	01/23/17	<0.0008	0.0325	0.0446	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.00059 J	0.0977	<0.00008	0.0035 J	<0.002	<0.0005	0.351	0.936	1.29
	02/23/17	<0.0008	<0.002	0.0705	<0.0003	<0.0003	<0.002	<0.003	0.106 J	0.00073 J	0.0052 J	<0.00008	<0.002	<0.002	<0.0005	0.306	0.951	1.26
	03/24/17	<0.0008	0.0107	0.0371	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.00074 J	0.0964	<0.00008	0.00461 J	<0.002	<0.0005	0.335	<0.627	0.96
	04/24/17	<0.0008	0.00732	0.0322	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.099	<0.00008	0.00303 J	<0.002	<0.0005	<0.363	1.60	1.96
	05/25/17	<0.0008	0.00347 J	0.0243	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0951	<0.0008	0.00302 J	<0.002	<0.0005	<0.477	0.818	1.30
	06/29/17	<0.0008	0.0328	0.0352	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0985	<0.0008	0.00257 J	<0.002	<0.0005	0.198	0.677	0.88
	06/12/18	<0.0008	0.00316 J	0.0222	<0.0003	<0.0003	0.00231 J	<0.003	<0.100	0.00152	0.111	<0.00008	0.0029 J	<0.002	<0.0005	<0.251	<0.508	<0.759
	09/13/18	--	0.0165	0.0360	--	--	<0.002	<0.003	<0.100	<0.0003	0.11	--	<0.002	--	--	<0.426	0.826	1.252
	05/15/19	<0.0008	<0.002	0.0253	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.101	<0.00008	0.00218 J	<0.002	<0.0005	0.457	<1.13	1.587
	09/04/19	--	0.00725	0.0317	--	--	--	<0.003	<0.1	--	0.109	--	<0.002	--	--	0.126	1.53	1.66
	05/20/20	<0.0008	<0.002	0.0293	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0999	<0.00008	<0.002	<0.002	<0.0005	0.158	0.696	0.853
	09/29/20	--	0.00466 J	0.0314	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.107	--	--	<0.00200	--	0.234	0.161	0.395
	06/14/21	<0.0008	<0.002	0.0273	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.099	<0.00008	<0.002	<0.002	<0.0005	0.149	1.05	1.20
	10/06/21	<0.0008	0.00436 J	0.0297	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.105	<0.00008	<0.002	<0.002	<0.0005	0.145 J	0.97	1.12
	05/26/22	<0.0008	<0.002	0.0209	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.104	<0.00008	<0.002	<0.002	<0.0005	0.184J	<0.573	0.184 U
	09/22/22	<0.000800	<0.00200	0.0138	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.119	<0.0000800	<0.00200	<0.00200	<0.000500	0.0569 U	0.318 J	0.375 J
BMW-27	09/13/16	<0.0008	0.00536	0.0434	<0.0003	0.00062 J	<0.002	0.15	0.668	0.00043 J	0.0541	<0.00008	<0.002	<0.002	<0.0005	0.308	<1.14	1.45
	10/26/16	<0.0008	0.00625	0.0339	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0933	<0.00008	<0.002	<0.002	<0.0005	0.156	1.94	2.10
	12/14/16	<0.0008	0.0051	0.0342	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0932	<0.00008	<0.002	<0.002	<0.0005	<0.12	<1.05	<1.17
	01/23/17	<0.0008	0.00845	0.0333	<0.0003	0.00071 J	0.0028 J	0.195	0.573	0.00032 J	0.0484	<0.00008	<0.002	<0.002	<0.0005	0.369	0.934	1.30
	02/23/17	<0.0008	<0.002	0.0704	<0.0003	<0.0003	<0.002	<0.003	0.252 J	0.00074 J	<0.005	<0.00008	<0.002	<0.002	<0.0005	<0.209	0.660	0.87
	03/24/17	<0.0008	0.00319 J	0.0296	<0.0003	0.00078 J	<0.002	0.222	0.738	<0.0003	0.0474	<0.00008	<0.002	<0.002	<0.0005	0.414	<0.725	1.14
	04/24/17	<0.0008	<0.002	0.0269	<0.0003	0.00066 J	<0.002	0.21	0.663	<0.0003	0.0497	<0.00008	<0.002	<0.002	<0.0005	<0.452	1.53	1.98
	05/25/17	<0.0008	<0.002	0.0266	<0.0003	0.000521 J	<0.002	0.2	1.61	0.000439 J	0.0471	<0.00008	<0.002	<0.002	<0.0005	<0.443	1.38	1.82
	06/29/17	<0.0008	0.00593	0.0307	<0.0003	0.00851 J	0.00266 J	0.255	0.717	<0.0003	0.048	<0.0008	<0.002	<0.002	<0.0005	0.303	0.628	0.93
	06/12/18	<0.0008	0.00223 J	0.0182	<0.0003	<0.0003	<0.002	<0.003	<0.100	0.00097 J	0.0721	<0.00008	<0.002	<0.002	<0.0005	0.305	<0.5860	0.891
	09/13/18	--	0.00467 J	0.0250	--	--	0.002 J	0.190	0.750	<0.0003	0.0531	--	<0.002	--	--	0.691	1.04	1.731
	05/15/19	<0.0008	<0.002	0.0238	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0943	<0.00008	<0.002	<0.002	<0.0005	<0.195	0.962	1.157
	09/04/19	--	0.00759	0.32	--	--	--	<0.003	<0.1	--	0.107	--	<0.002	--	--	0.0726	1.68	1.75
	05/20/20	<0.0008	<0.002	0.025	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.084	<0.00008	<0.002	<0.002	<0.0005	0.265	0.255	0.52
	09/29/20	--	0.00494 J	0.0313	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	0.0003	0.110	--	--	<0.00200	--	0.147	<1.09	0.147
	06/14/21	<0.0008	<0.002	0.021	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.075	<0.00008	<0.002	<0.002	<0.0005	0.0262	0.558	0.584 J
	10/06/21	<0.0008	0.00384 J	0.0375	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0883	<0.00008	<0.002	<0.002	<0.0005	0.358	0.585 J	0.943 J
	05/26/22	<0.0008	<0.002	0.0121	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.0538	<0.00008	<0.002	<0.002	<0.0005	0.0510 U	0.556	0.607
	09/22/22	<0.000800	<0.00200	0.00890 J	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0814	<0.0000800	<0.00200	<0.00200	<0.000500	0.164 J	0.367 J	0.531

TABLE 4
APPENDIX IV ANALYTICAL DATA
MLSES A1 AREA LANDFILL

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	F (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Tl (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Comb. (pCi/L)
BMW-28	12/14/16	0.0012 J	<0.002	0.0509	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.11	<0.00008	0.0103	0.0045 J	<0.0005	<0.566	<2.22	2.79
	01/23/17	0.001 J	<0.002	0.0518	<0.0003	<0.0003	<0.002	<0.003	0.104 J	<0.0003	0.116	<0.00008	0.00881	<0.002	<0.0005	0.626	1.12	1.75
	02/23/17	<0.0008	<0.002	0.0734	<0.0003	<0.0003	<0.002	<0.003	0.11 J	0.00097 J	0.00514 J	<0.00008	<0.002	<0.002	<0.0005	0.168	0.835	1.00
	03/24/17	0.0012 J	<0.002	0.046	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.1	<0.00008	0.00773	0.0021 J	<0.0005	1.04	1.17	2.21
	04/24/17	0.0011 J	<0.002	0.047	<0.0003	<0.0003	<0.002	<0.003	0.19 J	<0.0003	0.109	<0.00008	0.00766	<0.002	<0.0005	0.356	1.880	2.24
	05/25/17	0.00119 J	<0.002	0.0468	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000427 J	0.102	<0.00008	0.00764	<0.002	<0.0005	<0.739	1.170	1.91
	06/29/17	<0.0008	0.00253 J	0.0549	<0.0003	<0.0003	<0.002	0.0084	0.137 J	<0.0003	0.104	<0.00008	0.00754	<0.002	<0.0005	0.489	2.310	2.80
	08/01/17	<0.0008	0.0057	0.0524	<0.0003	<0.0003	<0.002	0.0115	<0.1	<0.0003	0.114	<0.00008	0.00707	<0.002	<0.0005	0.536	2.43	2.97
	06/12/18	<0.0008	<0.002	0.0505	<0.0003	<0.0003	<0.002	<0.003	0.529	0.00122	0.116	<0.00008	0.00764	<0.002	<0.0005	0.197	1.12	1.32
	09/14/18	--	<0.002	0.0419	--	--	<0.002	<0.003	0.445	<0.0003	0.114	--	0.00782	--	--	0.35	1.15	1.50
	05/15/19	<0.0008	<0.002	0.0285	<0.0003	<0.0003	<0.002	<0.003	0.496	<0.0003	0.119	<0.00008	0.0124	<0.002	<0.0005	0.289	0.924	1.21
	09/04/19	--	<0.002	0.027	--	--	--	<0.003	<0.1	--	0.131	--	0.00961	--	--	0.0173	3.20	3.21
	05/20/20	<0.0008	<0.002	0.0297	<0.0003	<0.0003	<0.002	<0.003	<0.100	<0.0003	0.133	<0.00008	0.00617	<0.002	<0.0005	0.157	2.38	2.54
	09/30/20	--	<0.002	0.0150	<0.0003	<0.0003	<0.002	<0.003	0.229 J	<0.0003	0.0953	--	--	<0.002	--	0.229	2.53	2.76
	06/15/21	<0.0008	<0.002	0.00547 J	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000393 J	<0.00500	<0.00008	<0.002	<0.002	<0.0005	0.101	0.972	1.07
	10/07/21	<0.0008	<0.002	0.00461 J	<0.0003	<0.0003	<0.002	<0.003	0.290 J	<0.0003	0.00749 J	<0.00008	<0.002	<0.002	<0.0005	0.795	0.832	1.63
	10/7/21 DUP	<0.0008	<0.002	0.00487 J	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.00637 J	<0.00008	<0.002	<0.002	<0.0005	0.462	0.516 J	0.978
	05/26/22	<0.0008	<0.002	0.00766 J	<0.0003	<0.0003	<0.002	<0.003	0.119 J	<0.0003	0.0150	<0.00008	<0.002	<0.002	<0.0005	0.289	1.06	1.34
	5/26/22 DUP	<0.0008	<0.002	0.0112	<0.0003	<0.0003	<0.002	<0.0003	0.151 J	<0.0003	0.0825	<0.0008	0.00658	<0.002	<0.0005	0.0587 J	0.666 J	0.725
	09/23/22	<0.000800	<0.00200	0.00499 J	<0.000300	<0.000300	<0.00200	<0.00300	<0.100	<0.000300	0.0233	<0.0000800	0.00302 J	<0.00200	<0.000500	0.0750 U	0.312 J	0.387 J
	9/23/22 DUP	<0.0008	<0.002	0.00791 J	<0.0003	<0.0003	<0.002	<0.0003	<0.100	<0.0003	0.0358	<0.0008	0.00321 J	<0.002	<0.0005	0.206 J	0.493	0.699
BMW-32*	06/13/19	NA	NA	NA	NA	NA	NA	0.00705	0.822	NA	0.115	NA	NA	NA	NA	NA	NA	NA
	07/08/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.116	NA	NA	NA	NA	NA	NA	NA
	09/09/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.115	NA	NA	NA	NA	NA	NA	NA
	09/30/20	NA	NA	NA	NA	NA	NA	0.00408 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/15/21	NA	NA	NA	NA	NA	NA	0.00370 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/07/21	NA	NA	NA	NA	NA	NA	0.00347 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/26/22	NA	NA	NA	NA	NA	NA	0.00307 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/23/22	NA	NA	NA	NA	NA	NA	0.00350 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1. Abbreviations: mg/L - milligrams per liter; pCi/L - picocuries per liter.
2. J - Concentration is below method quantitation limit; result is an estimate.
3. "--" - 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 in accordance with 40 CFR § 257.95(d)(1). Well BMW-33 was not formerly a CCR monitoring well; therefore, not all Appendix IV constituents were analyzed in samples from this well during every sampling event.
4. * - Well BMW-32 is a delineation well used to delineate the observed cobalt SSLs at wells BMW-20 and BMW-27; NA: not applicable.

ATTACHMENT 1

LABORATORY ANALYTICAL REPORTS

July 13, 2022

Will Vienne
WSP-Golder
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446

Order No.: 2206001

RE: Luminant - A1 Landfill - CCR

Dear Will Vienne:

DHL Analytical, Inc. received 14 sample(s) on 6/1/2022 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: T104704211-22-28

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: GOLDER
ADDRESS: 2201 DOUBLE CREEK DR #4004 ROUND ROCK, TX 78664
PHONE: 512-671-3434 EMAIL:
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

DATE: 5-27-22
PO#:
PROJECT LOCATION OR NAME: LUMINANT - AI LANDFILL - CCR
CLIENT PROJECT # 19122262 COLLECTOR: JOHN BRAYTON

LABORATORY USE ONLY
DHL WORKORDER #: 2206061

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

Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	PRESERVATION: HCL	HNO3	H2SO4	NaOH ☐ Zn Acetate ☐	ICE ☒ UNPRESERVED ☒	ANALYSES	APPENDIX III	APPENDIX IV	COBALT ONLY	FIELD NOTES
BMW-24	01	5-26-22	1015	W	P	4		X			X		X	X		
BMW-23	02	"	1110	W	P	4		X			X		X	X		
BMW-22	03	"	1200	W	P	4		X			X		X	X		
BMW-21	04	"	1300	W	P	4		X			X		X	X		
BMW-26	05	"	1405	W	P	4		X			X		X	X		
BMW-27	06	"	1500	W	P	4		X			X		X	X		
BMW-20	07	"	1605	W	P	4		X			X		X	X		
BMW-11AR	08	"	1715	W	P	4		X			X		X	X		
BMW-19	09	5-27-22	0750	W	P	4		X			X		X	X		
BMW-18	10	"	0850	W	P	4		X			X		X	X		
BMW-28	11	"	1000	W	P	4		X			X		X	X		
DUP-1	12	"	1000	W	P	4		X			X		X	X		
BMW-33	13	"	1115	W	P	4		X			X		X	X		
BMW-32	14	"	1210	W	P	1		X					X		X	

Relinquished By: (Sign) JB DATE/TIME 5-27-22 1700 Received by: Fedex
Relinquished By: (Sign) Fedex DATE/TIME 6/1/22-0907 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 ☐

LABORATORY USE ONLY
RECEIVING TEMP (°C): 0.2°C | 29.4 / 29.6°C THERM #:
CUSTODY SEALS: ☐ BROKEN ☑ INTACT ☐ NOT USED
CARRIER: ☐ LSO ☑ FEDEX ☐ UPS ☐ COURIER ☐ OTHER ☐ HAND DELIVERED

☐ **DHL DISPOSAL @ 5.00 each** ☐ **Return**

DHL COC REV 3 | MAR 2021

Eric Lau

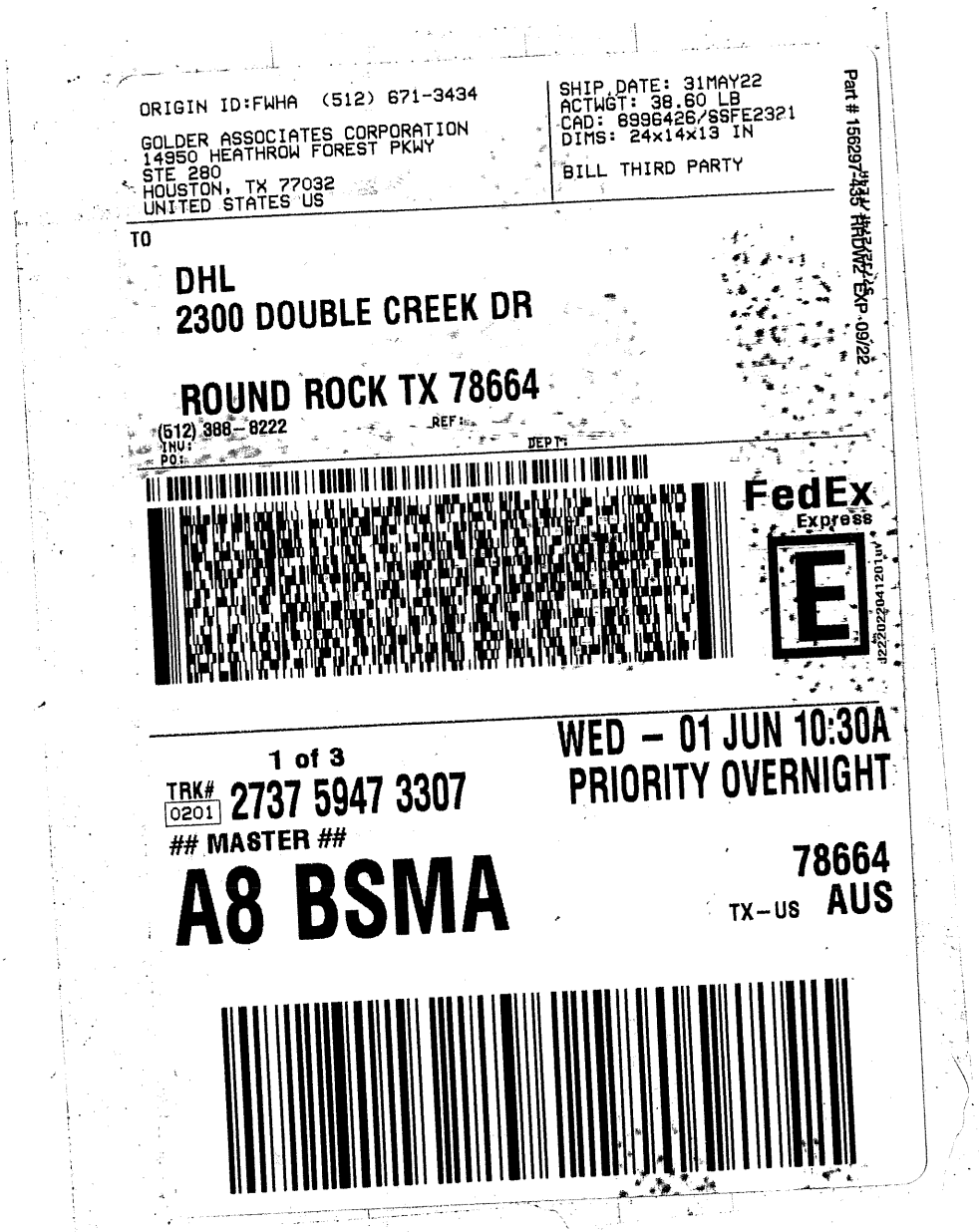
From: John DuPont
Sent: Tuesday, May 28, 2019 11:35 AM
To: Eric Lau
Subject: FW: CCR Analysis

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

From: Vienne, Will [mailto:William_Vienne@golder.com]
Sent: Tuesday, April 09, 2019 12:48 PM
To: John DuPont <dupont@dhlanalytical.com>
Subject: CCR Analysis



ORIGIN ID:FWHA (512) 671-3434

GOLDER ASSOCIATES CORPORATION
14950 HEATHROW FOREST PKWY
STE 280
HOUSTON, TX 77032
UNITED STATES US

SHIP DATE: 31MAY22
ACTWGT: 38.60 LB
CAD: 8996426/SSFE2321
DIMS: 24x14x13 IN

BILL THIRD PARTY

Part # 156297-1435 HRADW2 EXP 09/22

TO

DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

1 of 3

TRK# 0201 2737 5947 3307

WED - 01 JUN 10:30A
PRIORITY OVERNIGHT

MASTER

A8 BSMA

78664
TX-US AUS

CUSTODY S EAL

DATE 5-31-22

SIGNATURE

DHL ANALYTICAL

ORIGIN ID:FWHA (512) 671-3434
GOLDER ASSOCIATES CORPORATION
14950 HEATHROW FOREST PKWY
STE 280
HOUSTON, TX 77032
UNITED STATES US

SHIP DATE: 31MAY22
ACTWGT: 38.70 LB
CAD: 6996426/SSFE2321
DIMS: 24x14x13 IN
BILL THIRD PARTY

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

FedEx
Express
E

2 of 3
MPS# 0263 **2737 5947 3318**
Mstr# 2737 5947 3307 0201

WED - 01 JUN 10:30A
PRIORITY OVERNIGHT

A8 BSMA

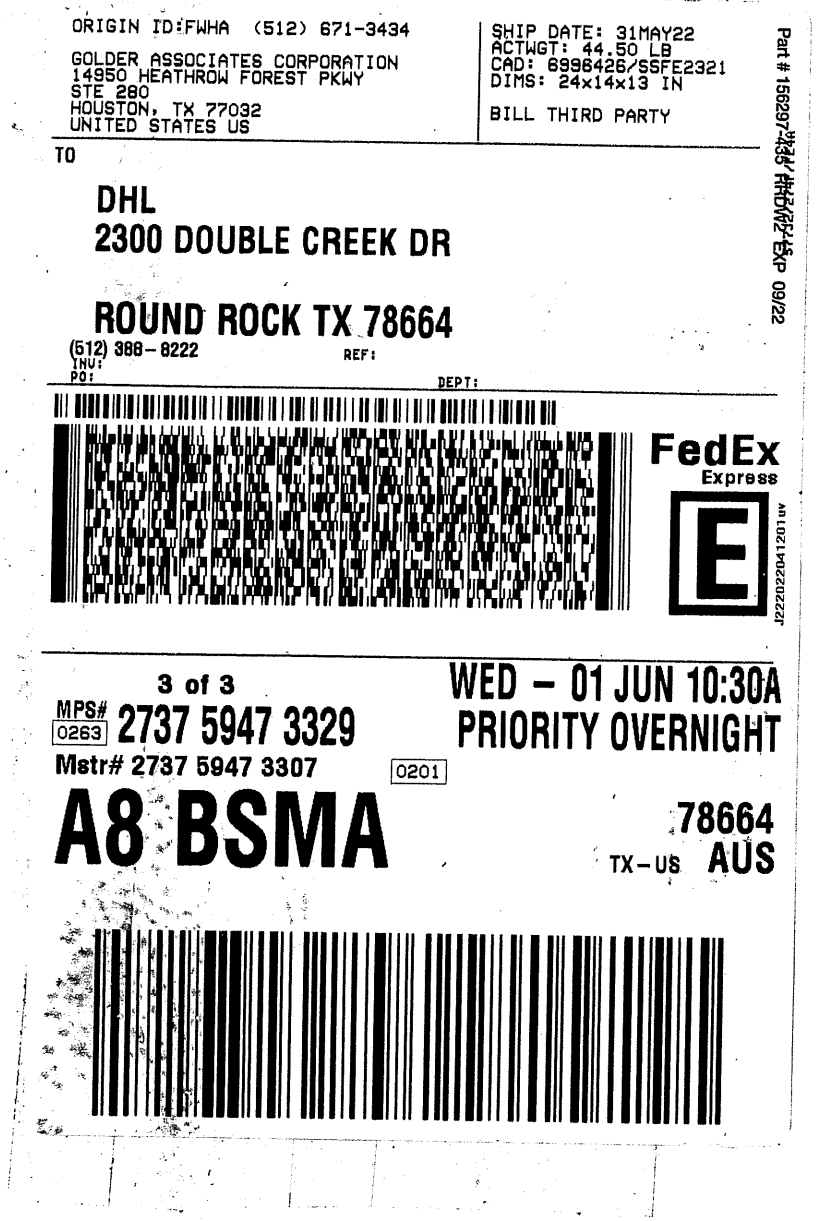
78664
TX-US AUS

CUSTODY SEAL

DATE 5-31-22

SIGNATURE [signature]

DHL ANALYTICAL



ORIGIN ID:FWHA (512) 671-3434

GOLDER ASSOCIATES CORPORATION
14950 HEATHROW FOREST PKWY
STE 280
HOUSTON, TX 77032
UNITED STATES US

SHIP DATE: 31MAY22
ACTWGT: 44.50 LB
CAD: 6996426/SSFE2321
DIMS: 24x14x13 IN

BILL THIRD PARTY

Part # 156297-XXX-XXXX REV 09/22

TO

DHL
2300 DOUBLE CREEK DR

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

FedEx Express

3 of 3
MPS# 0263 2737 5947 3329
Mstr# 2737 5947 3307 0201

WED - 01 JUN 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

CUSTODY SEAL

DATE 5-31-22

SIGNATURE

DHL ANALYTICAL

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name WSP-Golder | Date Received: 6/1/2022

Work Order Number 2206001 | Received by: KAO

Checklist completed by: _____ 6/1/2022 | Reviewed by SH 6/1/2022

Signature | Date | Initials | Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	0.2 °C /29.4/29.6°C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
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

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

Client contacted: _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Page 1 of 1

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: Luminant - A1 Landfill - CCR	**LRC Date:** 7/13/22
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2206001
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 - A1 Landfill - CCR	**LRC Date:** 7/13/22
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2206001
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 February 23-26 2021. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager

Signature

07/13/22

Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *13-Jul-22*

CLIENT: WSP-Golder
Project: Luminant - A1 Landfill - CCR
Lab Order: 2206001

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 6/1/22. A total of 14 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions analysis performed on 6/9/22 the matrix spike and matrix spike duplicate recoveries were slightly below control limits for Sulfate. This was due to matrix effect. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 6/7/22 (batch 105680) the matrix spike and matrix spike duplicate recoveries were below control limits for Calcium. These are flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

Exception Report S9-01

For Metals analysis performed on 6/7/22 (batch 105680) the PDS recovery was out of control limits for Calcium. This is flagged accordingly in the QC summary report. The serial dilution was within control limits for this analyte. No further corrective actions were taken.

For Mercury analysis performed on 6/9/22 the PDS recovery was slightly below control limits. This was due to matrix effect. This is flagged accordingly. The serial dilution was within control limits. No further corrective actions were taken.

DHL Analytical, Inc.

Date: *13-Jul-22*

CLIENT: WSP-Golder
Project: Luminant - A1 Landfill - CCR
Lab Order: 2206001

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2206001-01	BMW-24		05/26/22 10:15 AM	6/1/2022
2206001-02	BMW-23		05/26/22 11:10 AM	6/1/2022
2206001-03	BMW-22		05/26/22 12:00 PM	6/1/2022
2206001-04	BMW-21		05/26/22 01:00 PM	6/1/2022
2206001-05	BMW-26		05/26/22 02:05 PM	6/1/2022
2206001-06	BMW-27		05/26/22 03:00 PM	6/1/2022
2206001-07	BMW-20		05/26/22 04:05 PM	6/1/2022
2206001-08	BMW-11AR		05/26/22 05:15 PM	6/1/2022
2206001-09	BMW-19		05/27/22 07:50 AM	6/1/2022
2206001-10	BMW-18		05/27/22 08:50 AM	6/1/2022
2206001-11	BMW-28		05/27/22 10:00 AM	6/1/2022
2206001-12	DUP-1		05/27/22 10:00 AM	6/1/2022
2206001-13	BMW-33		05/27/22 11:15 AM	6/1/2022
2206001-14	BMW-32		05/27/22 12:10 PM	6/1/2022

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2206001-01A	BMW-24	05/26/22 10:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-24	05/26/22 10:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-24	05/26/22 10:15 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-01B	BMW-24	05/26/22 10:15 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-24	05/26/22 10:15 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-24	05/26/22 10:15 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-24	05/26/22 10:15 AM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-02A	BMW-23	05/26/22 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-23	05/26/22 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-23	05/26/22 11:10 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-02B	BMW-23	05/26/22 11:10 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-23	05/26/22 11:10 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-23	05/26/22 11:10 AM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-03A	BMW-22	05/26/22 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-22	05/26/22 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-22	05/26/22 12:00 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-03B	BMW-22	05/26/22 12:00 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-22	05/26/22 12:00 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-22	05/26/22 12:00 PM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-04A	BMW-21	05/26/22 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-21	05/26/22 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-21	05/26/22 01:00 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-04B	BMW-21	05/26/22 01:00 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-21	05/26/22 01:00 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-21	05/26/22 01:00 PM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-05A	BMW-26	05/26/22 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-26	05/26/22 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/02/22 08:05 AM	105637
	BMW-26	05/26/22 02:05 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2206001-05B	BMW-26	05/26/22 02:05 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-26	05/26/22 02:05 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-26	05/26/22 02:05 PM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-06A	BMW-27	05/26/22 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-27	05/26/22 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-27	05/26/22 03:00 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
	BMW-27	05/26/22 03:00 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-06B	BMW-27	05/26/22 03:00 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-27	05/26/22 03:00 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-27	05/26/22 03:00 PM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-07A	BMW-20	05/26/22 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-20	05/26/22 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-20	05/26/22 04:05 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
	BMW-20	05/26/22 04:05 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-07B	BMW-20	05/26/22 04:05 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-20	05/26/22 04:05 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-20	05/26/22 04:05 PM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-08A	BMW-11AR	05/26/22 05:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-11AR	05/26/22 05:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-11AR	05/26/22 05:15 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
	BMW-11AR	05/26/22 05:15 PM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-08B	BMW-11AR	05/26/22 05:15 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-11AR	05/26/22 05:15 PM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-11AR	05/26/22 05:15 PM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-09A	BMW-19	05/27/22 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-19	05/27/22 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-19	05/27/22 07:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
	BMW-19	05/27/22 07:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2206001-09B	BMW-19	05/27/22 07:50 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-19	05/27/22 07:50 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-19	05/27/22 07:50 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-19	05/27/22 07:50 AM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-10A	BMW-18	05/27/22 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-18	05/27/22 08:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
	BMW-18	05/27/22 08:50 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-10B	BMW-18	05/27/22 08:50 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-18	05/27/22 08:50 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-18	05/27/22 08:50 AM	Aqueous	M2540C	TDS Preparation	06/01/22 10:36 AM	105624
2206001-11A	BMW-28	05/27/22 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-28	05/27/22 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-28	05/27/22 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
	BMW-28	05/27/22 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-11B	BMW-28	05/27/22 10:00 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-28	05/27/22 10:00 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-28	05/27/22 10:00 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-28	05/27/22 10:00 AM	Aqueous	M2540C	TDS Preparation	06/02/22 01:17 PM	105653
2206001-12A	DUP-1	05/27/22 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	DUP-1	05/27/22 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	DUP-1	05/27/22 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
	DUP-1	05/27/22 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-12B	DUP-1	05/27/22 10:00 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	DUP-1	05/27/22 10:00 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	DUP-1	05/27/22 10:00 AM	Aqueous	M2540C	TDS Preparation	06/02/22 01:17 PM	105653
2206001-13A	BMW-33	05/27/22 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-33	05/27/22 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680
	BMW-33	05/27/22 11:15 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2206001-13A	BMW-33	05/27/22 11:15 AM	Aqueous	SW7470A	Mercury Aq Prep	06/08/22 10:14 AM	105730
2206001-13B	BMW-33	05/27/22 11:15 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-33	05/27/22 11:15 AM	Aqueous	E300	Anion Preparation	06/09/22 09:30 AM	105753
	BMW-33	05/27/22 11:15 AM	Aqueous	M2540C	TDS Preparation	06/02/22 01:17 PM	105653
2206001-14A	BMW-32	05/27/22 12:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/06/22 07:41 AM	105680

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2206001-01A	BMW-24	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:13 PM	CETAC2_HG_220609B
	BMW-24	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	5	06/03/22 02:53 PM	ICP-MS4_220603B
	BMW-24	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	1	06/02/22 03:32 PM	ICP-MS5_220602A
2206001-01B	BMW-24	Aqueous	E300	Anions by IC method - Water	105753	100	06/09/22 03:08 PM	IC2_220609A
	BMW-24	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 04:33 PM	IC2_220609A
	BMW-24	Aqueous	E300	Anions by IC method - Water	105753	1	06/09/22 09:39 PM	IC2_220609A
	BMW-24	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-02A	BMW-23	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:15 PM	CETAC2_HG_220609B
	BMW-23	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	10	06/03/22 02:55 PM	ICP-MS4_220603B
	BMW-23	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	1	06/02/22 03:35 PM	ICP-MS5_220602A
2206001-02B	BMW-23	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 04:50 PM	IC2_220609A
	BMW-23	Aqueous	E300	Anions by IC method - Water	105753	1	06/09/22 11:04 PM	IC2_220609A
	BMW-23	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-03A	BMW-22	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:18 PM	CETAC2_HG_220609B
	BMW-22	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	20	06/03/22 02:57 PM	ICP-MS4_220603B
	BMW-22	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	1	06/02/22 03:37 PM	ICP-MS5_220602A
2206001-03B	BMW-22	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 05:07 PM	IC2_220609A
	BMW-22	Aqueous	E300	Anions by IC method - Water	105753	1	06/09/22 11:21 PM	IC2_220609A
	BMW-22	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-04A	BMW-21	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:20 PM	CETAC2_HG_220609B
	BMW-21	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	1	06/02/22 03:40 PM	ICP-MS5_220602A
	BMW-21	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	10	06/03/22 02:59 PM	ICP-MS4_220603B
2206001-04B	BMW-21	Aqueous	E300	Anions by IC method - Water	105753	1	06/09/22 11:38 PM	IC2_220609A
	BMW-21	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 05:24 PM	IC2_220609A
	BMW-21	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-05A	BMW-26	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:22 PM	CETAC2_HG_220609B

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2206001-05A	BMW-26	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	10	06/03/22 03:01 PM	ICP-MS4_220603B
	BMW-26	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105637	1	06/02/22 03:43 PM	ICP-MS5_220602A
2206001-05B	BMW-26	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 05:41 PM	IC2_220609A
	BMW-26	Aqueous	E300	Anions by IC method - Water	105753	1	06/09/22 11:55 PM	IC2_220609A
	BMW-26	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-06A	BMW-27	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:42 PM	CETAC2_HG_220609B
	BMW-27	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:33 PM	CETAC2_HG_220609B
	BMW-27	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:24 PM	ICP-MS5_220607A
	BMW-27	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	10	06/07/22 01:02 PM	ICP-MS5_220607A
2206001-06B	BMW-27	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 07:06 PM	IC2_220609A
	BMW-27	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 12:12 AM	IC2_220609A
	BMW-27	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-07A	BMW-20	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:36 PM	CETAC2_HG_220609B
	BMW-20	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:45 PM	CETAC2_HG_220609B
	BMW-20	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:27 PM	ICP-MS5_220607A
	BMW-20	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	10	06/07/22 01:04 PM	ICP-MS5_220607A
2206001-07B	BMW-20	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 12:29 AM	IC2_220609A
	BMW-20	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 07:23 PM	IC2_220609A
	BMW-20	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-08A	BMW-11AR	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:38 PM	CETAC2_HG_220609B
	BMW-11AR	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:47 PM	CETAC2_HG_220609B
	BMW-11AR	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:29 PM	ICP-MS5_220607A
	BMW-11AR	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	10	06/07/22 01:07 PM	ICP-MS5_220607A
2206001-08B	BMW-11AR	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 07:40 PM	IC2_220609A
	BMW-11AR	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 12:46 AM	IC2_220609A

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2206001-08B	BMW-11AR	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-09A	BMW-19	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:40 PM	CETAC2_HG_220609B
	BMW-19	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:49 PM	CETAC2_HG_220609B
	BMW-19	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:32 PM	ICP-MS5_220607A
	BMW-19	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	50	06/07/22 01:10 PM	ICP-MS5_220607A
2206001-09B	BMW-19	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 07:57 PM	IC2_220609A
	BMW-19	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 01:03 AM	IC2_220609A
	BMW-19	Aqueous	E300	Anions by IC method - Water	105753	100	06/09/22 03:59 PM	IC2_220609A
	BMW-19	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-10A	BMW-18	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:43 PM	CETAC2_HG_220609B
	BMW-18	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:52 PM	CETAC2_HG_220609B
	BMW-18	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:34 PM	ICP-MS5_220607A
2206001-10B	BMW-18	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 08:14 PM	IC2_220609A
	BMW-18	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 01:20 AM	IC2_220609A
	BMW-18	Aqueous	M2540C	Total Dissolved Solids	105624	1	06/01/22 04:25 PM	WC_220601D
2206001-11A	BMW-28	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:54 PM	CETAC2_HG_220609B
	BMW-28	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:49 PM	CETAC2_HG_220609B
	BMW-28	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:37 PM	ICP-MS5_220607A
	BMW-28	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	10	06/07/22 01:12 PM	ICP-MS5_220607A
2206001-11B	BMW-28	Aqueous	E300	Anions by IC method - Water	105753	100	06/09/22 04:16 PM	IC2_220609A
	BMW-28	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 08:31 PM	IC2_220609A
	BMW-28	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 01:37 AM	IC2_220609A
	BMW-28	Aqueous	M2540C	Total Dissolved Solids	105653	1	06/02/22 06:20 PM	WC_220602E
2206001-12A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	105730	5	06/09/22 01:52 PM	CETAC2_HG_220609B

Lab Order: 2206001
Client: WSP-Golder
Project: Luminant - A1 Landfill - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2206001-12A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:56 PM	CETAC2_HG_220609B
	DUP-1	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:39 PM	ICP-MS5_220607A
	DUP-1	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	10	06/07/22 01:15 PM	ICP-MS5_220607A
2206001-12B	DUP-1	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 03:02 AM	IC2_220609A
	DUP-1	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 08:48 PM	IC2_220609A
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	105653	1	06/02/22 06:20 PM	WC_220602E
2206001-13A	BMW-33	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 01:54 PM	CETAC2_HG_220609B
	BMW-33	Aqueous	SW7470A	Mercury Total: Aqueous	105730	1	06/09/22 02:58 PM	CETAC2_HG_220609B
	BMW-33	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:54 PM	ICP-MS5_220607A
	BMW-33	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	10	06/07/22 01:17 PM	ICP-MS5_220607A
2206001-13B	BMW-33	Aqueous	E300	Anions by IC method - Water	105753	10	06/09/22 09:05 PM	IC2_220609A
	BMW-33	Aqueous	E300	Anions by IC method - Water	105753	1	06/10/22 03:19 AM	IC2_220609A
	BMW-33	Aqueous	M2540C	Total Dissolved Solids	105653	1	06/02/22 06:20 PM	WC_220602E
2206001-14A	BMW-32	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	105680	1	06/07/22 12:57 PM	ICP-MS5_220607A

DHL Analytical, Inc.

Date: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-24
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-01
Project No:	19122262	**Collection Date:**	05/26/22 10:15 AM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/22 03:32 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:32 PM
Barium	0.176	0.00300	0.0100		mg/L	1	06/02/22 03:32 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:32 PM
Boron	0.618	0.0500	0.150		mg/L	5	06/03/22 02:53 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:32 PM
Calcium	80.3	0.500	1.50		mg/L	5	06/03/22 02:53 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:32 PM
Cobalt	0.00834	0.00300	0.00500		mg/L	1	06/02/22 03:32 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:32 PM
Lithium	0.0499	0.00500	0.0100		mg/L	1	06/02/22 03:32 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:32 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:32 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/22 03:32 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 01:13 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	191	3.00	10.0		mg/L	10	06/09/22 04:33 PM
Fluoride	0.160	0.100	0.400	J	mg/L	1	06/09/22 09:39 PM
Sulfate	255	10.0	30.0		mg/L	10	06/09/22 04:33 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	952	10.0	10.0		mg/L	1	06/01/22 04:25 PM

Qualifiers:

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- 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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-23
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-02
Project No:	19122262	**Collection Date:**	05/26/22 11:10 AM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/22 03:35 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:35 PM
Barium	0.0426	0.00300	0.0100		mg/L	1	06/02/22 03:35 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:35 PM
Boron	1.67	0.100	0.300		mg/L	10	06/03/22 02:55 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:35 PM
Calcium	107	1.00	3.00		mg/L	10	06/03/22 02:55 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:35 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/22 03:35 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:35 PM
Lithium	0.0820	0.00500	0.0100		mg/L	1	06/02/22 03:35 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:35 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:35 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/22 03:35 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 01:15 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	251	3.00	10.0		mg/L	10	06/09/22 04:50 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/22 11:04 PM
Sulfate	482	10.0	30.0		mg/L	10	06/09/22 04:50 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1700	50.0	50.0		mg/L	1	06/01/22 04:25 PM

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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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-22
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-03
Project No:	19122262	**Collection Date:**	05/26/22 12:00 PM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/22 03:37 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:37 PM
Barium	0.0626	0.00300	0.0100		mg/L	1	06/02/22 03:37 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:37 PM
Boron	3.21	0.200	0.600		mg/L	20	06/03/22 02:57 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:37 PM
Calcium	218	2.00	6.00		mg/L	20	06/03/22 02:57 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:37 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/22 03:37 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:37 PM
Lithium	0.0830	0.00500	0.0100		mg/L	1	06/02/22 03:37 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:37 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:37 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/22 03:37 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 01:18 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	273	3.00	10.0		mg/L	10	06/09/22 05:07 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/22 11:21 PM
Sulfate	843	10.0	30.0		mg/L	10	06/09/22 05:07 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	2320	50.0	50.0		mg/L	1	06/01/22 04:25 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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-21
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-04
Project No:	19122262	**Collection Date:**	05/26/22 01:00 PM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/22 03:40 PM
Arsenic	0.00413	0.00200	0.00500	J	mg/L	1	06/02/22 03:40 PM
Barium	0.0398	0.00300	0.0100		mg/L	1	06/02/22 03:40 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:40 PM
Boron	1.03	0.100	0.300		mg/L	10	06/03/22 02:59 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:40 PM
Calcium	170	1.00	3.00		mg/L	10	06/03/22 02:59 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:40 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/22 03:40 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:40 PM
Lithium	0.0659	0.00500	0.0100		mg/L	1	06/02/22 03:40 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:40 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:40 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/22 03:40 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 01:20 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	407	3.00	10.0		mg/L	10	06/09/22 05:24 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/22 11:38 PM
Sulfate	444	10.0	30.0		mg/L	10	06/09/22 05:24 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	2110	50.0	50.0		mg/L	1	06/01/22 04:25 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
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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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-26
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-05
Project No:	19122262	**Collection Date:**	05/26/22 02:05 PM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/22 03:43 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:43 PM
Barium	0.0209	0.00300	0.0100		mg/L	1	06/02/22 03:43 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:43 PM
Boron	0.502	0.100	0.300		mg/L	10	06/03/22 03:01 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:43 PM
Calcium	187	1.00	3.00		mg/L	10	06/03/22 03:01 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:43 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/02/22 03:43 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/22 03:43 PM
Lithium	0.104	0.00500	0.0100		mg/L	1	06/02/22 03:43 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:43 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/22 03:43 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/22 03:43 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 01:22 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	124	3.00	10.0		mg/L	10	06/09/22 05:41 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/22 11:55 PM
Sulfate	674	10.0	30.0		mg/L	10	06/09/22 05:41 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1890	50.0	50.0		mg/L	1	06/01/22 04:25 PM

Qualifiers:

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J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
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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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-27
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-06
Project No:	19122262	**Collection Date:**	05/26/22 03:00 PM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:24 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:24 PM
Barium	0.0121	0.00300	0.0100		mg/L	1	06/07/22 12:24 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:24 PM
Boron	0.343	0.0100	0.0300		mg/L	1	06/07/22 12:24 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:24 PM
Calcium	93.7	1.00	3.00		mg/L	10	06/07/22 01:02 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:24 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/07/22 12:24 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:24 PM
Lithium	0.0538	0.00500	0.0100		mg/L	1	06/07/22 12:24 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:24 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:24 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:24 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:42 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	66.0	3.00	10.0		mg/L	10	06/09/22 07:06 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/10/22 12:12 AM
Sulfate	360	10.0	30.0		mg/L	10	06/09/22 07:06 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1040	50.0	50.0		mg/L	1	06/01/22 04:25 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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-20
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-07
Project No:	19122262	**Collection Date:**	05/26/22 04:05 PM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:27 PM
Arsenic	0.00413	0.00200	0.00500	J	mg/L	1	06/07/22 12:27 PM
Barium	0.0523	0.00300	0.0100		mg/L	1	06/07/22 12:27 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:27 PM
Boron	0.0968	0.0100	0.0300		mg/L	1	06/07/22 12:27 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:27 PM
Calcium	125	1.00	3.00		mg/L	10	06/07/22 01:04 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:27 PM
Cobalt	0.0487	0.00300	0.00500		mg/L	1	06/07/22 12:27 PM
Lead	0.000304	0.000300	0.00100	J	mg/L	1	06/07/22 12:27 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	06/07/22 12:27 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:27 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:27 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:27 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:45 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	35.8	3.00	10.0		mg/L	10	06/09/22 07:23 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/10/22 12:29 AM
Sulfate	455	10.0	30.0		mg/L	10	06/09/22 07:23 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1080	10.0	10.0		mg/L	1	06/01/22 04:25 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-11AR
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-08
Project No:	19122262	**Collection Date:**	05/26/22 05:15 PM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:29 PM
Arsenic	0.00278	0.00200	0.00500	J	mg/L	1	06/07/22 12:29 PM
Barium	0.0480	0.00300	0.0100		mg/L	1	06/07/22 12:29 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:29 PM
Boron	0.331	0.0100	0.0300		mg/L	1	06/07/22 12:29 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:29 PM
Calcium	119	1.00	3.00		mg/L	10	06/07/22 01:07 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:29 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/07/22 12:29 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:29 PM
Lithium	0.0205	0.00500	0.0100		mg/L	1	06/07/22 12:29 PM
Molybdenum	0.00214	0.00200	0.00500	J	mg/L	1	06/07/22 12:29 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:29 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:29 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:47 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	7.46	0.300	1.00		mg/L	1	06/10/22 12:46 AM
Fluoride	0.169	0.100	0.400	J	mg/L	1	06/10/22 12:46 AM
Sulfate	285	10.0	30.0		mg/L	10	06/09/22 07:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1060	50.0	50.0		mg/L	1	06/01/22 04:25 PM

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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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-19
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-09
Project No:	19122262	**Collection Date:**	05/27/22 07:50 AM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:32 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:32 PM
Barium	0.0122	0.00300	0.0100		mg/L	1	06/07/22 12:32 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:32 PM
Boron	0.426	0.0100	0.0300		mg/L	1	06/07/22 12:32 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:32 PM
Calcium	432	5.00	15.0		mg/L	50	06/07/22 01:10 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:32 PM
Cobalt	0.00355	0.00300	0.00500	J	mg/L	1	06/07/22 12:32 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:32 PM
Lithium	0.0663	0.00500	0.0100		mg/L	1	06/07/22 12:32 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:32 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:32 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:32 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:49 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	6.20	0.300	1.00		mg/L	1	06/10/22 01:03 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/10/22 01:03 AM
Sulfate	1900	100	300		mg/L	100	06/09/22 03:59 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	3480	50.0	50.0		mg/L	1	06/01/22 04:25 PM

Qualifiers:

ND - Not Detected at the SDL
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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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-18
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-10
Project No:	19122262	**Collection Date:**	05/27/22 08:50 AM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:34 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:34 PM
Barium	0.0334	0.00300	0.0100		mg/L	1	06/07/22 12:34 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:34 PM
Boron	0.401	0.0100	0.0300		mg/L	1	06/07/22 12:34 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:34 PM
Calcium	7.27	0.100	0.300		mg/L	1	06/07/22 12:34 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:34 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/07/22 12:34 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:34 PM
Lithium	0.0152	0.00500	0.0100		mg/L	1	06/07/22 12:34 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:34 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:34 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:34 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:52 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	19.2	0.300	1.00		mg/L	1	06/10/22 01:20 AM
Fluoride	0.209	0.100	0.400	J	mg/L	1	06/10/22 01:20 AM
Sulfate	79.6	1.00	3.00		mg/L	1	06/10/22 01:20 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	469	10.0	10.0		mg/L	1	06/01/22 04:25 PM

Qualifiers:

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S - Spike Recovery outside control limits
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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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-28
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-11
Project No:	19122262	**Collection Date:**	05/27/22 10:00 AM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:37 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:37 PM
Barium	0.00766	0.00300	0.0100	J	mg/L	1	06/07/22 12:37 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:37 PM
Boron	0.134	0.0100	0.0300		mg/L	1	06/07/22 12:37 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:37 PM
Calcium	25.4	1.00	3.00		mg/L	10	06/07/22 01:12 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:37 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/07/22 12:37 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:37 PM
Lithium	0.0150	0.00500	0.0100		mg/L	1	06/07/22 12:37 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:37 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:37 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:37 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:54 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	27.5	0.300	1.00		mg/L	1	06/10/22 01:37 AM
Fluoride	0.119	0.100	0.400	J	mg/L	1	06/10/22 01:37 AM
Sulfate	833	10.0	30.0		mg/L	10	06/09/22 08:31 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1730	50.0	50.0		mg/L	1	06/02/22 06:20 PM

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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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	DUP-1
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-12
Project No:	19122262	**Collection Date:**	05/27/22 10:00 AM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:39 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:39 PM
Barium	0.0112	0.00300	0.0100		mg/L	1	06/07/22 12:39 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:39 PM
Boron	0.477	0.0100	0.0300		mg/L	1	06/07/22 12:39 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:39 PM
Calcium	141	1.00	3.00		mg/L	10	06/07/22 01:15 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:39 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/07/22 12:39 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:39 PM
Lithium	0.0825	0.00500	0.0100		mg/L	1	06/07/22 12:39 PM
Molybdenum	0.00658	0.00200	0.00500		mg/L	1	06/07/22 12:39 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:39 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:39 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:56 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	34.1	0.300	1.00		mg/L	1	06/10/22 03:02 AM
Fluoride	0.151	0.100	0.400	J	mg/L	1	06/10/22 03:02 AM
Sulfate	1120	10.0	30.0		mg/L	10	06/09/22 08:48 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	2280	50.0	50.0		mg/L	1	06/02/22 06:20 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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-33
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-13
Project No:	19122262	**Collection Date:**	05/27/22 11:15 AM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/07/22 12:54 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:54 PM
Barium	0.112	0.00300	0.0100		mg/L	1	06/07/22 12:54 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:54 PM
Boron	0.183	0.0100	0.0300		mg/L	1	06/07/22 12:54 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:54 PM
Calcium	112	1.00	3.00		mg/L	10	06/07/22 01:17 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:54 PM
Cobalt	0.00435	0.00300	0.00500	J	mg/L	1	06/07/22 12:54 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/07/22 12:54 PM
Lithium	0.0121	0.00500	0.0100		mg/L	1	06/07/22 12:54 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:54 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/07/22 12:54 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/07/22 12:54 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **JV**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/09/22 02:58 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	58.1	3.00	10.0		mg/L	10	06/09/22 09:05 PM
Fluoride	0.147	0.100	0.400	J	mg/L	1	06/10/22 03:19 AM
Sulfate	168	10.0	30.0		mg/L	10	06/09/22 09:05 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1060	50.0	50.0		mg/L	1	06/02/22 06:20 PM

Qualifiers:

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J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
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: *13-Jul-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-32
Project:	Luminant - A1 Landfill - CCR	**Lab ID:**	2206001-14
Project No:	19122262	**Collection Date:**	05/27/22 12:10 PM
Lab Order:	2206001	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Cobalt	0.00307	0.00300	0.00500	J	mg/L	1	06/07/22 12:57 PM

Qualifiers:

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

CLIENT: WSP-Golder
Work Order: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_220426A

Sample ID: **DCS-105031**	Batch ID: **105031**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **DCS**	Run ID: **CETAC2_HG_220426A**	Analysis Date: **4/26/2022 1:00:45 PM**	Prep Date: **4/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000182	0.000200	0.000200	0	91.0	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_220609B

The QC data in batch 105730 applies to the following samples: 2206001-01A, 2206001-02A, 2206001-03A, 2206001-04A, 2206001-05A, 2206001-06A, 2206001-07A, 2206001-08A, 2206001-09A, 2206001-10A, 2206001-11A, 2206001-12A, 2206001-13A

Sample ID: **MB-105730** Batch ID: **105730** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_220609B** Analysis Date: **6/9/2022 1:06:44 PM** Prep Date: **6/8/2022**

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

Sample ID: **LCS-105730** Batch ID: **105730** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCS** Run ID: **CETAC2_HG_220609B** Analysis Date: **6/9/2022 1:09:00 PM** Prep Date: **6/8/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00198	0.000200	0.00200	0	99.0	85	115			

Sample ID: **LCSD-105730** Batch ID: **105730** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCSD** Run ID: **CETAC2_HG_220609B** Analysis Date: **6/9/2022 1:11:16 PM** Prep Date: **6/8/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00200	0.000200	0.00200	0	100	85	115	1.01	15	

Sample ID: **2206001-05AMS** Batch ID: **105730** TestNo: **SW7470A** Units: **mg/L**
SampType: **MS** Run ID: **CETAC2_HG_220609B** Analysis Date: **6/9/2022 1:24:53 PM** Prep Date: **6/8/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00176	0.000200	0.00200	0	88.0	80	120			

Sample ID: **2206001-05AMSD** Batch ID: **105730** TestNo: **SW7470A** Units: **mg/L**
SampType: **MSD** Run ID: **CETAC2_HG_220609B** Analysis Date: **6/9/2022 1:27:09 PM** Prep Date: **6/8/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00175	0.000200	0.00200	0	87.5	80	120	0.570	15	

Sample ID: **2206001-05APDS** Batch ID: **105730** TestNo: **SW7470A** Units: **mg/L**
SampType: **PDS** Run ID: **CETAC2_HG_220609B** Analysis Date: **6/9/2022 1:31:42 PM** Prep Date: **6/8/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00186	0.000200	0.00250	0	74.4	85	115			S

Sample ID: **2206001-05ASD** Batch ID: **105730** TestNo: **SW7470A** Units: **mg/L**
SampType: **SD** Run ID: **CETAC2_HG_220609B** Analysis Date: **6/9/2022 2:40:34 PM** Prep Date: **6/8/2022**

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

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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_220609B

Sample ID: **ICV-220609**	Batch ID: **R121528**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_220609B**	Analysis Date: **6/9/2022 10:18:21 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00378	0.000200	0.00400	0	94.5	90	110			

Sample ID: **CCV1-220609**	Batch ID: **R121528**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220609B**	Analysis Date: **6/9/2022 11:18:18 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00203	0.000200	0.00200	0	102	90	110			

Sample ID: **CCV2-220609**	Batch ID: **R121528**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220609B**	Analysis Date: **6/9/2022 1:45:23 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00202	0.000200	0.00200	0	101	90	110			

Sample ID: **CCV3-220609**	Batch ID: **R121528**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220609B**	Analysis Date: **6/9/2022 2:01:24 PM**	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: **CCV4-220609**	Batch ID: **R121528**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220609B**	Analysis Date: **6/9/2022 3:05:46 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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220511B

Sample ID: **DCS2-105256**	Batch ID: **105256**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS4_220511B**	Analysis Date: **5/11/2022 12:23:00 PM**	Prep Date: **5/10/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.318	0.300	0.300	0	106	70	130	0	0	

Sample ID: **DCS4-105256**	Batch ID: **105256**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS4**	Run ID: **ICP-MS4_220511B**	Analysis Date: **5/11/2022 12:31:00 PM**	Prep Date: **5/10/2022**

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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220603B

The QC data in batch 105637 applies to the following samples: 2206001-01A, 2206001-02A, 2206001-03A, 2206001-04A, 2206001-05A

Sample ID: **MB-105637** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_220603B** Analysis Date: **6/3/2022 2:13:00 PM** Prep Date: **6/2/2022**

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

Sample ID: **LCS-105637** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_220603B** Analysis Date: **6/3/2022 2:15:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.189	0.0300	0.200	0	94.6	80	120			

Sample ID: **LCSD-105637** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_220603B** Analysis Date: **6/3/2022 2:17:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.195	0.0300	0.200	0	97.4	80	120	2.92	15	

Sample ID: **2205330-04A SD** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_220603B** Analysis Date: **6/3/2022 2:23:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.965	0.750	0	0.858				11.8	20	
Calcium	56.8	7.50	0	56.6				0.322	20	

Sample ID: **2205330-04A PDS** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_220603B** Analysis Date: **6/3/2022 2:43:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.85	0.150	1.00	0.858	98.7	75	125			
Calcium	81.8	1.50	25.0	56.6	101	75	125			

Sample ID: **2205330-04A MS** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_220603B** Analysis Date: **6/3/2022 2:45:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.02	0.150	0.200	0.858	82.9	75	125			

Sample ID: **2205330-04A MSD** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_220603B** Analysis Date: **6/3/2022 2:47:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.04	0.150	0.200	0.858	92.0	75	125	1.75	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220603B

Sample ID: **ICV-220603**	Batch ID: **R121430**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_220603B**	Analysis Date: **6/3/2022 10:39:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.101	0.0300	0.100	0	101	90	110			
Calcium	2.67	0.300	2.50	0	107	90	110			

Sample ID: **LCVL-220603**	Batch ID: **R121430**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_220603B**	Analysis Date: **6/3/2022 10:50:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0196	0.0300	0.0200	0	98.2	80	120			
Calcium	0.0907	0.300	0.100	0	90.7	80	120			

Sample ID: **CCV4-220603**	Batch ID: **R121430**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220603B**	Analysis Date: **6/3/2022 1:50:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.185	0.0300	0.200	0	92.7	90	110			
Calcium	5.12	0.300	5.00	0	102	90	110			

Sample ID: **CCV5-220603**	Batch ID: **R121430**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220603B**	Analysis Date: **6/3/2022 2:49:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.210	0.0300	0.200	0	105	90	110			
Calcium	5.23	0.300	5.00	0	105	90	110			

Sample ID: **CCV6-220603**	Batch ID: **R121430**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220603B**	Analysis Date: **6/3/2022 3:14:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.199	0.0300	0.200	0	99.5	90	110			
Calcium	5.21	0.300	5.00	0	104	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220519B

Sample ID: **DCS1-105256** Batch ID: **105256** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS** Run ID: **ICP-MS5_220519B** Analysis Date: **5/19/2022 11:00:00 AM** Prep Date: **5/10/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00106	0.00250	0.00100	0	106	70	130	0	0	
Beryllium	0.000564	0.00100	0.000500	0	113	70	130	0	0	
Cadmium	0.000522	0.00100	0.000500	0	104	70	130	0	0	
Lead	0.000544	0.00100	0.000500	0	109	70	130	0	0	
Thallium	0.000552	0.00150	0.000500	0	110	70	130	0	0	

Sample ID: **DCS2-105256** Batch ID: **105256** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS2** Run ID: **ICP-MS5_220519B** Analysis Date: **5/19/2022 11:03:00 AM** Prep Date: **5/10/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.348	0.300	0.300	0	116	70	130	0	0	

Sample ID: **DCS3-105256** Batch ID: **105256** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS3** Run ID: **ICP-MS5_220519B** Analysis Date: **5/19/2022 11:11:00 AM** Prep Date: **5/10/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00535	0.00500	0.00500	0	107	70	130	0	0	
Barium	0.00526	0.0100	0.00500	0	105	70	130	0	0	
Chromium	0.00561	0.00500	0.00500	0	112	70	130	0	0	
Cobalt	0.00556	0.00500	0.00500	0	111	70	130	0	0	
Lithium	0.00572	0.0100	0.00500	0	114	70	130	0	0	
Molybdenum	0.00525	0.00500	0.00500	0	105	70	130	0	0	
Selenium	0.00532	0.00500	0.00500	0	106	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_220602A**

The QC data in batch 105637 applies to the following samples: 2206001-01A, 2206001-02A, 2206001-03A, 2206001-04A, 2206001-05A

Sample ID: **MB-105637** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 2:40:00 PM** Prep Date: **6/2/2022**

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-105637** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 2:43:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.3	80	120			
Arsenic	0.199	0.00500	0.200	0	99.6	80	120			
Barium	0.200	0.0100	0.200	0	100	80	120			
Beryllium	0.193	0.00100	0.200	0	96.5	80	120			
Cadmium	0.201	0.00100	0.200	0	100	80	120			
Calcium	5.13	0.300	5.00	0	103	80	120			
Chromium	0.197	0.00500	0.200	0	98.4	80	120			
Cobalt	0.203	0.00500	0.200	0	102	80	120			
Lead	0.195	0.00100	0.200	0	97.5	80	120			
Lithium	0.194	0.0100	0.200	0	97.1	80	120			
Molybdenum	0.193	0.00500	0.200	0	96.4	80	120			
Selenium	0.207	0.00500	0.200	0	103	80	120			
Thallium	0.206	0.00150	0.200	0	103	80	120			

Sample ID: **LCSD-105637** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 2:45:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	80	120	1.12	15	
Arsenic	0.204	0.00500	0.200	0	102	80	120	2.17	15	
Barium	0.201	0.0100	0.200	0	100	80	120	0.261	15	
Beryllium	0.194	0.00100	0.200	0	96.9	80	120	0.416	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220602A

Sample ID: **LCSD-105637** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 2:45:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.202	0.00100	0.200	0	101	80	120	0.790	15	
Calcium	5.09	0.300	5.00	0	102	80	120	0.937	15	
Chromium	0.198	0.00500	0.200	0	98.8	80	120	0.424	15	
Cobalt	0.208	0.00500	0.200	0	104	80	120	2.35	15	
Lead	0.198	0.00100	0.200	0	98.8	80	120	1.29	15	
Lithium	0.196	0.0100	0.200	0	98.2	80	120	1.17	15	
Molybdenum	0.193	0.00500	0.200	0	96.4	80	120	0.023	15	
Selenium	0.208	0.00500	0.200	0	104	80	120	0.428	15	
Thallium	0.210	0.00150	0.200	0	105	80	120	1.63	15	

Sample ID: **2205330-04A SD** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 2:53:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	0.0230	0.0250	0	0.0229				0.614	20	
Barium	0.109	0.0500	0	0.108				1.31	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				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	<0.0250	0.0500	0	0.00781				0	20	
Molybdenum	0.0361	0.0250	0	0.0357				1.11	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: **2205330-04A PDS** Batch ID: **105637** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 3:19:00 PM** Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.202	0.00250	0.200	0	101	75	125			
Arsenic	0.214	0.00500	0.200	0.0229	95.4	75	125			
Barium	0.306	0.0100	0.200	0.107	99.1	75	125			
Beryllium	0.189	0.00100	0.200	0	94.5	75	125			
Cadmium	0.203	0.00100	0.200	0	101	75	125			
Chromium	0.204	0.00500	0.200	0	102	75	125			
Cobalt	0.203	0.00500	0.200	0	102	75	125			
Lead	0.200	0.00100	0.200	0	100	75	125			
Lithium	0.203	0.0100	0.200	0.00781	97.7	75	125			
Molybdenum	0.226	0.00500	0.200	0.0357	95.2	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220602A

Sample ID: **2205330-04A PDS**	Batch ID: **105637**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS5_220602A**	Analysis Date: **6/2/2022 3:19:00 PM**	Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.196	0.00500	0.200	0	98.1	75	125			
Thallium	0.213	0.00150	0.200	0	106	75	125			

Sample ID: **2205330-04A MS**	Batch ID: **105637**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS5_220602A**	Analysis Date: **6/2/2022 3:22:00 PM**	Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	101	75	125			
Arsenic	0.219	0.00500	0.200	0.0229	98.1	75	125			
Barium	0.309	0.0100	0.200	0.107	101	75	125			
Beryllium	0.190	0.00100	0.200	0	94.9	75	125			
Cadmium	0.199	0.00100	0.200	0	99.3	75	125			
Calcium	57.3	0.300	5.00	52.6	93.0	75	125			
Chromium	0.199	0.00500	0.200	0	99.4	75	125			
Cobalt	0.200	0.00500	0.200	0	100	75	125			
Lead	0.195	0.00100	0.200	0	97.7	75	125			
Lithium	0.200	0.0100	0.200	0.00781	96.3	75	125			
Molybdenum	0.229	0.00500	0.200	0.0357	96.5	75	125			
Selenium	0.197	0.00500	0.200	0	98.4	75	125			
Thallium	0.209	0.00150	0.200	0	104	75	125			

Sample ID: **2205330-04A MSD**	Batch ID: **105637**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS5_220602A**	Analysis Date: **6/2/2022 3:25:00 PM**	Prep Date: **6/2/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	75	125	1.37	15	
Arsenic	0.224	0.00500	0.200	0.0229	101	75	125	2.41	15	
Barium	0.311	0.0100	0.200	0.107	102	75	125	0.890	15	
Beryllium	0.192	0.00100	0.200	0	96.2	75	125	1.40	15	
Cadmium	0.202	0.00100	0.200	0	101	75	125	1.61	15	
Calcium	57.5	0.300	5.00	52.6	98.0	75	125	0.429	15	
Chromium	0.202	0.00500	0.200	0	101	75	125	1.80	15	
Cobalt	0.204	0.00500	0.200	0	102	75	125	1.74	15	
Lead	0.197	0.00100	0.200	0	98.6	75	125	0.929	15	
Lithium	0.202	0.0100	0.200	0.00781	97.1	75	125	0.824	15	
Molybdenum	0.231	0.00500	0.200	0.0357	97.8	75	125	1.10	15	
Selenium	0.201	0.00500	0.200	0	100	75	125	2.04	15	
Thallium	0.212	0.00150	0.200	0	106	75	125	1.48	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220602A

Sample ID: **ICV-220602** Batch ID: **R121405** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 10:45:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.103	0.00250	0.100	0	103	90	110			
Arsenic	0.101	0.00500	0.100	0	101	90	110			
Barium	0.103	0.0100	0.100	0	103	90	110			
Beryllium	0.0988	0.00100	0.100	0	98.8	90	110			
Cadmium	0.101	0.00100	0.100	0	101	90	110			
Calcium	2.59	0.300	2.50	0	104	90	110			
Chromium	0.102	0.00500	0.100	0	102	90	110			
Cobalt	0.103	0.00500	0.100	0	103	90	110			
Lead	0.101	0.00100	0.100	0	101	90	110			
Lithium	0.100	0.0100	0.100	0	100	90	110			
Molybdenum	0.0947	0.00500	0.100	0	94.7	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0981	0.00150	0.100	0	98.1	90	110			

Sample ID: **LCVL-220602** Batch ID: **R121405** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 10:51:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00228	0.00250	0.00200	0	114	80	120			
Arsenic	0.00514	0.00500	0.00500	0	103	80	120			
Barium	0.00509	0.0100	0.00500	0	102	80	120			
Beryllium	0.00116	0.00100	0.00100	0	116	80	120			
Cadmium	0.000989	0.00100	0.00100	0	98.9	80	120			
Calcium	0.110	0.300	0.100	0	110	80	120			
Chromium	0.00506	0.00500	0.00500	0	101	80	120			
Cobalt	0.00506	0.00500	0.00500	0	101	80	120			
Lead	0.00104	0.00100	0.00100	0	104	80	120			
Lithium	0.0101	0.0100	0.0100	0	101	80	120			
Molybdenum	0.00477	0.00500	0.00500	0	95.5	80	120			
Selenium	0.00520	0.00500	0.00500	0	104	80	120			
Thallium	0.00106	0.00150	0.00100	0	106	80	120			

Sample ID: **CCV5-220602** Batch ID: **R121405** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 2:16:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	101	90	110			
Arsenic	0.204	0.00500	0.200	0	102	90	110			
Barium	0.204	0.0100	0.200	0	102	90	110			
Beryllium	0.196	0.00100	0.200	0	98.0	90	110			
Cadmium	0.203	0.00100	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220602A

Sample ID: **CCV5-220602** Batch ID: **R121405** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 2:16:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.17	0.300	5.00	0	103	90	110			
Chromium	0.201	0.00500	0.200	0	101	90	110			
Cobalt	0.207	0.00500	0.200	0	103	90	110			
Lead	0.199	0.00100	0.200	0	99.7	90	110			
Lithium	0.198	0.0100	0.200	0	99.2	90	110			
Molybdenum	0.195	0.00500	0.200	0	97.6	90	110			
Selenium	0.206	0.00500	0.200	0	103	90	110			
Thallium	0.211	0.00150	0.200	0	106	90	110			

Sample ID: **CCV6-220602** Batch ID: **R121405** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 3:27:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.203	0.00250	0.200	0	101	90	110			
Arsenic	0.203	0.00500	0.200	0	101	90	110			
Barium	0.206	0.0100	0.200	0	103	90	110			
Beryllium	0.195	0.00100	0.200	0	97.3	90	110			
Cadmium	0.206	0.00100	0.200	0	103	90	110			
Calcium	5.18	0.300	5.00	0	104	90	110			
Chromium	0.204	0.00500	0.200	0	102	90	110			
Cobalt	0.208	0.00500	0.200	0	104	90	110			
Lead	0.199	0.00100	0.200	0	99.5	90	110			
Lithium	0.200	0.0100	0.200	0	100	90	110			
Molybdenum	0.196	0.00500	0.200	0	97.9	90	110			
Selenium	0.207	0.00500	0.200	0	104	90	110			
Thallium	0.211	0.00150	0.200	0	105	90	110			

Sample ID: **CCV7-220602** Batch ID: **R121405** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_220602A** Analysis Date: **6/2/2022 3:58:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.203	0.00250	0.200	0	101	90	110			
Arsenic	0.205	0.00500	0.200	0	103	90	110			
Barium	0.205	0.0100	0.200	0	102	90	110			
Beryllium	0.198	0.00100	0.200	0	98.9	90	110			
Cadmium	0.206	0.00100	0.200	0	103	90	110			
Chromium	0.203	0.00500	0.200	0	101	90	110			
Cobalt	0.211	0.00500	0.200	0	105	90	110			
Lead	0.198	0.00100	0.200	0	99.0	90	110			
Lithium	0.198	0.0100	0.200	0	99.2	90	110			
Molybdenum	0.197	0.00500	0.200	0	98.7	90	110			

Qualifiers:

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

CLIENT: WSP-Golder
Work Order: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220602A

Sample ID: **CCV7-220602**	Batch ID: **R121405**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220602A**	Analysis Date: **6/2/2022 3:58:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.205	0.00500	0.200	0	102	90	110			
Thallium	0.210	0.00150	0.200	0	105	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220607A

The QC data in batch 105680 applies to the following samples: 2206001-06A, 2206001-07A, 2206001-08A, 2206001-09A, 2206001-10A, 2206001-11A, 2206001-12A, 2206001-13A, 2206001-14A

Sample ID: **MB-105680** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:04:00 PM** Prep Date: **6/6/2022**

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-105680** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:07:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	80	120			
Arsenic	0.201	0.00500	0.200	0	101	80	120			
Barium	0.201	0.0100	0.200	0	100	80	120			
Beryllium	0.195	0.00100	0.200	0	97.4	80	120			
Boron	0.192	0.0300	0.200	0	96.1	80	120			
Cadmium	0.189	0.00100	0.200	0	94.6	80	120			
Calcium	4.62	0.300	5.00	0	92.5	80	120			
Chromium	0.201	0.00500	0.200	0	101	80	120			
Cobalt	0.204	0.00500	0.200	0	102	80	120			
Lead	0.198	0.00100	0.200	0	98.8	80	120			
Lithium	0.194	0.0100	0.200	0	97.0	80	120			
Molybdenum	0.189	0.00500	0.200	0	94.3	80	120			
Selenium	0.207	0.00500	0.200	0	104	80	120			
Thallium	0.204	0.00150	0.200	0	102	80	120			

Sample ID: **LCSD-105680** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:09:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	80	120	0.300	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220607A

Sample ID: **LCSD-105680** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:09:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.200	0.00500	0.200	0	100	80	120	0.563	15	
Barium	0.199	0.0100	0.200	0	99.5	80	120	0.893	15	
Beryllium	0.198	0.00100	0.200	0	98.9	80	120	1.50	15	
Boron	0.197	0.0300	0.200	0	98.5	80	120	2.48	15	
Cadmium	0.189	0.00100	0.200	0	94.7	80	120	0.094	15	
Calcium	4.62	0.300	5.00	0	92.4	80	120	0.117	15	
Chromium	0.201	0.00500	0.200	0	100	80	120	0.071	15	
Cobalt	0.202	0.00500	0.200	0	101	80	120	1.05	15	
Lead	0.202	0.00100	0.200	0	101	80	120	2.07	15	
Lithium	0.198	0.0100	0.200	0	98.8	80	120	1.83	15	
Molybdenum	0.189	0.00500	0.200	0	94.4	80	120	0.135	15	
Selenium	0.207	0.00500	0.200	0	104	80	120	0.121	15	
Thallium	0.205	0.00150	0.200	0	103	80	120	0.356	15	

Sample ID: **2206038-02C SD** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:17:00 PM** Prep Date: **6/6/2022**

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	0.106	0.0500	0	0.106				0.084	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Boron	0.114	0.150	0	0.106				6.59	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Calcium	139	1.50	0	138				1.28	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	<0.0250	0.0500	0	0.00616				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: **2206038-02C PDS** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:42:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.191	0.00250	0.200	0	95.4	75	125			
Arsenic	0.195	0.00500	0.200	0	97.7	75	125			
Barium	0.301	0.0100	0.200	0.106	97.5	75	125			
Beryllium	0.174	0.00100	0.200	0	87.1	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220607A

Sample ID: **2206038-02C PDS** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:42:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.281	0.0300	0.200	0.106	87.0	75	125			
Cadmium	0.192	0.00100	0.200	0	95.8	75	125			
Calcium	133	0.300	5.00	138	-99.9	75	125			S
Chromium	0.206	0.00500	0.200	0	103	75	125			
Cobalt	0.202	0.00500	0.200	0	101	75	125			
Lead	0.201	0.00100	0.200	0	100	75	125			
Lithium	0.171	0.0100	0.200	0.00616	82.6	75	125			
Molybdenum	0.198	0.00500	0.200	0	98.8	75	125			
Selenium	0.199	0.00500	0.200	0	99.5	75	125			
Thallium	0.213	0.00150	0.200	0	106	75	125			

Sample ID: **2206038-02C MS** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:44:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.203	0.00250	0.200	0	102	75	125			
Arsenic	0.198	0.00500	0.200	0	99.0	75	125			
Barium	0.301	0.0100	0.200	0.106	97.3	75	125			
Beryllium	0.177	0.00100	0.200	0	88.3	75	125			
Boron	0.282	0.0300	0.200	0.106	87.9	75	125			
Cadmium	0.187	0.00100	0.200	0	93.7	75	125			
Calcium	140	0.300	5.00	138	45.8	75	125			S
Chromium	0.199	0.00500	0.200	0	99.7	75	125			
Cobalt	0.197	0.00500	0.200	0	98.3	75	125			
Lead	0.196	0.00100	0.200	0	97.8	75	125			
Lithium	0.175	0.0100	0.200	0.00616	84.6	75	125			
Molybdenum	0.195	0.00500	0.200	0	97.5	75	125			
Selenium	0.200	0.00500	0.200	0	100	75	125			
Thallium	0.210	0.00150	0.200	0	105	75	125			

Sample ID: **2206038-02C MSD** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:47:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.205	0.00250	0.200	0	103	75	125	0.795	15	
Arsenic	0.197	0.00500	0.200	0	98.6	75	125	0.435	15	
Barium	0.306	0.0100	0.200	0.106	99.9	75	125	1.72	15	
Beryllium	0.182	0.00100	0.200	0	91.2	75	125	3.25	15	
Boron	0.292	0.0300	0.200	0.106	92.7	75	125	3.36	15	
Cadmium	0.188	0.00100	0.200	0	93.8	75	125	0.003	15	
Calcium	139	0.300	5.00	138	32.2	75	125	0.485	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220607A

Sample ID: **2206038-02C MSD** Batch ID: **105680** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:47:00 PM** Prep Date: **6/6/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.201	0.00500	0.200	0	100	75	125	0.559	15	
Cobalt	0.198	0.00500	0.200	0	99.0	75	125	0.768	15	
Lead	0.196	0.00100	0.200	0	97.9	75	125	0.130	15	
Lithium	0.185	0.0100	0.200	0.00616	89.4	75	125	5.32	15	
Molybdenum	0.195	0.00500	0.200	0	97.5	75	125	0.084	15	
Selenium	0.201	0.00500	0.200	0	101	75	125	0.657	15	
Thallium	0.210	0.00150	0.200	0	105	75	125	0.179	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220607A

Sample ID: **ICV-220607**	Batch ID: **R121473**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS5_220607A**	Analysis Date: **6/7/2022 11:48:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.104	0.00250	0.100	0	104	90	110			
Arsenic	0.0996	0.00500	0.100	0	99.6	90	110			
Barium	0.102	0.0100	0.100	0	102	90	110			
Beryllium	0.0944	0.00100	0.100	0	94.4	90	110			
Boron	0.0948	0.0300	0.100	0	94.8	90	110			
Cadmium	0.0958	0.00100	0.100	0	95.8	90	110			
Calcium	2.38	0.300	2.50	0	95.1	90	110			
Chromium	0.103	0.00500	0.100	0	103	90	110			
Cobalt	0.102	0.00500	0.100	0	102	90	110			
Lead	0.0998	0.00100	0.100	0	99.8	90	110			
Lithium	0.0948	0.0100	0.100	0	94.8	90	110			
Molybdenum	0.0947	0.00500	0.100	0	94.6	90	110			
Selenium	0.103	0.00500	0.100	0	103	90	110			
Thallium	0.0973	0.00150	0.100	0	97.3	90	110			

Sample ID: **LCVL-220607**	Batch ID: **R121473**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS5_220607A**	Analysis Date: **6/7/2022 11:53:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00213	0.00250	0.00200	0	106	80	120			
Arsenic	0.00516	0.00500	0.00500	0	103	80	120			
Barium	0.00502	0.0100	0.00500	0	100	80	120			
Beryllium	0.000983	0.00100	0.00100	0	98.3	80	120			
Boron	0.0199	0.0300	0.0200	0	99.7	80	120			
Cadmium	0.000967	0.00100	0.00100	0	96.7	80	120			
Calcium	0.104	0.300	0.100	0	104	80	120			
Chromium	0.00523	0.00500	0.00500	0	105	80	120			
Cobalt	0.00510	0.00500	0.00500	0	102	80	120			
Lead	0.00101	0.00100	0.00100	0	101	80	120			
Lithium	0.00973	0.0100	0.0100	0	97.3	80	120			
Molybdenum	0.00491	0.00500	0.00500	0	98.1	80	120			
Selenium	0.00525	0.00500	0.00500	0	105	80	120			
Thallium	0.00102	0.00150	0.00100	0	102	80	120			

Sample ID: **CCV1-220607**	Batch ID: **R121473**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220607A**	Analysis Date: **6/7/2022 12:49:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.206	0.00250	0.200	0	103	90	110			
Arsenic	0.203	0.00500	0.200	0	102	90	110			
Barium	0.203	0.0100	0.200	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220607A

Sample ID: **CCV1-220607** Batch ID: **R121473** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 12:49:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.187	0.00100	0.200	0	93.7	90	110			
Boron	0.196	0.0300	0.200	0	98.1	90	110			
Cadmium	0.196	0.00100	0.200	0	97.8	90	110			
Calcium	4.72	0.300	5.00	0	94.5	90	110			
Chromium	0.208	0.00500	0.200	0	104	90	110			
Cobalt	0.207	0.00500	0.200	0	104	90	110			
Lead	0.205	0.00100	0.200	0	102	90	110			
Lithium	0.184	0.0100	0.200	0	92.1	90	110			
Molybdenum	0.198	0.00500	0.200	0	98.8	90	110			
Selenium	0.211	0.00500	0.200	0	105	90	110			
Thallium	0.213	0.00150	0.200	0	107	90	110			

Sample ID: **CCV2-220607** Batch ID: **R121473** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_220607A** Analysis Date: **6/7/2022 1:20:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.207	0.00250	0.200	0	103	90	110			
Arsenic	0.200	0.00500	0.200	0	100	90	110			
Barium	0.205	0.0100	0.200	0	103	90	110			
Beryllium	0.204	0.00100	0.200	0	102	90	110			
Boron	0.210	0.0300	0.200	0	105	90	110			
Cadmium	0.191	0.00100	0.200	0	95.5	90	110			
Calcium	4.71	0.300	5.00	0	94.2	90	110			
Chromium	0.206	0.00500	0.200	0	103	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			
Lead	0.205	0.00100	0.200	0	103	90	110			
Lithium	0.213	0.0100	0.200	0	106	90	110			
Molybdenum	0.189	0.00500	0.200	0	94.6	90	110			
Selenium	0.210	0.00500	0.200	0	105	90	110			
Thallium	0.209	0.00150	0.200	0	105	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_220526A

Sample ID: **DCS3-105533** Batch ID: **105533** TestNo: **E300** Units: **mg/L**
SampType: **DCS3** Run ID: **IC2_220526A** Analysis Date: **5/26/2022 7:02:08 PM** Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.988	1.00	1.000	0	98.8	70	130	0	0	
Fluoride	0.383	0.400	0.4000	0	95.8	70	130	0	0	
Sulfate	3.02	3.00	3.000	0	101	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_220609A

The QC data in batch 105753 applies to the following samples: 2206001-01B, 2206001-02B, 2206001-03B, 2206001-04B, 2206001-05B, 2206001-06B, 2206001-07B, 2206001-08B, 2206001-09B, 2206001-10B, 2206001-11B, 2206001-12B, 2206001-13B

Sample ID: **MB-105753** Batch ID: **105753** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_220609A** Analysis Date: **6/9/2022 10:43:28 AM** Prep Date: **6/9/2022**

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-105753** Batch ID: **105753** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC2_220609A** Analysis Date: **6/9/2022 11:00:28 AM** Prep Date: **6/9/2022**

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	3.81	0.400	4.000	0	95.4	90	110			
Sulfate	28.8	3.00	30.00	0	96.1	90	110			

Sample ID: **LCSD-105753** Batch ID: **105753** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_220609A** Analysis Date: **6/9/2022 11:17:28 AM** Prep Date: **6/9/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.29	1.00	10.00	0	92.9	90	110	1.01	20	
Fluoride	3.79	0.400	4.000	0	94.7	90	110	0.728	20	
Sulfate	28.6	3.00	30.00	0	95.3	90	110	0.834	20	

Sample ID: **2206001-01BMS** Batch ID: **105753** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_220609A** Analysis Date: **6/9/2022 3:25:51 PM** Prep Date: **6/9/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2000	100	2000	179.2	90.9	90	110			
Fluoride	1990	40.0	2000	0	99.4	90	110			
Sulfate	2000	300	2000	266.7	86.8	90	110			S

Sample ID: **2206001-01BMSD** Batch ID: **105753** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_220609A** Analysis Date: **6/9/2022 3:42:51 PM** Prep Date: **6/9/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1980	100	2000	179.2	90.2	90	110	0.653	20	
Fluoride	1980	40.0	2000	0	98.9	90	110	0.505	20	
Sulfate	2000	300	2000	266.7	86.8	90	110	0.000	20	S

Qualifiers:

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

CLIENT: WSP-Golder
Work Order: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_220609A

Sample ID: **ICV-220609**	Batch ID: **R121518**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_220609A**	Analysis Date: **6/9/2022 10:09:28 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.3	1.00	25.00	0	97.0	90	110			
Fluoride	9.90	0.400	10.00	0	99.0	90	110			
Sulfate	73.9	3.00	75.00	0	98.5	90	110			

Sample ID: **CCV1-220609**	Batch ID: **R121518**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_220609A**	Analysis Date: **6/9/2022 6:32:51 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.49	1.00	10.00	0	94.9	90	110			
Fluoride	3.91	0.400	4.000	0	97.6	90	110			
Sulfate	29.1	3.00	30.00	0	97.0	90	110			

Sample ID: **CCV2-220609**	Batch ID: **R121518**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_220609A**	Analysis Date: **6/9/2022 10:30:51 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.41	1.00	10.00	0	94.1	90	110			
Fluoride	3.87	0.400	4.000	0	96.7	90	110			
Sulfate	28.8	3.00	30.00	0	96.1	90	110			

Sample ID: **CCV3-220609**	Batch ID: **R121518**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_220609A**	Analysis Date: **6/10/2022 2:28:51 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.50	1.00	10.00	0	95.0	90	110			
Fluoride	3.95	0.400	4.000	0	98.7	90	110			
Sulfate	29.2	3.00	30.00	0	97.3	90	110			

Sample ID: **CCV4-220609**	Batch ID: **R121518**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_220609A**	Analysis Date: **6/10/2022 4:27:50 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.47	1.00	10.00	0	94.7	90	110			
Fluoride	3.93	0.400	4.000	0	98.4	90	110			

Qualifiers:

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

CLIENT: WSP-Golder
Work Order: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_220601D

The QC data in batch 105624 applies to the following samples: 2206001-01B, 2206001-02B, 2206001-03B, 2206001-04B, 2206001-05B, 2206001-06B, 2206001-07B, 2206001-08B, 2206001-09B, 2206001-10B

Sample ID: **MB-105624** Batch ID: **105624** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_220601D** Analysis Date: **6/1/2022 4:25:00 PM** Prep Date: **6/1/2022**

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-105624** Batch ID: **105624** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_220601D** Analysis Date: **6/1/2022 4:25:00 PM** Prep Date: **6/1/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	759	10.0	745.6	0	102	90	113			

Sample ID: **2205314-01D-DUP** Batch ID: **105624** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_220601D** Analysis Date: **6/1/2022 4:25:00 PM** Prep Date: **6/1/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	3230	50.0	0	3270				1.23	5	

Sample ID: **2205316-02D-DUP** Batch ID: **105624** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_220601D** Analysis Date: **6/1/2022 4:25:00 PM** Prep Date: **6/1/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	3720	50.0	0	3710				0.269	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: 2206001
Project: Luminant - A1 Landfill - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **WC_220602E**

The QC data in batch 105653 applies to the following samples: 2206001-11B, 2206001-12B, 2206001-13B

Sample ID: **MB-105653**	Batch ID: **105653**		TestNo: **M2540C**				Units: **mg/L**				
SampType: **MBLK**	Run ID: **WC_220602E**		Analysis Date: **6/2/2022 6:20:00 PM**				Prep Date: **6/2/2022**				
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-105653**	Batch ID: **105653**		TestNo: **M2540C**				Units: **mg/L**				
SampType: **LCS**	Run ID: **WC_220602E**		Analysis Date: **6/2/2022 6:20:00 PM**				Prep Date: **6/2/2022**				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Dissolved Solids (Residue, Filtera	759	10.0	745.6	0	102	90	113				
Sample ID: **2206001-12B-DUP**	Batch ID: **105653**		TestNo: **M2540C**				Units: **mg/L**				
SampType: **DUP**	Run ID: **WC_220602E**		Analysis Date: **6/2/2022 6:20:00 PM**				Prep Date: **6/2/2022**				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Dissolved Solids (Residue, Filtera	2180	50.0	0	2275				4.49	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: 2206001
Project: Luminant - A1 Landfill - 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 13, 2022

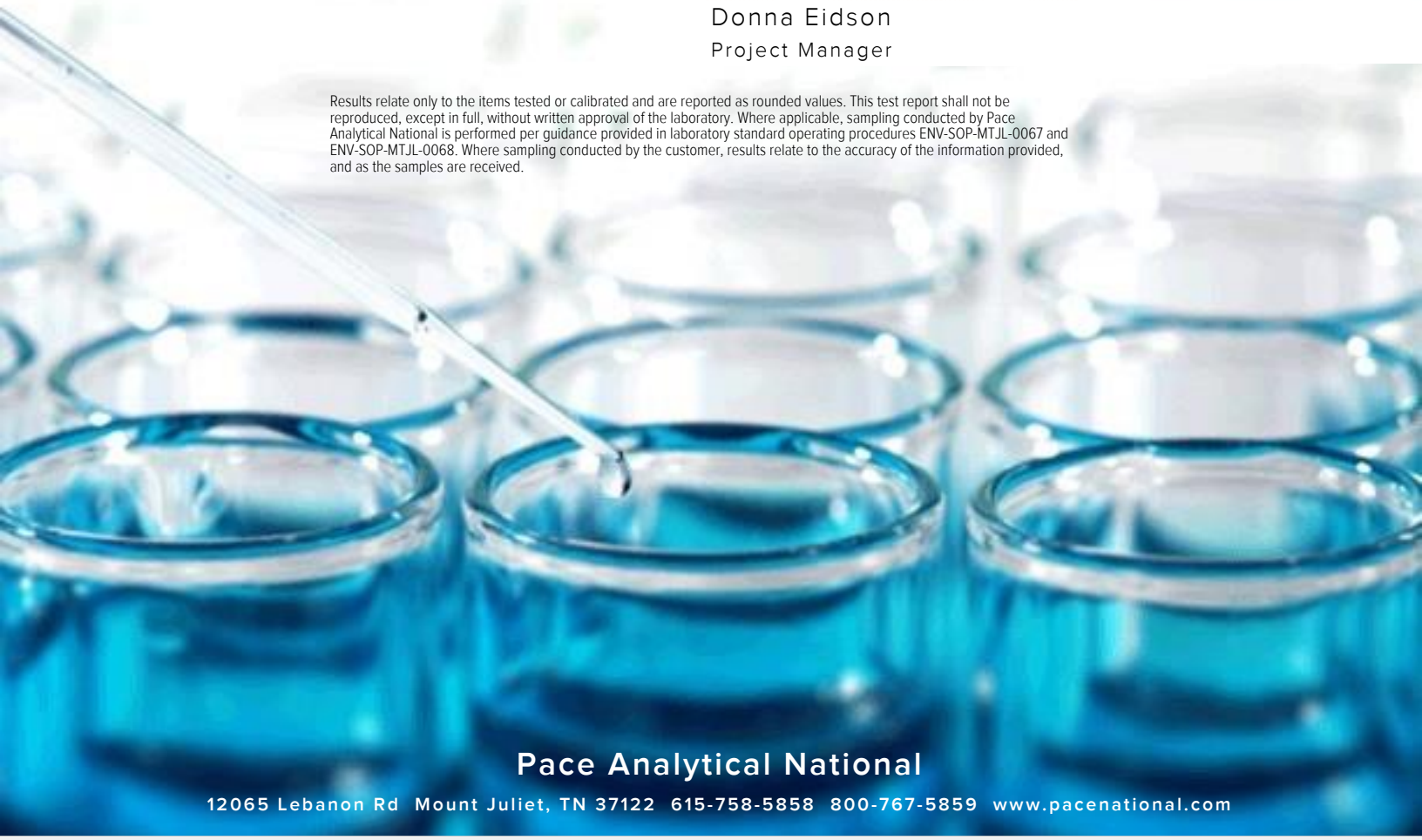
DHL Analytical, Inc.

Sample Delivery Group:	L1501734
Samples Received:	06/06/2022
Project Number:	2206001
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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BMW-24 L1501734-01 Non-Potable Water

Collected by | Collected date/time 05/26/22 10:15 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1886066	1	06/29/22 09:40	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-23 L1501734-02 Non-Potable Water

Collected by | Collected date/time 05/26/22 11:10 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1886066	1	06/29/22 09:40	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-22 L1501734-03 Non-Potable Water

Collected by | Collected date/time 05/26/22 12:00 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1886066	1	06/29/22 09:40	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-21 L1501734-04 Non-Potable Water

Collected by | Collected date/time 05/26/22 13:00 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1886066	1	06/29/22 09:40	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-26 L1501734-05 Non-Potable Water

Collected by | Collected date/time 05/26/22 14:05 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1886066	1	06/29/22 09:40	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-27 L1501734-06 Non-Potable Water

Collected by | Collected date/time 05/26/22 15:00 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1886066	1	06/29/22 09:40	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-20 L1501734-07 Non-Potable Water

Collected by | Collected date/time 05/26/22 16:05 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1886066	1	06/29/22 09:40	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/06/22 15:08	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-11AR L1501734-08 Non-Potable Water

Collected by | Collected date/time 05/26/22 17:15 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1887987	1	07/01/22 12:55	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-19 L1501734-09 Non-Potable Water

Collected by | Collected date/time 05/27/22 07:50 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1887987	1	07/01/22 12:55	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-18 L1501734-10 Non-Potable Water

Collected by | Collected date/time 05/27/22 08:50 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1887987	1	07/01/22 12:55	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-28 L1501734-11 Non-Potable Water

Collected by | Collected date/time 05/27/22 10:00 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1887987	1	07/01/22 12:55	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

DUP-1 L1501734-12 Non-Potable Water

Collected by | Collected date/time 05/27/22 10:00 | Received date/time 06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1887987	1	07/01/22 12:55	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886271	1	06/29/22 14:45	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886271	1	06/29/22 14:45	06/30/22 18:09	RGT	Mt. Juliet, TN

BMW-33 L1501734-13 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/27/22 11:15	06/06/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1887987	1	07/01/22 12:55	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1886277	1	06/30/22 13:59	07/11/22 13:49	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1886277	1	06/30/22 13:59	07/01/22 14:49	RGT	Mt. Juliet, TN

CASE NARRATIVE

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

Donna Eidson
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.678		0.332	0.596	07/06/2022 15:08	WG1886066
(T) Barium	*70.3*			*62.0-143*	*07/06/2022 15:08*	WG1886066
(T) Yttrium	*92.5*			*79.0-136*	*07/06/2022 15:08*	WG1886066

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.08		0.470	0.708	07/06/2022 15:08	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.401		0.333	0.383	06/30/2022 18:09	WG1886271
(T) Barium-133	*52.3*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.43		0.264	0.442	07/06/2022 15:08	WG1886066
(T) Barium	*93.8*			*62.0-143*	*07/06/2022 15:08*	WG1886066
(T) Yttrium	*100*			*79.0-136*	*07/06/2022 15:08*	WG1886066

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.97		0.392	0.478	07/06/2022 15:08	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.542		0.290	0.181	06/30/2022 18:09	WG1886271
(T) Barium-133	*75.8*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.21		0.283	0.456	07/06/2022 15:08	WG1886066
(T) Barium	*94.7*			*62.0-143*	*07/06/2022 15:08*	WG1886066
(T) Yttrium	*98.0*			*79.0-136*	*07/06/2022 15:08*	WG1886066

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	3.43		0.530	0.542	07/06/2022 15:08	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	1.22		0.448	0.293	06/30/2022 18:09	WG1886271
(T) Barium-133	*85.8*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.47		0.308	0.522	07/06/2022 15:08	WG1886066
(T) Barium	*92.0*			*62.0-143*	*07/06/2022 15:08*	WG1886066
(T) Yttrium	*96.1*			*79.0-136*	*07/06/2022 15:08*	WG1886066

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.13		0.413	0.553	07/06/2022 15:08	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.662		0.275	0.182	06/30/2022 18:09	WG1886271
(T) Barium-133	*115*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.106	U	0.306	0.573	07/06/2022 15:08	WG1886066
(T) Barium	*98.3*			*62.0-143*	*07/06/2022 15:08*	WG1886066
(T) Yttrium	*90.3*			*79.0-136*	*07/06/2022 15:08*	WG1886066

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.184	U	0.350	0.608	07/06/2022 15:08	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.184	J	0.170	0.202	06/30/2022 18:09	WG1886271
(T) Barium-133	*114*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.556		0.261	0.467	07/06/2022 15:08	WG1886066
(T) Barium	*87.3*			*62.0-143*	*07/06/2022 15:08*	WG1886066
(T) Yttrium	*99.6*			*79.0-136*	*07/06/2022 15:08*	WG1886066

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.607		0.292	0.521	07/06/2022 15:08	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0510	U	0.131	0.231	06/30/2022 18:09	WG1886271
(T) Barium-133	*108*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.04		0.261	0.451	07/06/2022 15:08	WG1886066
(T) Barium	*88.3*			*62.0-143*	*07/06/2022 15:08*	WG1886066
(T) Yttrium	*101*			*79.0-136*	*07/06/2022 15:08*	WG1886066

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.41		0.357	0.498	07/06/2022 15:08	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.379		0.243	0.211	06/30/2022 18:09	WG1886271
(T) Barium-133	*99.0*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.73		0.310	0.815	07/11/2022 13:49	WG1887987
(T) Barium	*90.6*			*62.0-143*	*07/11/2022 13:49*	WG1887987
(T) Yttrium	*98.9*			*79.0-136*	*07/11/2022 13:49*	WG1887987

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.06		0.391	0.850	07/11/2022 13:49	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.329		0.238	0.242	06/30/2022 18:09	WG1886271
(T) Barium-133	*97.6*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.557	J	0.230	0.643	07/11/2022 13:49	WG1887987
(T) Barium	*91.9*			*62.0-143*	*07/11/2022 13:49*	WG1887987
(T) Yttrium	*99.4*			*79.0-136*	*07/11/2022 13:49*	WG1887987

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.882		0.319	0.678	07/11/2022 13:49	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.326		0.221	0.215	06/30/2022 18:09	WG1886271
(T) Barium-133	*114*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.274	U	0.207	0.592	07/11/2022 13:49	WG1887987
(T) Barium	*97.8*			*62.0-143*	*07/11/2022 13:49*	WG1887987
(T) Yttrium	*99.7*			*79.0-136*	*07/11/2022 13:49*	WG1887987

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.430	J	0.278	0.645	07/11/2022 13:49	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.155	J	0.186	0.256	06/30/2022 18:09	WG1886271
(T) Barium-133	*90.6*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.06		0.225	0.602	07/11/2022 13:49	WG1887987
(T) Barium	*100*			*62.0-143*	*07/11/2022 13:49*	WG1887987
(T) Yttrium	*109*			*79.0-136*	*07/11/2022 13:49*	WG1887987

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.34		0.323	0.655	07/11/2022 13:49	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.289		0.232	0.258	06/30/2022 18:09	WG1886271
(T) Barium-133	*82.0*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.666	J	0.241	0.670	07/11/2022 13:49	WG1887987
(T) Barium	*90.4*			*62.0-143*	*07/11/2022 13:49*	WG1887987
(T) Yttrium	*110*			*79.0-136*	*07/11/2022 13:49*	WG1887987

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.725		0.259	0.687	07/11/2022 13:49	WG1886271

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0587	J	0.0949	0.151	06/30/2022 18:09	WG1886271
(T) Barium-133	*84.7*			*30.0-143*	*06/30/2022 18:09*	WG1886271

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.836		0.268	0.739	07/11/2022 13:49	WG1887987
(T) Barium	*88.1*			*62.0-143*	*07/11/2022 13:49*	WG1887987
(T) Yttrium	*103*			*79.0-136*	*07/11/2022 13:49*	WG1887987

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.19		0.337	0.752	07/11/2022 13:49	WG1886277

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.351		0.204	0.137	07/01/2022 14:49	WG1886277
(T) Barium-133	*102*			*30.0-143*	*07/01/2022 14:49*	WG1886277

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

Method Blank (MB)

(MB) R3812201-1 07/06/22 12:07

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.496		0.148	0.407
(T) Barium	*103*		*103*	
(T) Yttrium	*99.7*		*99.7*	

L1500875-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1500875-07 07/06/22 12:07 • (DUP) R3812201-5 07/06/22 12:07

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	0.508	0.224	0.616	0.435	0.328	0.616	1	15.6	0.185	U	20	3
(T) Barium	*108*			*107*	*107*							
(T) Yttrium	*96.1*			*94.4*	*94.4*							

Laboratory Control Sample (LCS)

(LCS) R3812201-2 07/06/22 12:07

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.91	98.2	80.0-120	
(T) Barium			*110*		
(T) Yttrium			*101*		

L1500875-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1500875-06 07/06/22 12:07 • (MS) R3812201-3 07/06/22 12:07 • (MSD) R3812201-4 07/06/22 12:07

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	1.02	10.4	8.63	93.7	76.2	1	70.0-130			18.5		20
(T) Barium		*102*			*96.2*	*105*							
(T) Yttrium		*98.4*			*97.1*	*99.9*							

Method Blank (MB)

(MB) R3813868-1 07/11/22 13:49

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.340		0.116	0.325
(T) Barium	*109*		*109*	
(T) Yttrium	*99.1*		*99.1*	

L1501073-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1501073-11 07/11/22 13:49 • (DUP) R3813868-5 07/11/22 13:49

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	0.249	0.200	0.572	0.579	0.234	0.572	1	79.8	1.07	J	20	3
(T) Barium	*103*			*101*	*101*							
(T) Yttrium	*97.8*			*105*	*105*							

Laboratory Control Sample (LCS)

(LCS) R3813868-2 07/11/22 13:49

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.46	89.1	80.0-120	
(T) Barium			*110*		
(T) Yttrium			*102*		

L1501073-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1501073-08 07/11/22 13:49 • (MS) R3813868-3 07/11/22 13:49 • (MSD) R3813868-4 07/11/22 13:49

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	0.968	9.66	8.69	86.9	77.2	1	70.0-130			10.6		20
(T) Barium		*124*			*119*	*112*							
(T) Yttrium		*103*			*96.8*	*101*							

Method Blank (MB)

(MB) R3811605-1 06/30/22 18:09

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.0331	U	0.0579	0.0923
(T) Barium-133	*72.1*		*72.1*	

L1506488-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1506488-08 06/30/22 18:09 • (DUP) R3811605-5 06/30/22 18:09

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
	Bq/l	+ / -	Bq/l	Bq/l	+ / -	Bq/l		%			%	
Radium-226	0.00221	0.00599	0.0102	0.0125	0.0110	0.0102	1	140	0.824	J	20	3
(T) Barium-133	*97.0*			*67.6*	*67.6*							

Laboratory Control Sample (LCS)

(LCS) R3811605-2 06/30/22 18:09

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	5.96	119	80.0-120	
(T) Barium-133			*68.2*		

L1501734-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1501734-01 06/30/22 18:09 • (MS) R3811605-3 06/30/22 18:09 • (MSD) R3811605-4 06/30/22 18:09

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.401	22.4	22.9	110	112	1	75.0-125			1.94		20
(T) Barium-133		*52.3*			*81.7*	*82.4*							

Method Blank (MB)

(MB) R3811913-1 07/01/22 14:49

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-226	0.00337	U	0.0391	0.0742
(T) Barium-133	*94.8*		*94.8*	

L1501744-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1501744-10 07/01/22 14:49 • (DUP) R3811913-5 07/01/22 14:49

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	0.146	0.160	0.211	0.0170	0.102	0.211	1	158	0.679	U	20	3
(T) Barium-133	*101*			*97.4*	*97.4*							

Laboratory Control Sample (LCS)

(LCS) R3811913-2 07/01/22 14:49

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.02	5.00	99.5	80.0-120	
(T) Barium-133			*97.3*		

L1501734-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1501734-13 07/01/22 14:49 • (MS) R3811913-3 07/01/22 14:49 • (MSD) R3811913-4 07/01/22 14:49

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	0.351	20.1	19.0	98.7	93.3	1	75.0-125			5.57		20
(T) Barium-133		*102*			*103*	*105*							

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

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

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

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

CHAIN-OF-CUSTODY RECORD

Work Order: 2206001

D003

4501734 01-Jun-22

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

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

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228 E904.0	Ra-226 M7500 Ra B M				
BMW-24	Aqueous	01C	05/26/22 10:15 AM	1LHDPEHNO3		1			-01	-01
BMW-24	Aqueous	01D	05/26/22 10:15 AM	1LHDPEHNO3	1				-01	-02
BMW-23	Aqueous	02C	05/26/22 11:10 AM	1LHDPEHNO3		1			-02	-03
BMW-23	Aqueous	02D	05/26/22 11:10 AM	1LHDPEHNO3	1				-02	-04
BMW-22	Aqueous	03C	05/26/22 12:00 PM	1LHDPEHNO3		1			-03	-05
BMW-22	Aqueous	03D	05/26/22 12:00 PM	1LHDPEHNO3	1				-03	-06
BMW-21	Aqueous	04C	05/26/22 01:00 PM	1LHDPEHNO3		1			-04	-07
BMW-21	Aqueous	04D	05/26/22 01:00 PM	1LHDPEHNO3	1				-04	-
BMW-26	Aqueous	05C	05/26/22 02:05 PM	1LHDPEHNO3		1			-05	
BMW-26	Aqueous	05D	05/26/22 02:05 PM	1LHDPEHNO3	1				-05	
BMW-27	Aqueous	06C	05/26/22 03:00 PM	1LHDPEHNO3		1			-06	
BMW-27	Aqueous	06D	05/26/22 03:00 PM	1LHDPEHNO3	1				-06	
BMW-20	Aqueous	07C	05/26/22 04:05 PM	1LHDPEHNO3		1			-07	
BMW-20	Aqueous	07D	05/26/22 04:05 PM	1LHDPEHNO3	1				-07	
BMW-11AR	Aqueous	08C	05/26/22 05:15 PM	1LHDPEHNO3		1			-08	
BMW-11AR	Aqueous	08D	05/26/22 05:15 PM	1LHDPEHNO3	1				-08	
BMW-19	Aqueous	09C	05/27/22 07:50 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

	Date/Time		Date/Time
Relinquished by:	6/3/22 1800	Received by:	6/6/22 1000
Relinquished by:			

ENP Sample Receipt Checklist

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

AMB

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

CHAIN-OF-CUSTODY RECORD

Work Order: 2206001

Subcontractor:

Pace Analytical
12065 Lebanon Rd
Mt. Juliet, TN 37122

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

1509734 01-Jun-22

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228 E904.0	Ra-226 M7500 Ra B M				
BMW-19	Aqueous	09D	05/27/22 07:50 AM	1LHDPEHNO3	1			-09		
BMW-18	Aqueous	10C	05/27/22 08:50 AM	1LHDPEHNO3		1		-10		
BMW-18	Aqueous	10D	05/27/22 08:50 AM	1LHDPEHNO3	1			-10		
BMW-28	Aqueous	11C	05/27/22 10:00 AM	1LHDPEHNO3		1		-11		
BMW-28	Aqueous	11D	05/27/22 10:00 AM	1LHDPEHNO3	1			-11		
DUP-1	Aqueous	12C	05/27/22 10:00 AM	1LHDPEHNO3		1		-12		
DUP-1	Aqueous	12D	05/27/22 10:00 AM	1LHDPEHNO3	1			-12		
BMW-33	Aqueous	13C	05/27/22 11:15 AM	1LHDPEHNO3		1		-13		
BMW-33	Aqueous	13D	05/27/22 11:15 AM	1LHDPEHNO3	1			-13		

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:	6/7/22 1800	Received by:	6/6/22 1000
Relinquished by:		Received by:	

November 09, 2022

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

Order No.: 2209216

RE: MLSES - A1 Landfill

Dear Will Vienne:

DHL Analytical, Inc. received 14 sample(s) on 9/27/2022 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: T104704211-22-28

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: GOLDER
ADDRESS: AUSTIN, TX
PHONE: EMAIL:
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

PO#: 31404097.005
PROJECT LOCATION OR NAME: MLSES - A1 LANDFILL
CLIENT PROJECT # 31404097.005

LABORATORY USE ONLY
DHL WORKORDER #: 2209216

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	HNO_3	H_2SO_4	NaOH ☐ Zn Acetate ☐	ICE ☒ UNPRESERVED ☒	ANALYSES	APPENDIX III	APPENDIX IV	COBALT ONLY	FIELD NOTES
BMW-24	01	9-22-22	1135	W	P	4		X			X		X	X		
BMW-23	02		1225	W	P	4		X			X		X	X		
BMW-22	03		1320	W	P	4		X			X		X	X		
BMW-21	04		1410	W	P	4		X			X		X	X		
BMW-20	05		1505	W	P	4		X			X		X	X		
BMW-27	06		1555	W	P	4		X			X		X	X		
BMW-26	07		1645	W	P	4		X			X		X	X		
BMW-11AR	08	9-23-22	0810	W	P	4		X			X		X	X		
BMW-19	09		0900	W	P	4		X			X		X	X		
BMW-18	10		1000	W	P	4		X			X		X	X		
BMW-28	11		1100	W	P	4		X			X		X	X		
DUP-1	12		1100	W	P	4		X			X		X	X		
BMW-32	13		1205	W	P	~~4~~ 1		X			X		✓		X	
BMW-33	14		1310	W	P	4		X			X		X	X		

Relinquished By: (Sign)	DATE/TIME	Received by:
	9-26-22 1830	Fedex
Relinquished By: (Sign) Fedex	DATE/TIME 9-27-22 0844	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 _____ ☐

LABORATORY USE ONLY
RECEIVING TEMP (°C): 2.6°C, 2.0°C, 0.8°C THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☑ INTACT ☐ NOT USED
CARRIER: ☐ LSO ☑ FEDEX ☐ UPS ☐ COURIER ☐ OTHER ☐ HAND DELIVERED

☐ **DHL DISPOSAL @ 5.00 each** ☐ **Return**

DHL COC REV 3 | MAR 2021

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:ACTA (512) 388-8222
JOHN BRAYTON
GOLDER ASSOCIATES CORPORATION
14950 HEATHROW FOREST PKWY STE 280
PO #31404097.005
HOUSTON, TX 77032
UNITED STATES US

SHIP DATE: 26SEP22
ACTWGT: 55.15 LB
CAD: 6993649/SSFE2322
DIMS: 24x14x13 IN

BILL THIRD PARTY

TO

DHL
2300 DOUBLE CREEK DR

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

Part # 156297-435 RRDB EXP 06/23

FedEx
Express

E

J223022081201uv

1 of 3

TUE - 27 SEP 10:30A
PRIORITY OVERNIGHT

TRK# 0201 2784 3568 6950

MASTER

44 BSMA

78664
TX-US AUS

CUSTODY SEAL

DATE 9-26-22

SIGNATURE John Br

DHL ANALYTICAL

ORIGIN ID:ACTA (512) 388-8222
JOHN BRAYTON
GOLDER ASSOCIATES CORPORATION
14950 HEATHROW FOREST PKWY STE 280
PO #31404097.005
HOUSTON, TX 77032
UNITED STATES US

SHIP DATE: 26SEP22
ACTWGT: 55.15 LB
CAD: 6993649/SSFE2322
DIMS: 24x14x13 IN

BILL THIRD PARTY

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J223022081201uv

2 of 3

MPS# 0263 **2784 3568 6960**
Mstr# 2784 3568 6950 0201

TUE - 27 SEP 10:30A
PRIORITY OVERNIGHT

44 BSMA

78664
TX-US AUS

CUSTODY SEAL

DATE 9-26-22

SIGNATURE [signature]

DH
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PO: DEPT:

FedEx Express

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Part # 156297-435 RRDB EXP 06/23

3 of 3
MPS# 0263 2784 3568 6971
Mstr# 2784 3568 6950 0201

TUE - 27 SEP 10:30A
PRIORITY OVERNIGHT

44 BSMA

78664
TX-US AUS

CUSTODY SEAL

DATE 9·26·22

SIGNATURE [signature]

DHL ANALYTICAL

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name WSP-Golder | Date Received: 9/27/2022

Work Order Number 2209216 | Received by: KAO

Checklist completed by: [signature] Signature | 9/27/2022 Date | Reviewed by [initials] Initials | 9/27/2022 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 ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	2.6 °C /2.0/0.8°C
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

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

Client contacted: Date contacted: Person contacted

Contacted by: Regarding:

Comments:

Corrective Action:

Page 1 of 1

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: MLSES – A1 Landfill	**LRC Date:** 11/9/22
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2209216
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				
		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: MLSES – A1 Landfill	**LRC Date:** 11/9/22
Reviewer Name: Carlos Castro	**Laboratory Work Order:** 2209216
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

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

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

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

This data package consists of:

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

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

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

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

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

Name: John DuPont
Official Title: General Manager

Signature

11/09/22
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *09-Nov-22*

CLIENT: WSP-Golder
Project: MLSES - A1 Landfill
Lab Order: 2209216

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 9/27/22. A total of 14 samples were received. The samples arrived in good condition and were properly packaged.

DHL Analytical, Inc.

Date: *09-Nov-22*

CLIENT: WSP-Golder
Project: MLSES - A1 Landfill
Lab Order: 2209216

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2209216-01	BMW-24		09/22/22 11:35 AM	9/27/2022
2209216-02	BMW-23		09/22/22 12:25 PM	9/27/2022
2209216-03	BMW-22		09/22/22 01:20 PM	9/27/2022
2209216-04	BMW-21		09/22/22 02:10 PM	9/27/2022
2209216-05	BMW-20		09/22/22 03:05 PM	9/27/2022
2209216-06	BMW-27		09/22/22 03:55 PM	9/27/2022
2209216-07	BMW-26		09/22/22 04:45 PM	9/27/2022
2209216-08	BMW-11AR		09/23/22 08:10 AM	9/27/2022
2209216-09	BMW-19		09/23/22 09:00 AM	9/27/2022
2209216-10	BMW-18		09/23/22 10:00 AM	9/27/2022
2209216-11	BMW-28		09/23/22 11:00 AM	9/27/2022
2209216-12	DUP-1		09/23/22 11:00 AM	9/27/2022
2209216-13	BMW-32		09/23/22 12:05 PM	9/27/2022
2209216-14	BMW-33		09/23/22 01:10 PM	9/27/2022

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2209216-01A	BMW-24	09/22/22 11:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-24	09/22/22 11:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-24	09/22/22 11:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-24	09/22/22 11:35 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
	BMW-24	09/22/22 11:35 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
	BMW-24	09/22/22 11:35 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-01B	BMW-24	09/22/22 11:35 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-24	09/22/22 11:35 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-24	09/22/22 11:35 AM	Aqueous	E300	Anion Preparation	10/04/22 09:42 AM	107243
	BMW-24	09/22/22 11:35 AM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-02A	BMW-23	09/22/22 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-23	09/22/22 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-23	09/22/22 12:25 PM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-02B	BMW-23	09/22/22 12:25 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-23	09/22/22 12:25 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-23	09/22/22 12:25 PM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-03A	BMW-22	09/22/22 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-22	09/22/22 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-22	09/22/22 01:20 PM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-03B	BMW-22	09/22/22 01:20 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-22	09/22/22 01:20 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-22	09/22/22 01:20 PM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-04A	BMW-21	09/22/22 02:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-21	09/22/22 02:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-21	09/22/22 02:10 PM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-04B	BMW-21	09/22/22 02:10 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-21	09/22/22 02:10 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-21	09/22/22 02:10 PM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2209216-05A	BMW-20	09/22/22 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-20	09/22/22 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-20	09/22/22 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-20	09/22/22 03:05 PM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-05B	BMW-20	09/22/22 03:05 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-20	09/22/22 03:05 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-20	09/22/22 03:05 PM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-06A	BMW-27	09/22/22 03:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-27	09/22/22 03:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-27	09/22/22 03:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-27	09/22/22 03:55 PM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-06B	BMW-27	09/22/22 03:55 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-27	09/22/22 03:55 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-27	09/22/22 03:55 PM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-07A	BMW-26	09/22/22 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-26	09/22/22 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-26	09/22/22 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-26	09/22/22 04:45 PM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-07B	BMW-26	09/22/22 04:45 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-26	09/22/22 04:45 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-26	09/22/22 04:45 PM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-08A	BMW-11AR	09/23/22 08:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-11AR	09/23/22 08:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-11AR	09/23/22 08:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-11AR	09/23/22 08:10 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-08B	BMW-11AR	09/23/22 08:10 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-11AR	09/23/22 08:10 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-11AR	09/23/22 08:10 AM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2209216-09A	BMW-19	09/23/22 09:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-19	09/23/22 09:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-19	09/23/22 09:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-19	09/23/22 09:00 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-09B	BMW-19	09/23/22 09:00 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-19	09/23/22 09:00 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-19	09/23/22 09:00 AM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-10A	BMW-18	09/23/22 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-18	09/23/22 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-18	09/23/22 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-10B	BMW-18	09/23/22 10:00 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-18	09/23/22 10:00 AM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-11A	BMW-28	09/23/22 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-28	09/23/22 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-28	09/23/22 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-28	09/23/22 11:00 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-11B	BMW-28	09/23/22 11:00 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-28	09/23/22 11:00 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-28	09/23/22 11:00 AM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-12A	DUP-1	09/23/22 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	DUP-1	09/23/22 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	DUP-1	09/23/22 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	DUP-1	09/23/22 11:00 AM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-12B	DUP-1	09/23/22 11:00 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	DUP-1	09/23/22 11:00 AM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	DUP-1	09/23/22 11:00 AM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171
2209216-13A	BMW-32	09/23/22 12:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
2209216-14A	BMW-33	09/23/22 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2209216-14A	BMW-33	09/23/22 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-33	09/23/22 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/28/22 08:59 AM	107162
	BMW-33	09/23/22 01:10 PM	Aqueous	SW7470A	Mercury Aq Prep	09/29/22 10:18 AM	107187
2209216-14B	BMW-33	09/23/22 01:10 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-33	09/23/22 01:10 PM	Aqueous	E300	Anion Preparation	10/03/22 09:46 AM	107227
	BMW-33	09/23/22 01:10 PM	Aqueous	M2540C	TDS Preparation	09/28/22 02:51 PM	107171

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2209216-01A	BMW-24	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 03:07 PM	CETAC2_HG_220929B
	BMW-24	Aqueous	SW7470A	Mercury Total: Aqueous	107187	5	09/29/22 03:09 PM	CETAC2_HG_220929B
	BMW-24	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:10 PM	CETAC2_HG_220929B
	BMW-24	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/30/22 03:25 PM	ICP-MS4_220930C
	BMW-24	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:20 PM	ICP-MS5_220929C
	BMW-24	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:24 PM	ICP-MS5_220929C
2209216-01B	BMW-24	Aqueous	E300	Anions by IC method - Water	107243	100	10/04/22 03:15 PM	IC2_221004A
	BMW-24	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 04:17 PM	IC4_221003A
	BMW-24	Aqueous	E300	Anions by IC method - Water	107227	1	10/03/22 10:18 PM	IC4_221003A
	BMW-24	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-02A	BMW-23	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:12 PM	CETAC2_HG_220929B
	BMW-23	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/30/22 03:27 PM	ICP-MS4_220930C
	BMW-23	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:23 PM	ICP-MS5_220929C
2209216-02B	BMW-23	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 04:36 PM	IC4_221003A
	BMW-23	Aqueous	E300	Anions by IC method - Water	107227	1	10/03/22 10:37 PM	IC4_221003A
	BMW-23	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-03A	BMW-22	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:15 PM	CETAC2_HG_220929B
	BMW-22	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	20	09/30/22 03:29 PM	ICP-MS4_220930C
	BMW-22	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:25 PM	ICP-MS5_220929C
2209216-03B	BMW-22	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 04:55 PM	IC4_221003A
	BMW-22	Aqueous	E300	Anions by IC method - Water	107227	1	10/03/22 10:56 PM	IC4_221003A
	BMW-22	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-04A	BMW-21	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:17 PM	CETAC2_HG_220929B
	BMW-21	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/30/22 03:31 PM	ICP-MS4_220930C
	BMW-21	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:28 PM	ICP-MS5_220929C

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2209216-04B	BMW-21	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 05:14 PM	IC4_221003A
	BMW-21	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 12:31 AM	IC4_221003A
	BMW-21	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-05A	BMW-20	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:19 PM	CETAC2_HG_220929B
	BMW-20	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/30/22 03:33 PM	ICP-MS4_220930C
	BMW-20	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:30 PM	ICP-MS5_220929C
	BMW-20	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:27 PM	ICP-MS5_220929C
2209216-05B	BMW-20	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 05:33 PM	IC4_221003A
	BMW-20	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 12:50 AM	IC4_221003A
	BMW-20	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-06A	BMW-27	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:21 PM	CETAC2_HG_220929B
	BMW-27	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/30/22 03:35 PM	ICP-MS4_220930C
	BMW-27	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:33 PM	ICP-MS5_220929C
	BMW-27	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:30 PM	ICP-MS5_220929C
2209216-06B	BMW-27	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 05:52 PM	IC4_221003A
	BMW-27	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 01:09 AM	IC4_221003A
	BMW-27	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-07A	BMW-26	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:24 PM	CETAC2_HG_220929B
	BMW-26	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:35 PM	ICP-MS5_220929C
	BMW-26	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:32 PM	ICP-MS5_220929C
	BMW-26	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	2	09/30/22 03:37 PM	ICP-MS4_220930C
2209216-07B	BMW-26	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 06:11 PM	IC4_221003A
	BMW-26	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 01:28 AM	IC4_221003A
	BMW-26	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-08A	BMW-11AR	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:30 PM	CETAC2_HG_220929B
	BMW-11AR	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/30/22 03:39 PM	ICP-MS4_220930C

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2209216-08A	BMW-11AR	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:51 PM	ICP-MS5_220929C
	BMW-11AR	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:35 PM	ICP-MS5_220929C
2209216-08B	BMW-11AR	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 06:30 PM	IC4_221003A
	BMW-11AR	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 01:47 AM	IC4_221003A
	BMW-11AR	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-09A	BMW-19	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:33 PM	CETAC2_HG_220929B
	BMW-19	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:53 PM	ICP-MS5_220929C
	BMW-19	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	50	09/29/22 03:37 PM	ICP-MS5_220929C
	BMW-19	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	2	09/30/22 03:41 PM	ICP-MS4_220930C
2209216-09B	BMW-19	Aqueous	E300	Anions by IC method - Water	107227	100	10/03/22 02:23 PM	IC4_221003A
	BMW-19	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 02:06 AM	IC4_221003A
	BMW-19	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-10A	BMW-18	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:35 PM	CETAC2_HG_220929B
	BMW-18	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	2	09/30/22 03:56 PM	ICP-MS4_220930C
	BMW-18	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:56 PM	ICP-MS5_220929C
2209216-10B	BMW-18	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 02:25 AM	IC4_221003A
	BMW-18	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-11A	BMW-28	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:40 PM	CETAC2_HG_220929B
	BMW-28	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/30/22 03:58 PM	ICP-MS4_220930C
	BMW-28	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 02:58 PM	ICP-MS5_220929C
	BMW-28	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:40 PM	ICP-MS5_220929C
2209216-11B	BMW-28	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 08:05 PM	IC4_221003A
	BMW-28	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 02:44 AM	IC4_221003A
	BMW-28	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-12A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:42 PM	CETAC2_HG_220929B
	DUP-1	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 03:01 PM	ICP-MS5_220929C

Lab Order: 2209216
Client: WSP-Golder
Project: MLSES - A1 Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2209216-12A	DUP-1	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:42 PM	ICP-MS5_220929C
	DUP-1	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/30/22 04:00 PM	ICP-MS4_220930C
2209216-12B	DUP-1	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 03:03 AM	IC4_221003A
	DUP-1	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 08:24 PM	IC4_221003A
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C
2209216-13A	BMW-32	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 03:03 PM	ICP-MS5_220929C
2209216-14A	BMW-33	Aqueous	SW7470A	Mercury Total: Aqueous	107187	1	09/29/22 02:45 PM	CETAC2_HG_220929B
	BMW-33	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/30/22 04:02 PM	ICP-MS4_220930C
	BMW-33	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	1	09/29/22 03:06 PM	ICP-MS5_220929C
	BMW-33	Aqueous	SW6020B	Trace Metals: ICP-MS - Water	107162	10	09/29/22 03:45 PM	ICP-MS5_220929C
2209216-14B	BMW-33	Aqueous	E300	Anions by IC method - Water	107227	10	10/03/22 08:43 PM	IC4_221003A
	BMW-33	Aqueous	E300	Anions by IC method - Water	107227	1	10/04/22 03:22 AM	IC4_221003A
	BMW-33	Aqueous	M2540C	Total Dissolved Solids	107171	1	09/28/22 05:15 PM	WC_220928C

DHL Analytical, Inc.

Date: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-24
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-01
Project No:	31404097.005	**Collection Date:**	09/22/22 11:35 AM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:20 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:20 PM
Barium	1.88	0.00300	0.0100		mg/L	1	09/29/22 02:20 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:20 PM
Boron	0.198	0.0100	0.0300		mg/L	1	09/30/22 03:25 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:20 PM
Calcium	55.9	1.00	3.00		mg/L	10	09/29/22 03:24 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:20 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:20 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:20 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	09/29/22 02:20 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:20 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:20 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:20 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:10 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	521	30.0	100		mg/L	100	10/04/22 03:15 PM
Fluoride	0.483	0.100	0.400		mg/L	1	10/03/22 10:18 PM
Sulfate	<1.00	1.00	3.00		mg/L	1	10/03/22 10:18 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1210	50.0	50.0		mg/L	1	09/28/22 05:15 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-23
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-02
Project No:	31404097.005	**Collection Date:**	09/22/22 12:25 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:23 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:23 PM
Barium	0.0420	0.00300	0.0100		mg/L	1	09/29/22 02:23 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:23 PM
Boron	1.63	0.100	0.300		mg/L	10	09/30/22 03:27 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:23 PM
Calcium	109	1.00	3.00		mg/L	10	09/30/22 03:27 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:23 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:23 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:23 PM
Lithium	0.0870	0.00500	0.0100		mg/L	1	09/29/22 02:23 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:23 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:23 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:23 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:12 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	282	3.00	10.0		mg/L	10	10/03/22 04:36 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/03/22 10:37 PM
Sulfate	522	10.0	30.0		mg/L	10	10/03/22 04:36 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1670	50.0	50.0		mg/L	1	09/28/22 05:15 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-22
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-03
Project No:	31404097.005	**Collection Date:**	09/22/22 01:20 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:25 PM
Arsenic	0.00206	0.00200	0.00500	J	mg/L	1	09/29/22 02:25 PM
Barium	0.0643	0.00300	0.0100		mg/L	1	09/29/22 02:25 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:25 PM
Boron	3.25	0.200	0.600		mg/L	20	09/30/22 03:29 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:25 PM
Calcium	225	2.00	6.00		mg/L	20	09/30/22 03:29 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:25 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:25 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:25 PM
Lithium	0.0887	0.00500	0.0100		mg/L	1	09/29/22 02:25 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:25 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:25 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:25 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:15 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	312	3.00	10.0		mg/L	10	10/03/22 04:55 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/03/22 10:56 PM
Sulfate	932	10.0	30.0		mg/L	10	10/03/22 04:55 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	2280	50.0	50.0		mg/L	1	09/28/22 05:15 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-21
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-04
Project No:	31404097.005	**Collection Date:**	09/22/22 02:10 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:28 PM
Arsenic	0.00589	0.00200	0.00500		mg/L	1	09/29/22 02:28 PM
Barium	0.0420	0.00300	0.0100		mg/L	1	09/29/22 02:28 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:28 PM
Boron	0.952	0.100	0.300		mg/L	10	09/30/22 03:31 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:28 PM
Calcium	173	1.00	3.00		mg/L	10	09/30/22 03:31 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:28 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:28 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:28 PM
Lithium	0.0739	0.00500	0.0100		mg/L	1	09/29/22 02:28 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:28 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:28 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:28 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:17 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	448	3.00	10.0		mg/L	10	10/03/22 05:14 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 12:31 AM
Sulfate	496	10.0	30.0		mg/L	10	10/03/22 05:14 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	2090	50.0	50.0		mg/L	1	09/28/22 05:15 PM

Qualifiers:

ND - Not Detected at the SDL
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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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-20
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-05
Project No:	31404097.005	**Collection Date:**	09/22/22 03:05 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:30 PM
Arsenic	0.00662	0.00200	0.00500		mg/L	1	09/29/22 02:30 PM
Barium	0.0364	0.00300	0.0100		mg/L	1	09/29/22 02:30 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:30 PM
Boron	0.102	0.0100	0.0300		mg/L	1	09/30/22 03:33 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:30 PM
Calcium	132	1.00	3.00		mg/L	10	09/29/22 03:27 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:30 PM
Cobalt	0.0746	0.00300	0.00500		mg/L	1	09/29/22 02:30 PM
Lead	0.000940	0.000300	0.00100	J	mg/L	1	09/29/22 02:30 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	09/29/22 02:30 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:30 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:30 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:30 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:19 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	46.5	0.300	1.00		mg/L	1	10/04/22 12:50 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 12:50 AM
Sulfate	734	10.0	30.0		mg/L	10	10/03/22 05:33 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1220	50.0	50.0		mg/L	1	09/28/22 05:15 PM

Qualifiers:

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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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-27
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-06
Project No:	31404097.005	**Collection Date:**	09/22/22 03:55 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:33 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:33 PM
Barium	0.00890	0.00300	0.0100	J	mg/L	1	09/29/22 02:33 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:33 PM
Boron	0.348	0.0100	0.0300		mg/L	1	09/30/22 03:35 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:33 PM
Calcium	79.3	1.00	3.00		mg/L	10	09/29/22 03:30 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:33 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:33 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:33 PM
Lithium	0.0814	0.00500	0.0100		mg/L	1	09/29/22 02:33 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:33 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:33 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:33 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:21 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	121	3.00	10.0		mg/L	10	10/03/22 05:52 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 01:09 AM
Sulfate	578	10.0	30.0		mg/L	10	10/03/22 05:52 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1340	50.0	50.0		mg/L	1	09/28/22 05:15 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
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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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-26
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-07
Project No:	31404097.005	**Collection Date:**	09/22/22 04:45 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:35 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:35 PM
Barium	0.0138	0.00300	0.0100		mg/L	1	09/29/22 02:35 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:35 PM
Boron	0.508	0.0200	0.0600		mg/L	2	09/30/22 03:37 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:35 PM
Calcium	115	1.00	3.00		mg/L	10	09/29/22 03:32 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:35 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:35 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:35 PM
Lithium	0.119	0.00500	0.0100		mg/L	1	09/29/22 02:35 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:35 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:35 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:35 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:24 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	147	3.00	10.0		mg/L	10	10/03/22 06:11 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 01:28 AM
Sulfate	726	10.0	30.0		mg/L	10	10/03/22 06:11 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1680	50.0	50.0		mg/L	1	09/28/22 05:15 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-11AR
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-08
Project No:	31404097.005	**Collection Date:**	09/23/22 08:10 AM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:51 PM
Arsenic	0.00715	0.00200	0.00500		mg/L	1	09/29/22 02:51 PM
Barium	0.0742	0.00300	0.0100		mg/L	1	09/29/22 02:51 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:51 PM
Boron	0.383	0.0100	0.0300		mg/L	1	09/30/22 03:39 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:51 PM
Calcium	167	1.00	3.00		mg/L	10	09/29/22 03:35 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:51 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:51 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:51 PM
Lithium	0.0238	0.00500	0.0100		mg/L	1	09/29/22 02:51 PM
Molybdenum	0.00275	0.00200	0.00500	J	mg/L	1	09/29/22 02:51 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:51 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:51 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:30 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	17.2	0.300	1.00		mg/L	1	10/04/22 01:47 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 01:47 AM
Sulfate	458	10.0	30.0		mg/L	10	10/03/22 06:30 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1410	50.0	50.0		mg/L	1	09/28/22 05:15 PM

Qualifiers:

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

DHL Analytical, Inc.

Date: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-19
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-09
Project No:	31404097.005	**Collection Date:**	09/23/22 09:00 AM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:53 PM
Arsenic	0.00312	0.00200	0.00500	J	mg/L	1	09/29/22 02:53 PM
Barium	0.0122	0.00300	0.0100		mg/L	1	09/29/22 02:53 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:53 PM
Boron	0.466	0.0200	0.0600		mg/L	2	09/30/22 03:41 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:53 PM
Calcium	497	5.00	15.0		mg/L	50	09/29/22 03:37 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:53 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:53 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:53 PM
Lithium	0.0850	0.00500	0.0100		mg/L	1	09/29/22 02:53 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:53 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:53 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:53 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:33 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	8.00	0.300	1.00		mg/L	1	10/04/22 02:06 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 02:06 AM
Sulfate	2270	100	300		mg/L	100	10/03/22 02:23 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	3620	50.0	50.0		mg/L	1	09/28/22 05:15 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-18
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-10
Project No:	31404097.005	**Collection Date:**	09/23/22 10:00 AM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:56 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:56 PM
Barium	0.0331	0.00300	0.0100		mg/L	1	09/29/22 02:56 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:56 PM
Boron	0.432	0.0200	0.0600		mg/L	2	09/30/22 03:56 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:56 PM
Calcium	7.23	0.100	0.300		mg/L	1	09/29/22 02:56 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:56 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:56 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:56 PM
Lithium	0.0153	0.00500	0.0100		mg/L	1	09/29/22 02:56 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:56 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:56 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:56 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:35 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	21.0	0.300	1.00		mg/L	1	10/04/22 02:25 AM
Fluoride	0.205	0.100	0.400	J	mg/L	1	10/04/22 02:25 AM
Sulfate	86.4	1.00	3.00		mg/L	1	10/04/22 02:25 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	469	10.0	10.0		mg/L	1	09/28/22 05:15 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-28
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-11
Project No:	31404097.005	**Collection Date:**	09/23/22 11:00 AM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 02:58 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:58 PM
Barium	0.00499	0.00300	0.0100	J	mg/L	1	09/29/22 02:58 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:58 PM
Boron	0.168	0.0100	0.0300		mg/L	1	09/30/22 03:58 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:58 PM
Calcium	34.8	1.00	3.00		mg/L	10	09/29/22 03:40 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:58 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 02:58 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 02:58 PM
Lithium	0.0233	0.00500	0.0100		mg/L	1	09/29/22 02:58 PM
Molybdenum	0.00302	0.00200	0.00500	J	mg/L	1	09/29/22 02:58 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 02:58 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 02:58 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:40 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	11.1	0.300	1.00		mg/L	1	10/04/22 02:44 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 02:44 AM
Sulfate	54.3	1.00	3.00		mg/L	1	10/04/22 02:44 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	116	10.0	10.0		mg/L	1	09/28/22 05:15 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	DUP-1
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-12
Project No:	31404097.005	**Collection Date:**	09/23/22 11:00 AM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 03:01 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 03:01 PM
Barium	0.00791	0.00300	0.0100	J	mg/L	1	09/29/22 03:01 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 03:01 PM
Boron	0.230	0.0100	0.0300		mg/L	1	09/30/22 04:00 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 03:01 PM
Calcium	51.5	1.00	3.00		mg/L	10	09/29/22 03:42 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 03:01 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/29/22 03:01 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 03:01 PM
Lithium	0.0358	0.00500	0.0100		mg/L	1	09/29/22 03:01 PM
Molybdenum	0.00321	0.00200	0.00500	J	mg/L	1	09/29/22 03:01 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 03:01 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 03:01 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:42 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	14.0	0.300	1.00		mg/L	1	10/04/22 03:03 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 03:03 AM
Sulfate	144	1.00	3.00		mg/L	1	10/04/22 03:03 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	281	10.0	10.0		mg/L	1	09/28/22 05:15 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-32
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-13
Project No:	31404097.005	**Collection Date:**	09/23/22 12:05 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Cobalt	0.00350	0.00300	0.00500	J	mg/L	1	09/29/22 03:03 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: *09-Nov-22*

CLIENT:	WSP-Golder	**Client Sample ID:**	BMW-33
Project:	MLSES - A1 Landfill	**Lab ID:**	2209216-14
Project No:	31404097.005	**Collection Date:**	09/23/22 01:10 PM
Lab Order:	2209216	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/29/22 03:06 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 03:06 PM
Barium	0.112	0.00300	0.0100		mg/L	1	09/29/22 03:06 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 03:06 PM
Boron	0.195	0.0100	0.0300		mg/L	1	09/30/22 04:02 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 03:06 PM
Calcium	132	1.00	3.00		mg/L	10	09/29/22 03:45 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 03:06 PM
Cobalt	0.00702	0.00300	0.00500		mg/L	1	09/29/22 03:06 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/29/22 03:06 PM
Lithium	0.0136	0.00500	0.0100		mg/L	1	09/29/22 03:06 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 03:06 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/29/22 03:06 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/29/22 03:06 PM
MERCURY TOTAL: AQUEOUS		**SW7470A**					Analyst: **CMC**
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/29/22 02:45 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **RA**
Chloride	73.6	3.00	10.0		mg/L	10	10/03/22 08:43 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/04/22 03:22 AM
Sulfate	174	10.0	30.0		mg/L	10	10/03/22 08:43 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	945	50.0	50.0		mg/L	1	09/28/22 05:15 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

CLIENT: WSP-Golder
Work Order: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_220805C

Sample ID: **DCS-106496**	Batch ID: **106496**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **DCS**	Run ID: **CETAC2_HG_220805C**	Analysis Date: **8/5/2022 3:18:57 PM**	Prep Date: **8/5/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000164	0.000200	0.000200	0	82.0	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_220929B

The QC data in batch 107187 applies to the following samples: 2209216-01A, 2209216-02A, 2209216-03A, 2209216-04A, 2209216-05A, 2209216-06A, 2209216-07A, 2209216-08A, 2209216-09A, 2209216-10A, 2209216-11A, 2209216-12A, 2209216-14A

Sample ID: **MB-107187** Batch ID: **107187** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_220929B** Analysis Date: **9/29/2022 1:45:34 PM** Prep Date: **9/29/2022**

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

Sample ID: **LCS-107187** Batch ID: **107187** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCS** Run ID: **CETAC2_HG_220929B** Analysis Date: **9/29/2022 1:50:05 PM** Prep Date: **9/29/2022**

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-107187** Batch ID: **107187** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCSD** Run ID: **CETAC2_HG_220929B** Analysis Date: **9/29/2022 1:52:22 PM** Prep Date: **9/29/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00206	0.000200	0.00200	0	103	85	115	0.976	15	

Sample ID: **2209190-01AMS** Batch ID: **107187** TestNo: **SW7470A** Units: **mg/L**
SampType: **MS** Run ID: **CETAC2_HG_220929B** Analysis Date: **9/29/2022 1:56:54 PM** Prep Date: **9/29/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0102	0.00100	0.0100	0	103	80	120			

Sample ID: **2209190-01AMSD** Batch ID: **107187** TestNo: **SW7470A** Units: **mg/L**
SampType: **MSD** Run ID: **CETAC2_HG_220929B** Analysis Date: **9/29/2022 1:59:09 PM** Prep Date: **9/29/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0105	0.00100	0.0100	0	104	80	120	1.93	15	

Sample ID: **2209190-01ASD** Batch ID: **107187** TestNo: **SW7470A** Units: **mg/L**
SampType: **SD** Run ID: **CETAC2_HG_220929B** Analysis Date: **9/29/2022 2:01:25 PM** Prep Date: **9/29/2022**

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

Sample ID: **2209190-01APDS** Batch ID: **107187** TestNo: **SW7470A** Units: **mg/L**
SampType: **PDS** Run ID: **CETAC2_HG_220929B** Analysis Date: **9/29/2022 2:03:41 PM** Prep Date: **9/29/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0125	0.00100	0.0125	0	100	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_220929B

Sample ID: **ICV-220929**	Batch ID: **R123263**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **ICV**	Run ID: **CETAC2_HG_220929B**	Analysis Date: **9/29/2022 11:53:07 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00385	0.000200	0.00400	0	96.2	90	110			

Sample ID: **CCV2-220929**	Batch ID: **R123263**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220929B**	Analysis Date: **9/29/2022 1:04:48 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			

Sample ID: **CCV3-220929**	Batch ID: **R123263**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220929B**	Analysis Date: **9/29/2022 2:26:23 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	90	110			

Sample ID: **CCV4-220929**	Batch ID: **R123263**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220929B**	Analysis Date: **9/29/2022 2:56:27 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			

Sample ID: **CCV5-220929**	Batch ID: **R123263**	TestNo: **SW7470A**	Units: **mg/L**
SampType: **CCV**	Run ID: **CETAC2_HG_220929B**	Analysis Date: **9/29/2022 3:11:43 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00198	0.000200	0.00200	0	99.0	90	110			

Qualifiers:

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

CLIENT: WSP-Golder
Work Order: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220822A

Sample ID: **DCS2-106706**	Batch ID: **106706**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS4_220822A**	Analysis Date: **8/22/2022 10:55:00 AM**	Prep Date: **8/19/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.364	0.300	0.300	0	121	70	130	0	0	

Sample ID: **DCS4-106706**	Batch ID: **106706**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS4**	Run ID: **ICP-MS4_220822A**	Analysis Date: **8/22/2022 11:00:00 AM**	Prep Date: **8/19/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0267	0.0300	0.0300	0	88.9	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS4_220930C**

The QC data in batch 107162 applies to the following samples: 2209216-01A, 2209216-02A, 2209216-03A, 2209216-04A, 2209216-05A, 2209216-06A, 2209216-07A, 2209216-08A, 2209216-09A, 2209216-10A, 2209216-11A, 2209216-12A, 2209216-13A, 2209216-14A

Sample ID: **MB-107162** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_220930C** Analysis Date: **9/30/2022 3:13:00 PM** Prep Date: **9/28/2022**

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

Sample ID: **LCS-107162** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_220930C** Analysis Date: **9/30/2022 3:15:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.199	0.0300	0.200	0	99.5	80	120			

Sample ID: **LCSD-107162** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_220930C** Analysis Date: **9/30/2022 3:17:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.195	0.0300	0.200	0	97.4	80	120	2.05	15	

Sample ID: **2209206-01A SD** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_220930C** Analysis Date: **9/30/2022 3:23:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.148	0.150	0	0.162				8.78	20	

Sample ID: **2209206-01A PDS** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_220930C** Analysis Date: **9/30/2022 3:43:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.356	0.0300	0.200	0.162	97.2	75	125			

Sample ID: **2209206-01A MS** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_220930C** Analysis Date: **9/30/2022 3:45:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.354	0.0300	0.200	0.162	96.0	75	125			

Sample ID: **2209206-01A MSD** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_220930C** Analysis Date: **9/30/2022 3:47:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.362	0.0300	0.200	0.162	100	75	125	2.29	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220930C

Sample ID: **ICV-220930**	Batch ID: **R123291**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_220930C**	Analysis Date: **9/30/2022 10:35:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0994	0.0300	0.100	0	99.4	90	110			
Calcium	2.62	0.300	2.50	0	105	90	110			

Sample ID: **LCVL-220930**	Batch ID: **R123291**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_220930C**	Analysis Date: **9/30/2022 10:44:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0226	0.0300	0.0200	0	113	80	120			
Calcium	0.0956	0.300	0.100	0	95.6	80	120			

Sample ID: **CCV7-220930**	Batch ID: **R123291**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220930C**	Analysis Date: **9/30/2022 3:09:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.203	0.0300	0.200	0	102	90	110			
Calcium	5.16	0.300	5.00	0	103	90	110			

Sample ID: **CCV8-220930**	Batch ID: **R123291**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220930C**	Analysis Date: **9/30/2022 3:51:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.195	0.0300	0.200	0	97.3	90	110			
Calcium	4.99	0.300	5.00	0	99.7	90	110			

Sample ID: **CCV9-220930**	Batch ID: **R123291**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220930C**	Analysis Date: **9/30/2022 4:09:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.203	0.0300	0.200	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220822B

Sample ID: **DCS1-106706**	Batch ID: **106706**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS**	Run ID: **ICP-MS5_220822B**	Analysis Date: **8/22/2022 11:05:00 AM**	Prep Date: **8/19/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.000971	0.00250	0.00100	0	97.1	70	130	0	0	
Beryllium	0.000548	0.00100	0.000500	0	110	70	130	0	0	
Cadmium	0.000521	0.00100	0.000500	0	104	70	130	0	0	
Lead	0.000534	0.00100	0.000500	0	107	70	130	0	0	
Thallium	0.000508	0.00150	0.000500	0	102	70	130	0	0	

Sample ID: **DCS2-106706**	Batch ID: **106706**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS5_220822B**	Analysis Date: **8/22/2022 11:09:00 AM**	Prep Date: **8/19/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.345	0.300	0.300	0	115	70	130	0	0	

Sample ID: **DCS3-106706**	Batch ID: **106706**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS3**	Run ID: **ICP-MS5_220822B**	Analysis Date: **8/22/2022 11:11:00 AM**	Prep Date: **8/19/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00525	0.00500	0.00500	0	105	70	130	0	0	
Barium	0.00502	0.0100	0.00500	0	100	70	130	0	0	
Chromium	0.00517	0.00500	0.00500	0	103	70	130	0	0	
Cobalt	0.00529	0.00500	0.00500	0	106	70	130	0	0	
Lithium	0.00516	0.0100	0.00500	0	103	70	130	0	0	
Molybdenum	0.00510	0.00500	0.00500	0	102	70	130	0	0	
Selenium	0.00505	0.00500	0.00500	0	101	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_220929C**

The QC data in batch 107162 applies to the following samples: 2209216-01A, 2209216-02A, 2209216-03A, 2209216-04A, 2209216-05A, 2209216-06A, 2209216-07A, 2209216-08A, 2209216-09A, 2209216-10A, 2209216-11A, 2209216-12A, 2209216-13A, 2209216-14A

Sample ID: **MB-107162** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:00:00 PM** Prep Date: **9/28/2022**

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-107162** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:02:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	99.1	80	120			
Arsenic	0.201	0.00500	0.200	0	101	80	120			
Barium	0.202	0.0100	0.200	0	101	80	120			
Beryllium	0.199	0.00100	0.200	0	99.5	80	120			
Cadmium	0.203	0.00100	0.200	0	102	80	120			
Calcium	4.84	0.300	5.00	0	96.8	80	120			
Chromium	0.202	0.00500	0.200	0	101	80	120			
Cobalt	0.208	0.00500	0.200	0	104	80	120			
Lead	0.199	0.00100	0.200	0	99.3	80	120			
Lithium	0.203	0.0100	0.200	0	102	80	120			
Molybdenum	0.198	0.00500	0.200	0	99.0	80	120			
Selenium	0.207	0.00500	0.200	0	104	80	120			
Thallium	0.209	0.00150	0.200	0	104	80	120			

Sample ID: **LCSD-107162** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:05:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	98.8	80	120	0.292	15	
Arsenic	0.200	0.00500	0.200	0	100	80	120	0.331	15	
Barium	0.202	0.0100	0.200	0	101	80	120	0.197	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220929C

Sample ID: **LCSD-107162** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:05:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.201	0.00100	0.200	0	100	80	120	0.903	15	
Cadmium	0.205	0.00100	0.200	0	102	80	120	0.689	15	
Calcium	5.00	0.300	5.00	0	99.9	80	120	3.13	15	
Chromium	0.202	0.00500	0.200	0	101	80	120	0.039	15	
Cobalt	0.208	0.00500	0.200	0	104	80	120	0.092	15	
Lead	0.197	0.00100	0.200	0	98.6	80	120	0.726	15	
Lithium	0.210	0.0100	0.200	0	105	80	120	3.27	15	
Molybdenum	0.198	0.00500	0.200	0	98.9	80	120	0.040	15	
Selenium	0.205	0.00500	0.200	0	103	80	120	0.918	15	
Thallium	0.207	0.00150	0.200	0	104	80	120	0.881	15	

Sample ID: **2209206-01A SD** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:13:00 PM** Prep Date: **9/28/2022**

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	0.00588				0	20	
Barium	0.0884	0.0500	0	0.0875				1.02	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	0.00292				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	0.00199	0.00500	0	0.00186				6.86	20	
Lithium	<0.0250	0.0500	0	0.0157				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: **2209206-01A PDS** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:38:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.187	0.00250	0.200	0	93.6	75	125			
Arsenic	0.206	0.00500	0.200	0.00588	100	75	125			
Barium	0.300	0.0100	0.200	0.0875	106	75	125			
Beryllium	0.209	0.00100	0.200	0	104	75	125			
Cadmium	0.214	0.00100	0.200	0	107	75	125			
Chromium	0.223	0.00500	0.200	0.00292	110	75	125			
Cobalt	0.221	0.00500	0.200	0	110	75	125			
Lead	0.221	0.00100	0.200	0.00186	109	75	125			
Lithium	0.246	0.0100	0.200	0.0157	115	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220929C

Sample ID: **2209206-01A PDS** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:38:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.206	0.00500	0.200	0	103	75	125			
Selenium	0.209	0.00500	0.200	0	104	75	125			
Thallium	0.222	0.00150	0.200	0	111	75	125			

Sample ID: **2209206-01A MS** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:40:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.194	0.00250	0.200	0	97.1	75	125			
Arsenic	0.201	0.00500	0.200	0.00588	97.7	75	125			
Barium	0.289	0.0100	0.200	0.0875	101	75	125			
Beryllium	0.196	0.00100	0.200	0	98.2	75	125			
Cadmium	0.200	0.00100	0.200	0	100	75	125			
Calcium	44.4	0.300	5.00	39.6	95.9	75	125			
Chromium	0.203	0.00500	0.200	0.00292	99.8	75	125			
Cobalt	0.205	0.00500	0.200	0	102	75	125			
Lead	0.199	0.00100	0.200	0.00186	98.6	75	125			
Lithium	0.230	0.0100	0.200	0.0157	107	75	125			
Molybdenum	0.196	0.00500	0.200	0	98.0	75	125			
Selenium	0.197	0.00500	0.200	0	98.5	75	125			
Thallium	0.207	0.00150	0.200	0	104	75	125			

Sample ID: **2209206-01A MSD** Batch ID: **107162** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_220929C** Analysis Date: **9/29/2022 2:43:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.192	0.00250	0.200	0	96.1	75	125	1.06	15	
Arsenic	0.203	0.00500	0.200	0.00588	98.3	75	125	0.665	15	
Barium	0.290	0.0100	0.200	0.0875	101	75	125	0.140	15	
Beryllium	0.199	0.00100	0.200	0	99.4	75	125	1.27	15	
Cadmium	0.200	0.00100	0.200	0	100	75	125	0.025	15	
Calcium	44.9	0.300	5.00	39.6	107	75	125	1.26	15	
Chromium	0.204	0.00500	0.200	0.00292	101	75	125	0.765	15	
Cobalt	0.206	0.00500	0.200	0	103	75	125	0.593	15	
Lead	0.200	0.00100	0.200	0.00186	99.0	75	125	0.454	15	
Lithium	0.228	0.0100	0.200	0.0157	106	75	125	0.805	15	
Molybdenum	0.198	0.00500	0.200	0	98.8	75	125	0.776	15	
Selenium	0.198	0.00500	0.200	0	99.2	75	125	0.675	15	
Thallium	0.208	0.00150	0.200	0	104	75	125	0.592	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220929C

Sample ID: **2209206-01A SD**	Batch ID: **107162**	TestNo: **SW6020B**			Units: **mg/L**			
SampType: **SD**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 3:22:00 PM**			Prep Date: **9/28/2022**			

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	40.2	15.0	0	40.3				0.401	20	

Sample ID: **2209206-01A PDS**	Batch ID: **107162**	TestNo: **SW6020B**			Units: **mg/L**			
SampType: **PDS**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 3:48:00 PM**			Prep Date: **9/28/2022**			

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	92.8	3.00	50.0	40.3	105	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220929C

Sample ID: **ICV-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 10:33:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.101	0.00250	0.100	0	101	90	110			
Arsenic	0.0985	0.00500	0.100	0	98.5	90	110			
Barium	0.101	0.0100	0.100	0	101	90	110			
Beryllium	0.0981	0.00100	0.100	0	98.1	90	110			
Cadmium	0.101	0.00100	0.100	0	101	90	110			
Calcium	2.53	0.300	2.50	0	101	90	110			
Chromium	0.101	0.00500	0.100	0	101	90	110			
Cobalt	0.104	0.00500	0.100	0	104	90	110			
Lead	0.0998	0.00100	0.100	0	99.8	90	110			
Lithium	0.100	0.0100	0.100	0	100	90	110			
Molybdenum	0.0951	0.00500	0.100	0	95.1	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			
Thallium	0.0958	0.00150	0.100	0	95.8	90	110			

Sample ID: **LCVL-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 10:39:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00221	0.00250	0.00200	0	111	80	120			
Arsenic	0.00517	0.00500	0.00500	0	103	80	120			
Barium	0.00510	0.0100	0.00500	0	102	80	120			
Beryllium	0.00114	0.00100	0.00100	0	114	80	120			
Cadmium	0.00102	0.00100	0.00100	0	102	80	120			
Calcium	0.114	0.300	0.100	0	114	80	120			
Chromium	0.00482	0.00500	0.00500	0	96.4	80	120			
Cobalt	0.00522	0.00500	0.00500	0	104	80	120			
Lead	0.00101	0.00100	0.00100	0	101	80	120			
Lithium	0.0106	0.0100	0.0100	0	106	80	120			
Molybdenum	0.00511	0.00500	0.00500	0	102	80	120			
Selenium	0.00541	0.00500	0.00500	0	108	80	120			
Thallium	0.00101	0.00150	0.00100	0	101	80	120			

Sample ID: **CCV3-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 12:28:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	98.9	90	110			
Arsenic	0.203	0.00500	0.200	0	101	90	110			
Barium	0.201	0.0100	0.200	0	100	90	110			
Beryllium	0.193	0.00100	0.200	0	96.6	90	110			
Cadmium	0.203	0.00100	0.200	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220929C

Sample ID: **CCV3-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 12:28:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.95	0.300	5.00	0	99.0	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.209	0.00500	0.200	0	105	90	110			
Lead	0.197	0.00100	0.200	0	98.6	90	110			
Lithium	0.194	0.0100	0.200	0	97.0	90	110			
Molybdenum	0.199	0.00500	0.200	0	99.5	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

Sample ID: **CCV4-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 2:45:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.7	90	110			
Arsenic	0.199	0.00500	0.200	0	99.4	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.201	0.00100	0.200	0	100	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Calcium	4.96	0.300	5.00	0	99.3	90	110			
Chromium	0.204	0.00500	0.200	0	102	90	110			
Cobalt	0.209	0.00500	0.200	0	105	90	110			
Lead	0.198	0.00100	0.200	0	98.9	90	110			
Lithium	0.213	0.0100	0.200	0	106	90	110			
Molybdenum	0.195	0.00500	0.200	0	97.3	90	110			
Selenium	0.205	0.00500	0.200	0	103	90	110			
Thallium	0.209	0.00150	0.200	0	104	90	110			

Sample ID: **CCV5-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 3:14:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	90	110			
Arsenic	0.199	0.00500	0.200	0	99.4	90	110			
Barium	0.205	0.0100	0.200	0	102	90	110			
Beryllium	0.203	0.00100	0.200	0	101	90	110			
Cadmium	0.205	0.00100	0.200	0	103	90	110			
Calcium	5.08	0.300	5.00	0	102	90	110			
Chromium	0.205	0.00500	0.200	0	103	90	110			
Cobalt	0.212	0.00500	0.200	0	106	90	110			
Lead	0.206	0.00100	0.200	0	103	90	110			
Lithium	0.220	0.0100	0.200	0	110	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220929C

Sample ID: **CCV5-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 3:14:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.199	0.00500	0.200	0	99.5	90	110			
Selenium	0.207	0.00500	0.200	0	104	90	110			
Thallium	0.210	0.00150	0.200	0	105	90	110			

Sample ID: **CCV6-220929**	Batch ID: **R123270**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220929C**	Analysis Date: **9/29/2022 3:50:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.10	0.300	5.00	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_220928A

Sample ID: **DCS3-107167** Batch ID: **107167** TestNo: **E300** Units: **mg/L**
SampType: **DCS3** Run ID: **IC2_220928A** Analysis Date: **9/28/2022 4:33:50 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.923	1.00	1.000	0	92.3	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_221004A

The QC data in batch 107243 applies to the following samples: 2209216-01B

Sample ID: **MB-107243**	Batch ID: **107243**	TestNo: **E300**	Units: **mg/L**
SampType: **MBLK**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 11:15:06 AM**	Prep Date: **10/4/2022**

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

Sample ID: **LCS-107243**	Batch ID: **107243**	TestNo: **E300**	Units: **mg/L**
SampType: **LCS**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 11:32:06 AM**	Prep Date: **10/4/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			

Sample ID: **LCSD-107243**	Batch ID: **107243**	TestNo: **E300**	Units: **mg/L**
SampType: **LCSD**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 11:49:06 AM**	Prep Date: **10/4/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110	1.04	20	

Sample ID: **2209216-01BMS**	Batch ID: **107243**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 3:32:56 PM**	Prep Date: **10/4/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2520	100	2000	520.5	99.8	90	110			

Sample ID: **2209216-01BMSD**	Batch ID: **107243**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 3:49:56 PM**	Prep Date: **10/4/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2520	100	2000	520.5	100	90	110	0.115	20	

Sample ID: **2209259-04BMS**	Batch ID: **107243**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 4:23:56 PM**	Prep Date: **10/4/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2970	100	2000	1101	93.5	90	110			

Sample ID: **2209259-04BMSD**	Batch ID: **107243**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 4:40:56 PM**	Prep Date: **10/4/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3000	100	2000	1101	94.8	90	110	0.834	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_221004A

Sample ID: **ICV-221004**	Batch ID: **R123339**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 10:41:06 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.5	1.00	25.00	0	102	90	110			

Sample ID: **CCV1-221004**	Batch ID: **R123339**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_221004A**	Analysis Date: **10/4/2022 7:47:56 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.97	1.00	10.00	0	99.7	90	110			

Qualifiers:

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

CLIENT: WSP-Golder
Work Order: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_220809A

Sample ID: **DCS3-106523** Batch ID: **106523** TestNo: **E300** Units: **mg/L**
SampType: **DCS3** Run ID: **IC4_220809A** Analysis Date: **8/9/2022 12:54:08 PM** Prep Date: **8/9/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.921	1.00	1.000	0	92.1	70	130	0	0	
Fluoride	0.418	0.400	0.4000	0	104	70	130	0	0	
Sulfate	2.64	3.00	3.000	0	88.1	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_221003A

The QC data in batch 107227 applies to the following samples: 2209216-01B, 2209216-02B, 2209216-03B, 2209216-04B, 2209216-05B, 2209216-06B, 2209216-07B, 2209216-08B, 2209216-09B, 2209216-10B, 2209216-11B, 2209216-12B, 2209216-14B

Sample ID: **MB-107227** Batch ID: **107227** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC4_221003A** Analysis Date: **10/3/2022 11:04:15 AM** Prep Date: **10/3/2022**

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-107227** Batch ID: **107227** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC4_221003A** Analysis Date: **10/3/2022 11:23:15 AM** Prep Date: **10/3/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.13	1.00	10.00	0	91.3	90	110			
Fluoride	3.86	0.400	4.000	0	96.6	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID: **LCSD-107227** Batch ID: **107227** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC4_221003A** Analysis Date: **10/3/2022 11:42:15 AM** Prep Date: **10/3/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.18	1.00	10.00	0	91.8	90	110	0.549	20	
Fluoride	3.85	0.400	4.000	0	96.4	90	110	0.281	20	
Sulfate	31.1	3.00	30.00	0	104	90	110	1.22	20	

Sample ID: **2209216-09BMS** Batch ID: **107227** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_221003A** Analysis Date: **10/3/2022 2:42:04 PM** Prep Date: **10/3/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1840	100	2000	0	92.1	90	110			
Fluoride	1990	40.0	2000	0	99.4	90	110			
Sulfate	4080	300	2000	2274	90.4	90	110			

Sample ID: **2209216-09BMSD** Batch ID: **107227** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_221003A** Analysis Date: **10/3/2022 3:01:04 PM** Prep Date: **10/3/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1840	100	2000	0	92.0	90	110	0.156	20	
Fluoride	1990	40.0	2000	0	99.5	90	110	0.098	20	
Sulfate	4080	300	2000	2274	90.4	90	110	0.028	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_221003A

Sample ID: **2209247-06DMS**	Batch ID: **107227**	TestNo: **E300**	Units: **mg/L**
SampType: **MS**	Run ID: **IC4_221003A**	Analysis Date: **10/3/2022 3:39:04 PM**	Prep Date: **10/3/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1810	100	2000	0	90.4	90	110			
Fluoride	1990	40.0	2000	0	99.4	90	110			
Sulfate	3700	300	2000	1890	90.6	90	110			

Sample ID: **2209247-06DMSD**	Batch ID: **107227**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC4_221003A**	Analysis Date: **10/3/2022 3:58:04 PM**	Prep Date: **10/3/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1810	100	2000	0	90.5	90	110	0.202	20	
Fluoride	1990	40.0	2000	0	99.6	90	110	0.111	20	
Sulfate	3700	300	2000	1890	90.6	90	110	0.008	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_221003A

Sample ID: **ICV-221003**	Batch ID: **R123299**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC4_221003A**	Analysis Date: **10/3/2022 10:26:15 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	23.7	1.00	25.00	0	94.7	90	110			
Fluoride	10.1	0.400	10.00	0	101	90	110			
Sulfate	80.1	3.00	75.00	0	107	90	110			

Sample ID: **CCV1-221003**	Batch ID: **R123299**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_221003A**	Analysis Date: **10/3/2022 7:27:04 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.57	1.00	10.00	0	95.7	90	110			
Fluoride	4.04	0.400	4.000	0	101	90	110			
Sulfate	32.2	3.00	30.00	0	107	90	110			

Sample ID: **CCV2-221003**	Batch ID: **R123299**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_221003A**	Analysis Date: **10/3/2022 11:53:04 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.58	1.00	10.00	0	95.8	90	110			
Fluoride	4.06	0.400	4.000	0	101	90	110			
Sulfate	32.5	3.00	30.00	0	108	90	110			

Sample ID: **CCV3-221003**	Batch ID: **R123299**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_221003A**	Analysis Date: **10/4/2022 4:19:04 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.58	1.00	10.00	0	95.8	90	110			
Fluoride	4.09	0.400	4.000	0	102	90	110			
Sulfate	32.3	3.00	30.00	0	108	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: 2209216
Project: MLSES - A1 Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: WC_220928C

The QC data in batch 107171 applies to the following samples: 2209216-01B, 2209216-02B, 2209216-03B, 2209216-04B, 2209216-05B, 2209216-06B, 2209216-07B, 2209216-08B, 2209216-09B, 2209216-10B, 2209216-11B, 2209216-12B, 2209216-14B

Sample ID: **MB-107171** Batch ID: **107171** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_220928C** Analysis Date: **9/28/2022 5:15:00 PM** Prep Date: **9/28/2022**

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-107171** Batch ID: **107171** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_220928C** Analysis Date: **9/28/2022 5:15:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	743	10.0	745.6	0	99.7	90	113			

Sample ID: **2209216-03B-DUP** Batch ID: **107171** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_220928C** Analysis Date: **9/28/2022 5:15:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2260	50.0	0	2280				0.881	5	

Sample ID: **2209216-04B-DUP** Batch ID: **107171** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_220928C** Analysis Date: **9/28/2022 5:15:00 PM** Prep Date: **9/28/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2070	50.0	0	2085				0.722	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

DHL Analytical, Inc.

Date: *09-Nov-22*

CLIENT: WSP-Golder
Work Order: 2209216
Project: MLSES - A1 Landfill

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

November 08, 2022

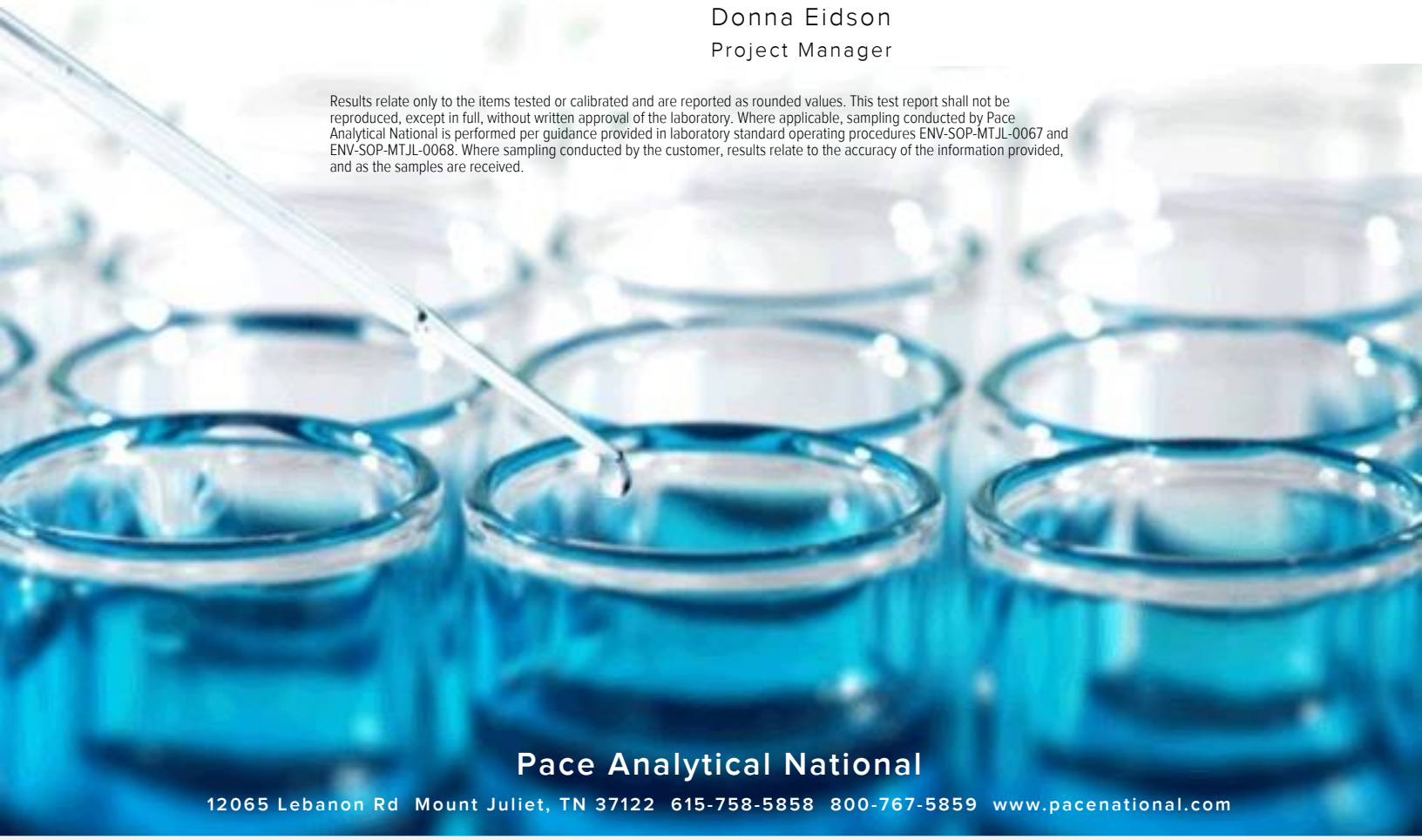
DHL Analytical, Inc.

Sample Delivery Group:	L1541511
Samples Received:	09/30/2022
Project Number:	2209216
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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BMW-24 L1541511-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/22/22 11:35	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938642	1	10/21/22 16:02	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938642	1	10/21/22 16:02	10/22/22 13:20	RGT	Mt. Juliet, TN

BMW-23 L1541511-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/22/22 12:25	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938642	1	10/21/22 16:02	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938642	1	10/21/22 16:02	10/22/22 13:20	RGT	Mt. Juliet, TN

BMW-22 L1541511-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/22/22 13:20	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938642	1	10/21/22 16:02	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938642	1	10/21/22 16:02	10/22/22 13:20	RGT	Mt. Juliet, TN

BMW-21 L1541511-04 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/22/22 14:10	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938642	1	10/21/22 16:02	11/03/22 10:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938642	1	10/21/22 16:02	10/22/22 13:20	RGT	Mt. Juliet, TN

BMW-20 L1541511-05 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/22/22 15:05	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938642	1	10/21/22 16:02	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938642	1	10/21/22 16:02	10/22/22 13:20	RGT	Mt. Juliet, TN

BMW-27 L1541511-06 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/22/22 15:55	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938642	1	10/21/22 16:02	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938642	1	10/21/22 16:02	10/22/22 13:20	RGT	Mt. Juliet, TN

BMW-26 L1541511-07 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/22/22 16:45	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938642	1	10/21/22 16:02	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938642	1	10/21/22 16:02	10/22/22 13:20	RGT	Mt. Juliet, TN

BMW-11AR L1541511-08 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/23/22 08:10	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938643	1	10/25/22 13:05	11/03/22 15:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938643	1	10/25/22 13:05	10/27/22 19:24	RGT	Mt. Juliet, TN

BMW-19 L1541511-09 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/23/22 09:00	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938643	1	10/25/22 13:05	11/03/22 15:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938643	1	10/25/22 13:05	10/27/22 19:24	RGT	Mt. Juliet, TN

BMW-18 L1541511-10 Non-Potable Water

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

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938643	1	10/25/22 13:05	11/03/22 15:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938643	1	10/25/22 13:05	10/27/22 19:24	RGT	Mt. Juliet, TN

BMW-28 L1541511-11 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/23/22 11:00	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938643	1	10/25/22 13:05	11/03/22 15:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938643	1	10/25/22 13:05	10/27/22 19:24	RGT	Mt. Juliet, TN

DUP-1 L1541511-12 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/23/22 11:00	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938643	1	10/25/22 13:05	11/03/22 15:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938643	1	10/25/22 13:05	10/27/22 19:24	RGT	Mt. Juliet, TN

BMW-33 L1541511-13 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/23/22 13:10	09/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1949214	1	10/27/22 12:34	11/03/22 15:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1938643	1	10/25/22 13:05	11/03/22 15:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1938643	1	10/25/22 13:05	10/27/22 19:24	RGT	Mt. Juliet, TN

CASE NARRATIVE

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

Donna Eidson
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.05		0.206	0.341	11/03/2022 10:45	WG1949214
(T) Barium	*109*			*30.0-143*	*11/03/2022 10:45*	WG1949214
(T) Yttrium	*110*			*30.0-136*	*11/03/2022 10:45*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.95		0.381	0.374	11/03/2022 10:45	WG1938642

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.894		0.321	0.154	10/22/2022 13:20	WG1938642
(T) Barium-133	*93.7*			*30.0-143*	*10/22/2022 13:20*	WG1938642

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.97		0.237	0.368	11/03/2022 10:45	WG1949214
(T) Barium	*92.4*			*30.0-143*	*11/03/2022 10:45*	WG1949214
(T) Yttrium	*106*			*30.0-136*	*11/03/2022 10:45*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.62		0.385	0.440	11/03/2022 10:45	WG1938642

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.651		0.304	0.241	10/22/2022 13:20	WG1938642
(T) Barium-133	*95.9*			*30.0-143*	*10/22/2022 13:20*	WG1938642

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	2.14		0.223	0.335	11/03/2022 10:45	WG1949214
(T) Barium	*102*			*30.0-143*	*11/03/2022 10:45*	WG1949214
(T) Yttrium	*105*			*30.0-136*	*11/03/2022 10:45*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	3.04		0.412	0.380	11/03/2022 10:45	WG1938642

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.900		0.347	0.179	10/22/2022 13:20	WG1938642
(T) Barium-133	*93.4*			*30.0-143*	*10/22/2022 13:20*	WG1938642

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.903		0.217	0.366	11/03/2022 10:45	WG1949214
(T) Barium	*103*			*30.0-143*	*11/03/2022 10:45*	WG1949214
(T) Yttrium	*104*			*30.0-136*	*11/03/2022 10:45*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.35		0.365	0.475	11/03/2022 10:45	WG1938642

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.449		0.294	0.303	10/22/2022 13:20	WG1938642
(T) Barium-133	*96.6*			*30.0-143*	*10/22/2022 13:20*	WG1938642

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.400	J	0.254	0.477	11/03/2022 15:00	WG1949214
(T) Barium	*88.7*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*101*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.658		0.343	0.554	11/03/2022 15:00	WG1938642

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.258	J	0.231	0.281	10/22/2022 13:20	WG1938642
(T) Barium-133	*105*			*30.0-143*	*10/22/2022 13:20*	WG1938642

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.367	J	0.200	0.375	11/03/2022 15:00	WG1949214
(T) Barium	*99.4*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*102*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.531		0.276	0.456	11/03/2022 15:00	WG1938642

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.164	J	0.190	0.259	10/22/2022 13:20	WG1938642
(T) Barium-133	*106*			*30.0-143*	*10/22/2022 13:20*	WG1938642

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.318	J	0.222	0.420	11/03/2022 15:00	WG1949214
(T) Barium	*92.3*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*103*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.375	J	0.266	0.493	11/03/2022 15:00	WG1938642

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0569	U	0.146	0.258	10/22/2022 13:20	WG1938642
(T) Barium-133	*90.3*			*30.0-143*	*10/22/2022 13:20*	WG1938642

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.59		0.223	0.376	11/03/2022 15:00	WG1949214
(T) Barium	*94.9*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*102*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.27		0.404	0.480	11/03/2022 15:00	WG1938643

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.683		0.337	0.299	10/27/2022 19:24	WG1938643
(T) Barium-133	*92.2*			*30.0-143*	*10/27/2022 19:24*	WG1938643

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.555		0.199	0.367	11/03/2022 15:00	WG1949214
(T) Barium	*107*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*102*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.659		0.260	0.449	11/03/2022 15:00	WG1938643

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.104	J	0.167	0.259	10/27/2022 19:24	WG1938643
(T) Barium-133	*98.3*			*30.0-143*	*10/27/2022 19:24*	WG1938643

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0496	U	0.214	0.413	11/03/2022 15:00	WG1949214
(T) Barium	*97.1*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*101*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.261	J	0.321	0.526	11/03/2022 15:00	WG1938643

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.212	J	0.239	0.325	10/27/2022 19:24	WG1938643
(T) Barium-133	*97.7*			*30.0-143*	*10/27/2022 19:24*	WG1938643

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.312	J	0.214	0.404	11/03/2022 15:00	WG1949214
(T) Barium	*93.8*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*99.4*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.387	J	0.250	0.456	11/03/2022 15:00	WG1938643

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0750	U	0.130	0.212	10/27/2022 19:24	WG1938643
(T) Barium-133	*97.6*			*30.0-143*	*10/27/2022 19:24*	WG1938643

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.493		0.197	0.365	11/03/2022 15:00	WG1949214
(T) Barium	*111*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*95.0*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.699		0.284	0.448	11/03/2022 15:00	WG1938643

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.206	J	0.204	0.260	10/27/2022 19:24	WG1938643
(T) Barium-133	*91.4*			*30.0-143*	*10/27/2022 19:24*	WG1938643

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.406		0.193	0.361	11/03/2022 15:00	WG1949214
(T) Barium	*94.7*			*30.0-143*	*11/03/2022 15:00*	WG1949214
(T) Yttrium	*104*			*30.0-136*	*11/03/2022 15:00*	WG1949214

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.669		0.263	0.396	11/03/2022 15:00	WG1938643

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.263		0.178	0.162	10/27/2022 19:24	WG1938643
(T) Barium-133	*99.1*			*30.0-143*	*10/27/2022 19:24*	WG1938643

QUALITY CONTROL SUMMARY

L1541511-01,02,03,04,05,06,07,08,09,10,11,12,13

Method Blank (MB)

(MB) R3857224-1 11/03/22 10:45

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	-0.0211	U	0.160	0.293
(T) Barium	*106*		*106*	
(T) Yttrium	*100*		*100*	

L1538854-39 Original Sample (OS) • Duplicate (DUP)

(OS) L1538854-39 11/03/22 10:45 • (DUP) R3857224-5 11/03/22 10:45

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	0.155	0.191	0.346	0.780	0.295	0.346	1	134	1.78		20	3
(T) Barium	*104*			*103*	*103*							
(T) Yttrium	*105*			*106*	*106*							

Laboratory Control Sample (LCS)

(LCS) R3857224-2 11/03/22 10:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	4.74	94.8	80.0-120	
(T) Barium			*113*		
(T) Yttrium			*102*		

L1542524-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542524-01 11/03/22 15:00 • (MS) R3857224-3 11/03/22 10:45 • (MSD) R3857224-4 11/03/22 10:45

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	10.0	1.37	10.5	11.6	91.3	102	1	70.0-130			9.78		20
(T) Barium		*107*			*110*	*107*							
(T) Yttrium		*92.2*			*104*	*95.4*							

Method Blank (MB)

(MB) R3856740-1 10/22/22 13:20

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	-0.00737	U	0.0302	0.0722
(T) Barium-133	*88.6*		*88.6*	

L1541511-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1541511-07 10/22/22 13:20 • (DUP) R3856740-5 10/22/22 13:20

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	0.0569	0.146	0.258	1.15	0.393	0.258	1	181	2.60		20	3
(T) Barium-133	*90.3*			*85.0*	*85.0*							

Laboratory Control Sample (LCS)

(LCS) R3856740-2 10/22/22 13:20

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.02	5.82	116	80.0-120	
(T) Barium-133			*85.2*		

L1541511-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1541511-01 10/22/22 13:20 • (MS) R3856740-3 10/22/22 13:20 • (MSD) R3856740-4 10/22/22 13:20

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	0.894	22.1	22.1	106	106	1	75.0-125			0.0453		20
(T) Barium-133		*93.7*			*86.8*	*90.0*							

Method Blank (MB)

(MB) R3858371-1 10/27/22 15:27

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.0131	U	0.0470	0.0858
(T) Barium-133	*81.9*		*81.9*	

L1541511-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1541511-08 10/27/22 19:24 • (DUP) R3858371-5 10/27/22 15:27

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.683	0.337	0.299	0.492	0.289	0.299	1	32.5	0.430		20	3
(T) Barium-133	*92.2*			*94.6*	*94.6*							

Laboratory Control Sample (LCS)

(LCS) R3858371-2 10/27/22 15:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	5.17	103	80.0-120	
(T) Barium-133			*88.4*		

L1541511-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1541511-13 10/27/22 19:24 • (MS) R3858371-3 10/27/22 15:27 • (MSD) R3858371-4 10/27/22 15:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.263	17.3	18.3	85.1	89.9	1	75.0-125			5.40		20
(T) Barium-133		*99.1*			*95.0*	*93.8*							

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

G103

Work Order: 2209216

L154151

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

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

27-Sep-22

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests: Ra-228 E904.0	Ra-226 M7500 Ra B M					
BMW-24	Aqueous	01C	09/22/22 11:35 AM	1LHDPEHNO3		1					01
BMW-24	Aqueous	01D	09/22/22 11:35 AM	1LHDPEHNO3	1						01
BMW-23	Aqueous	02C	09/22/22 12:25 PM	1LHDPEHNO3		1					02
BMW-23	Aqueous	02D	09/22/22 12:25 PM	1LHDPEHNO3	1						02
BMW-22	Aqueous	03C	09/22/22 01:20 PM	1LHDPEHNO3		1					03
BMW-22	Aqueous	03D	09/22/22 01:20 PM	1LHDPEHNO3	1						03
BMW-21	Aqueous	04C	09/22/22 02:10 PM	1LHDPEHNO3		1					04
BMW-21	Aqueous	04D	09/22/22 02:10 PM	1LHDPEHNO3	1						04
BMW-20	Aqueous	05C	09/22/22 03:05 PM	1LHDPEHNO3		1					05
BMW-20	Aqueous	05D	09/22/22 03:05 PM	1LHDPEHNO3	1						05
BMW-27	Aqueous	06C	09/22/22 03:55 PM	1LHDPEHNO3		1					06
BMW-27	Aqueous	06D	09/22/22 03:55 PM	1LHDPEHNO3	1						06
BMW-26	Aqueous	07C	09/22/22 04:45 PM	1LHDPEHNO3		1					07
BMW-26	Aqueous	07D	09/22/22 04:45 PM	1LHDPEHNO3	1						07
BMW-11AR	Aqueous	08C	09/23/22 08:10 AM	1LHDPEHNO3		1					08
BMW-11AR	Aqueous	08D	09/23/22 08:10 AM	1LHDPEHNO3	1						08
BMW-19	Aqueous	09C	09/23/22 09:00 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

AmD

	Date/Time		Date/Time
Relinquished by:	9/27/22 1800	Received by:	9/30/22 0930
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: 2209216

L1541511

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

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

27-Sep-22

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests: Ra-228 E904.0	Ra-226 M7500 Ra B M				
BMW-19	Aqueous	09D	09/23/22 09:00 AM	1LHDPEHNO3	1					09
BMW-18	Aqueous	10C	09/23/22 10:00 AM	1LHDPEHNO3		1				10
BMW-18	Aqueous	10D	09/23/22 10:00 AM	1LHDPEHNO3	1					10
BMW-28	Aqueous	11C	09/23/22 11:00 AM	1LHDPEHNO3		1				11
BMW-28	Aqueous	11D	09/23/22 11:00 AM	1LHDPEHNO3	1					11
DUP-1	Aqueous	12C	09/23/22 11:00 AM	1LHDPEHNO3		1				12
DUP-1	Aqueous	12D	09/23/22 11:00 AM	1LHDPEHNO3	1					12
BMW-33	Aqueous	14C	09/23/22 01:10 PM	1LHDPEHNO3		1				13
BMW-33	Aqueous	14D	09/23/22 01:10 PM	1LHDPEHNO3	1					13

Sample Receipt Checklist

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

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

AMB

	Date/Time		Date/Time
Relinquished by:	9/27/22 1800	Received by:	9/30/22 0930
Relinquished by:		Received by:	

ATTACHMENT 2

APPENDIX IV CONFIDENCE INTERVAL GRAPHS

EXPLANATION

95% Upper confidence limit

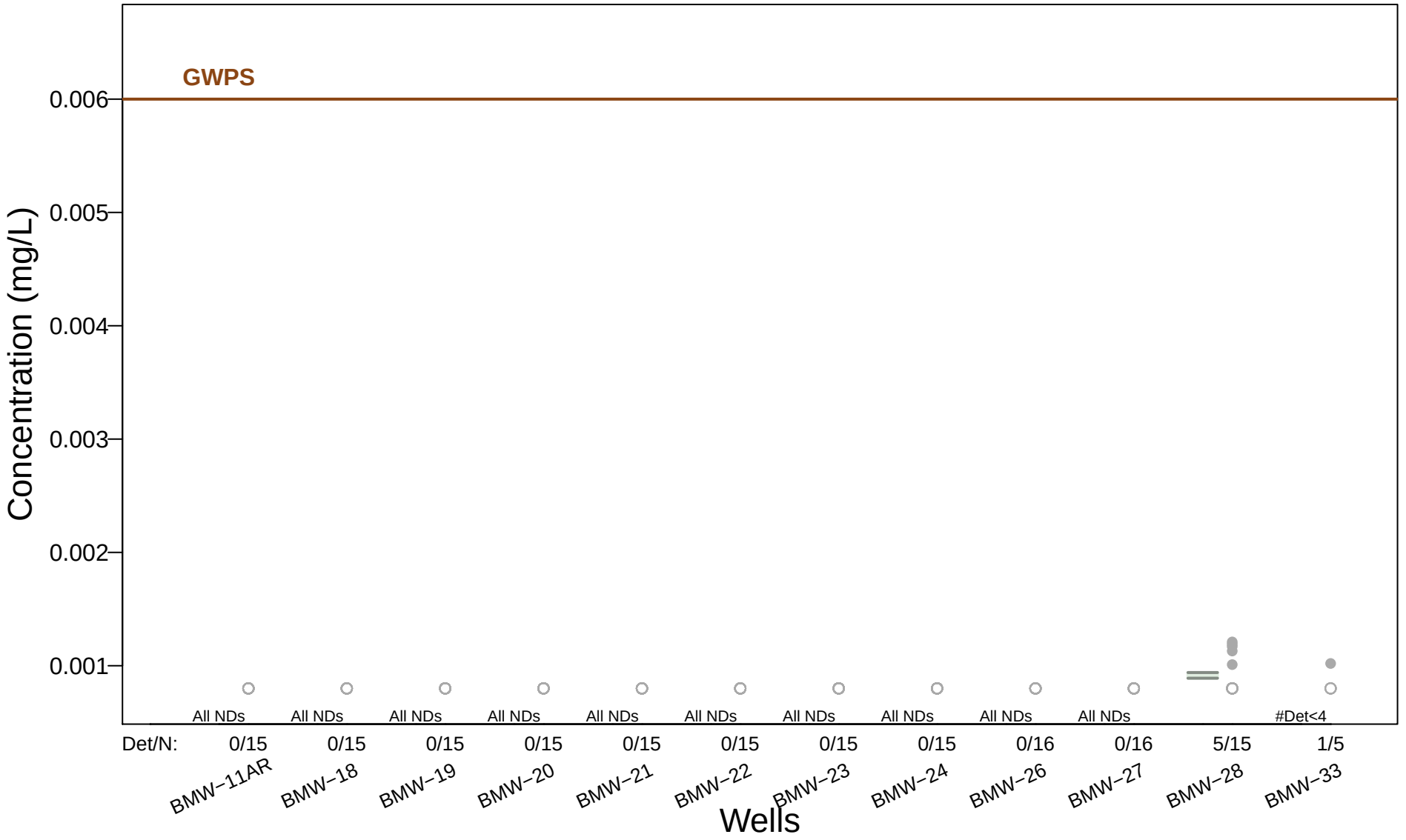
95% Lower confidence limit

Detected sample concentration

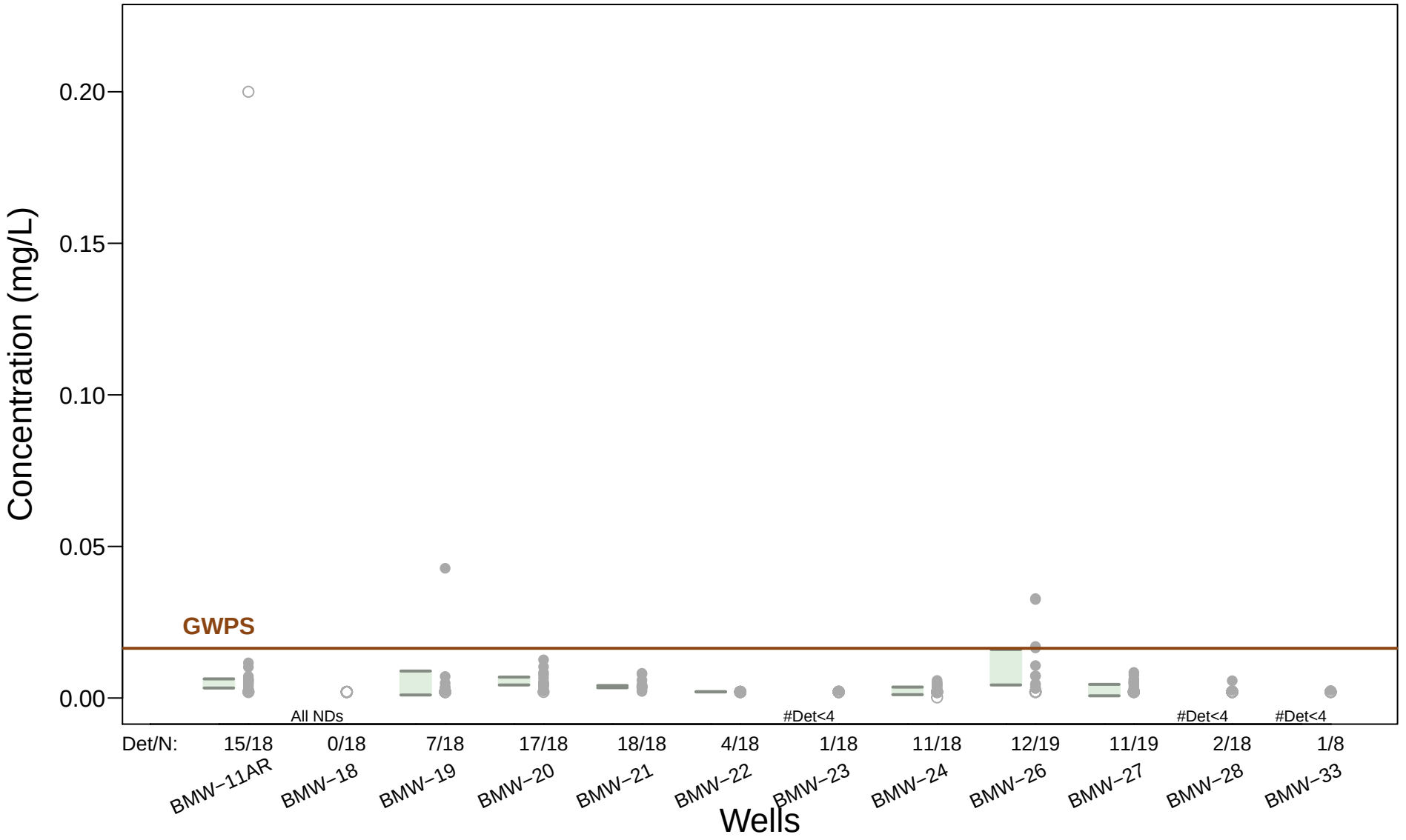
Non-detect sample result (concentration set to laboratory reporting limit)

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

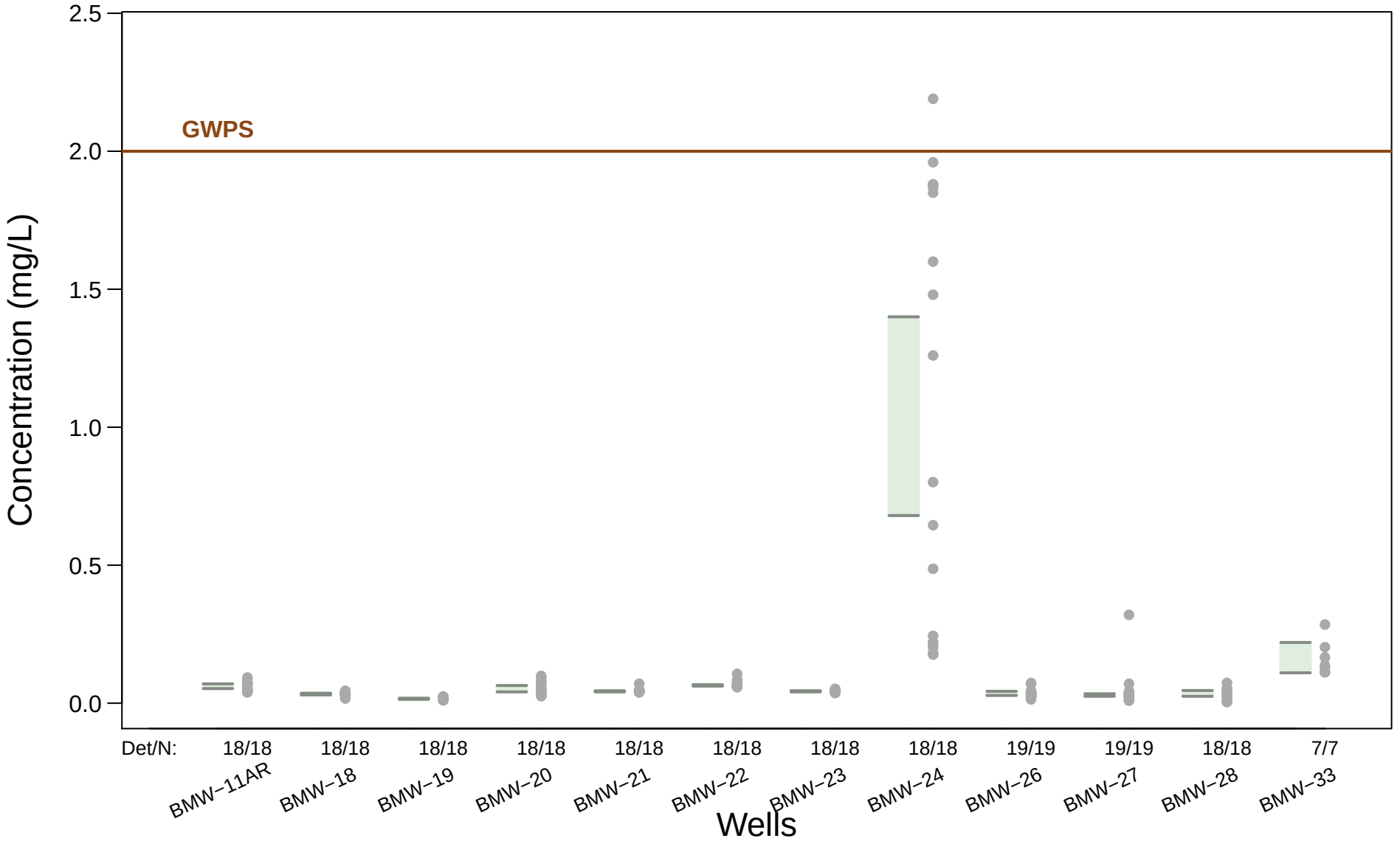
Antimony – 95% Confidence Intervals



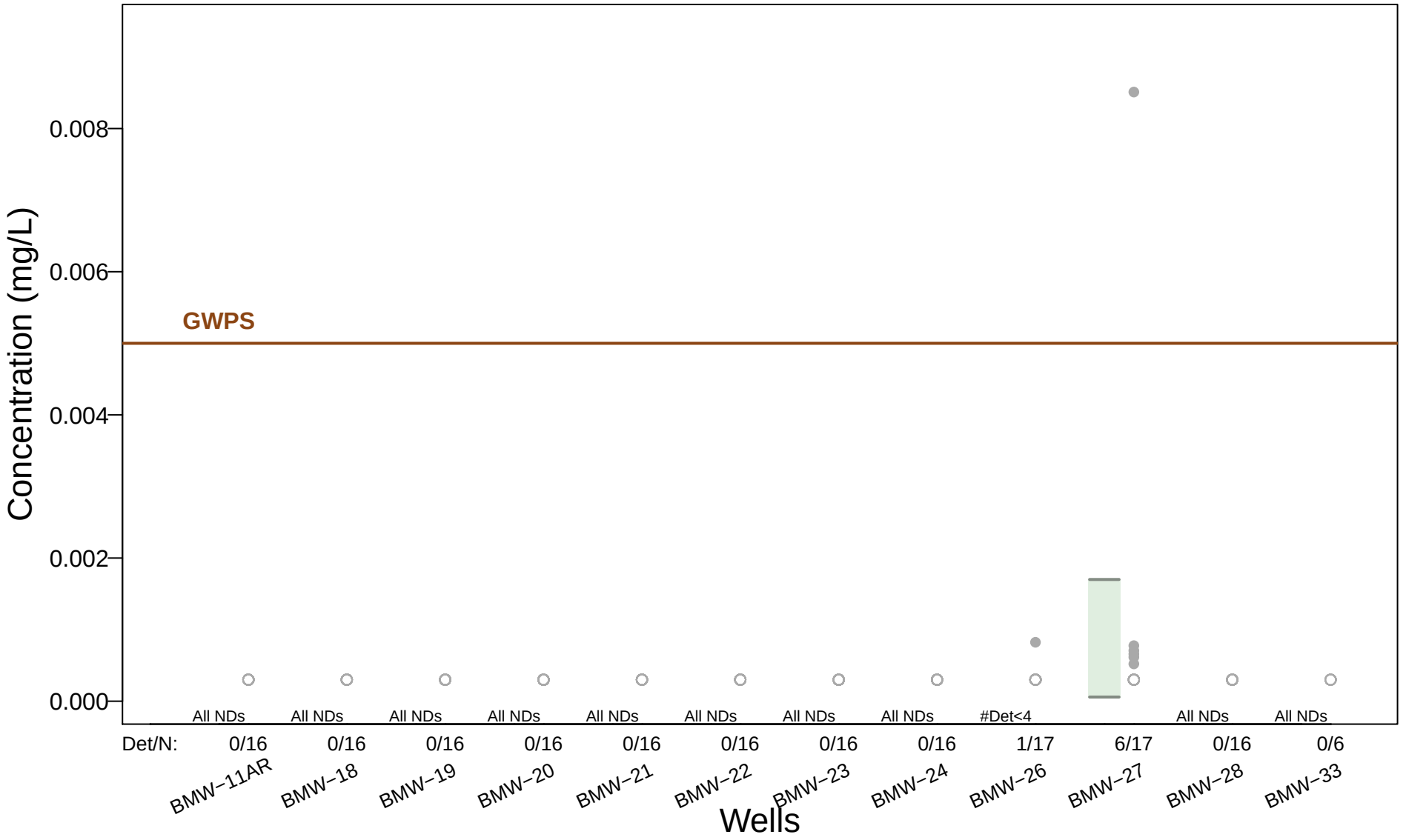
Arsenic − 95% Confidence Intervals



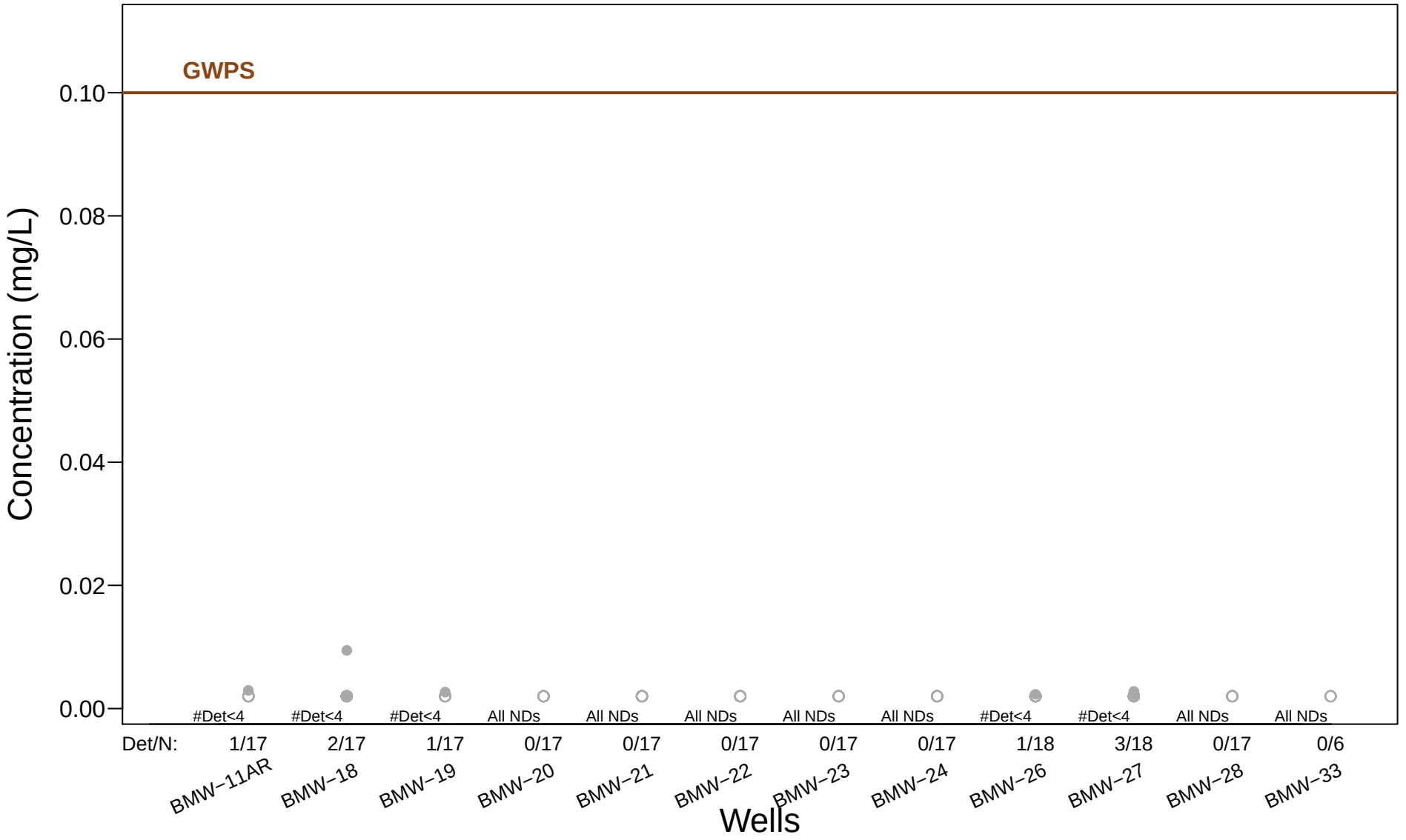
Barium – 95% Confidence Intervals



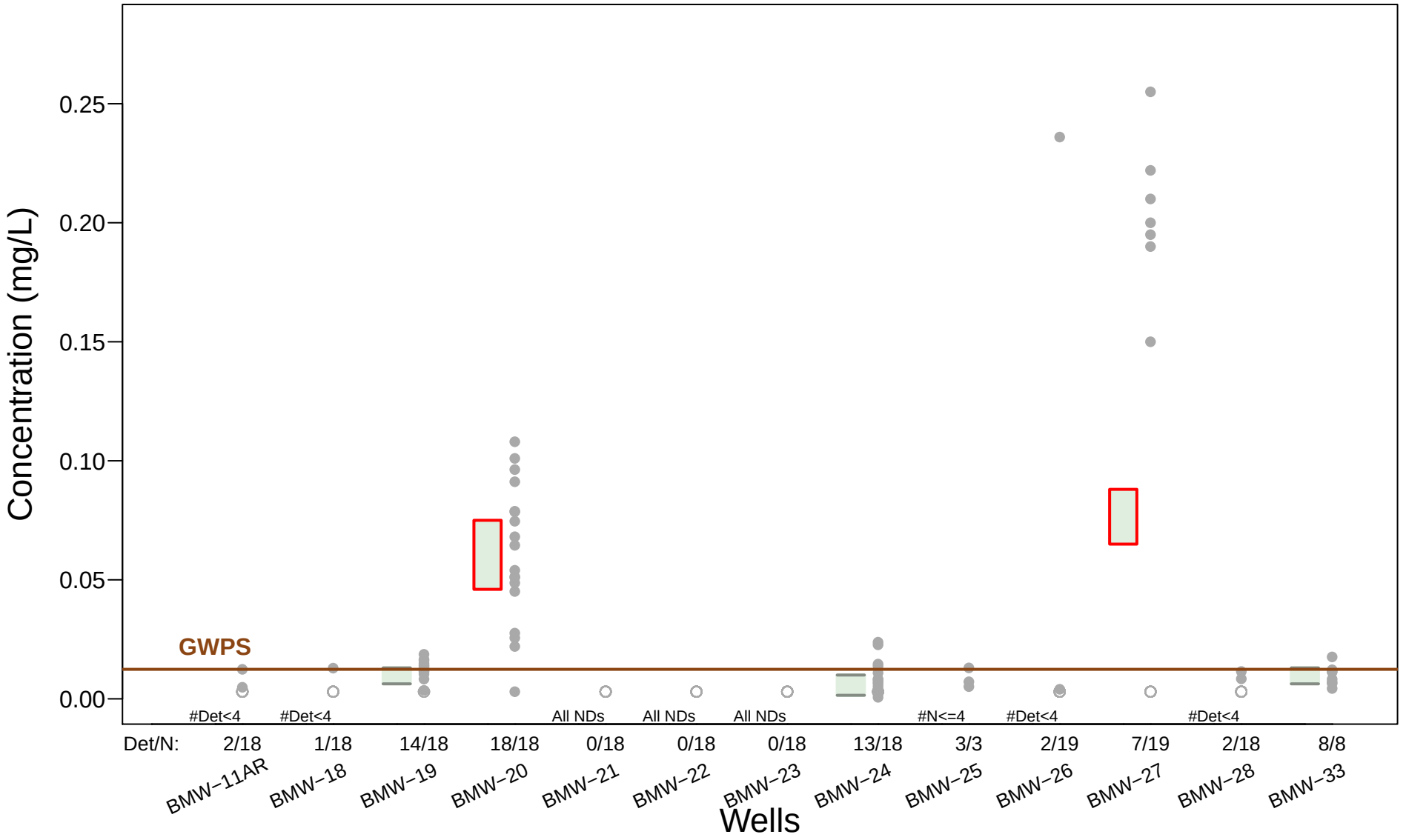
Cadmium – 95% Confidence Intervals



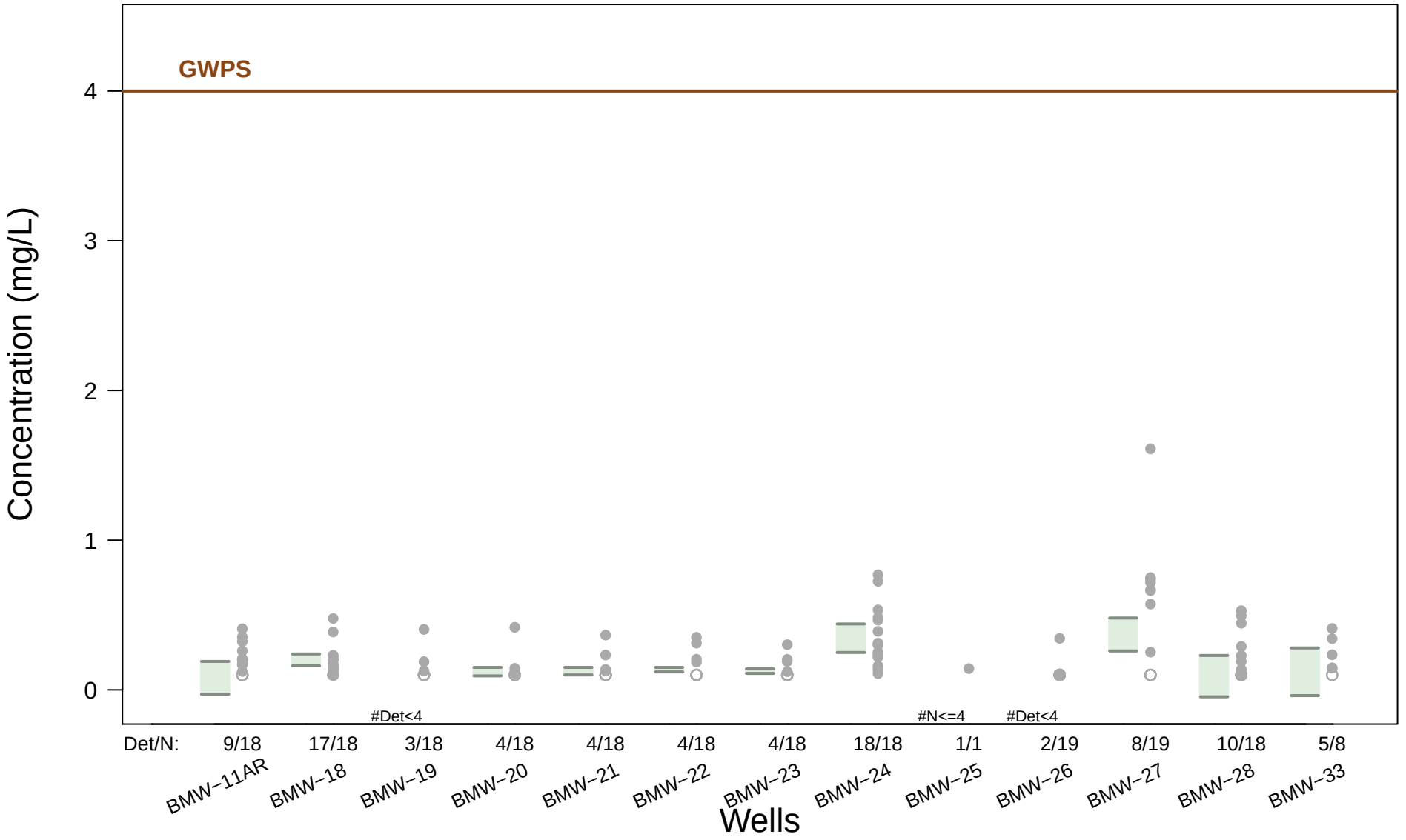
Chromium – 95% Confidence Intervals



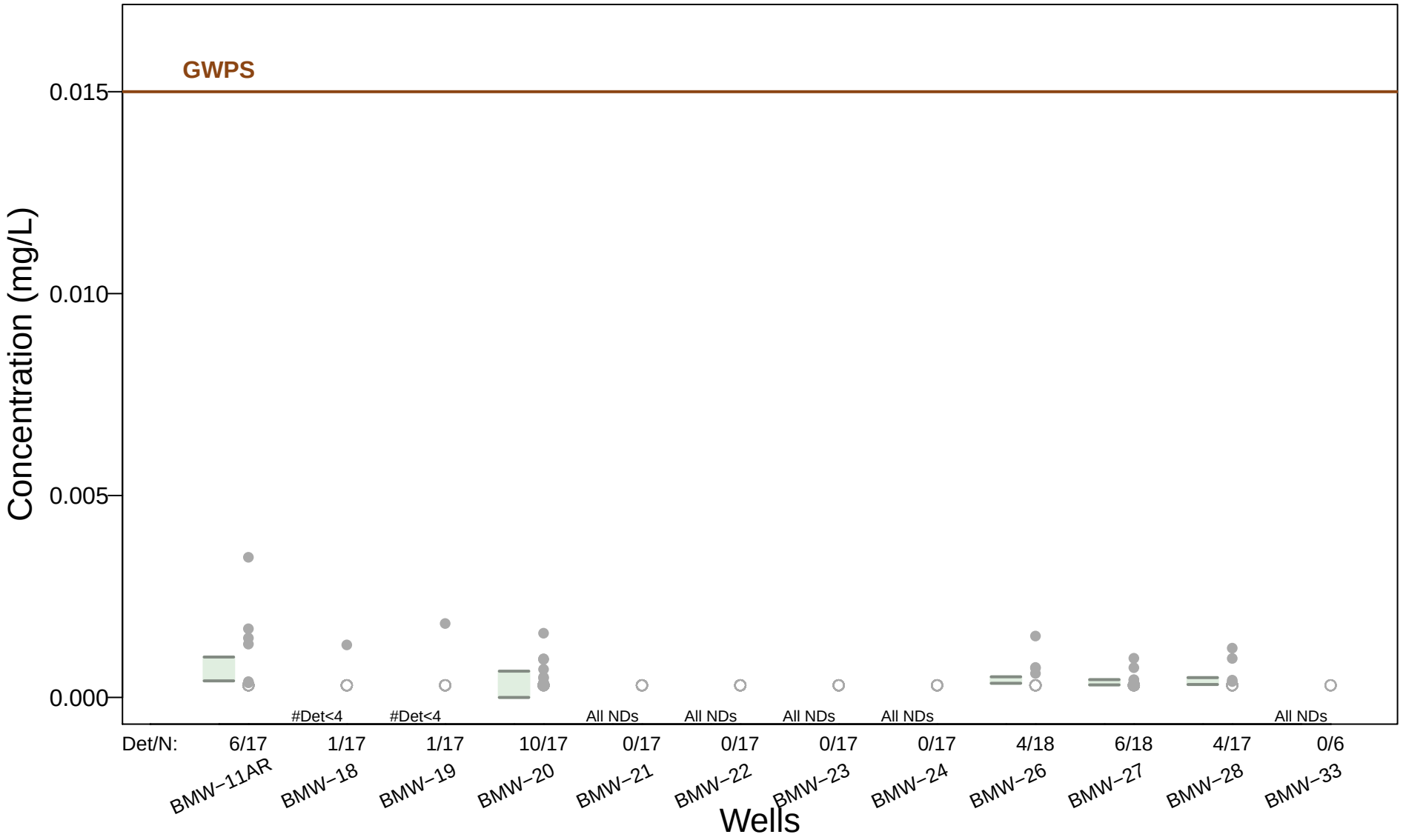
Cobalt – 95% Confidence Intervals



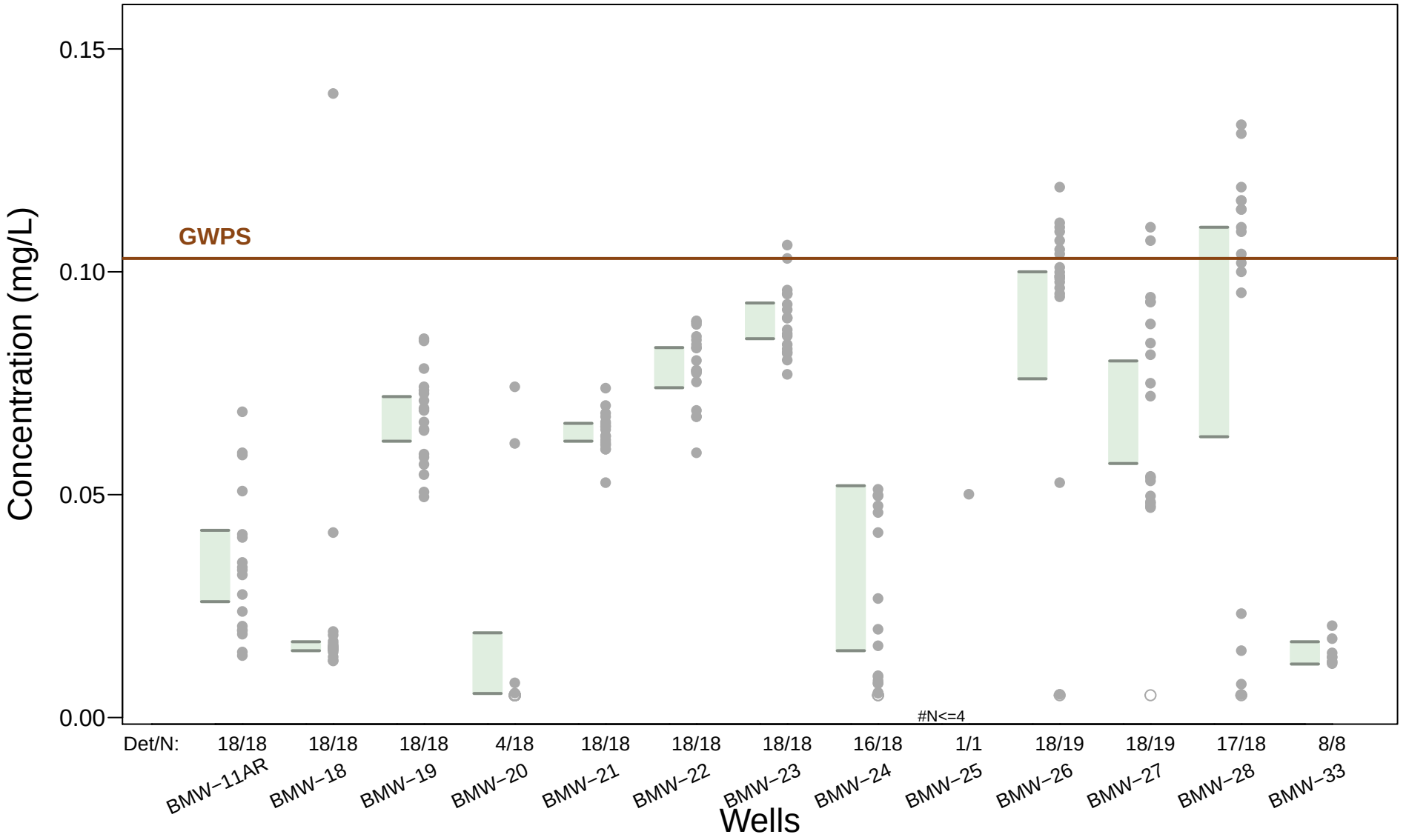
Fluoride (Appendix IV) – 95% Confidence Intervals



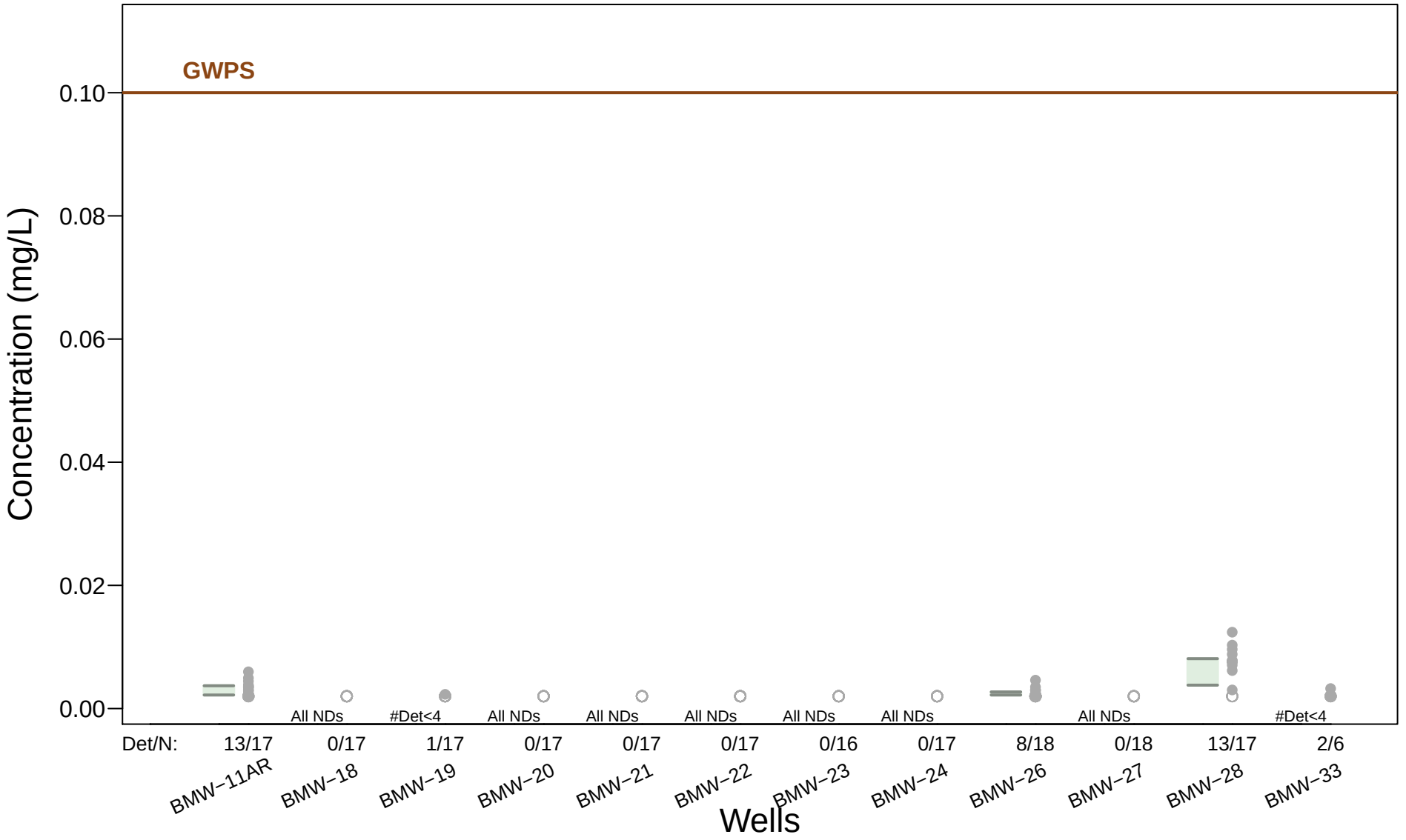
Lead – 95% Confidence Intervals



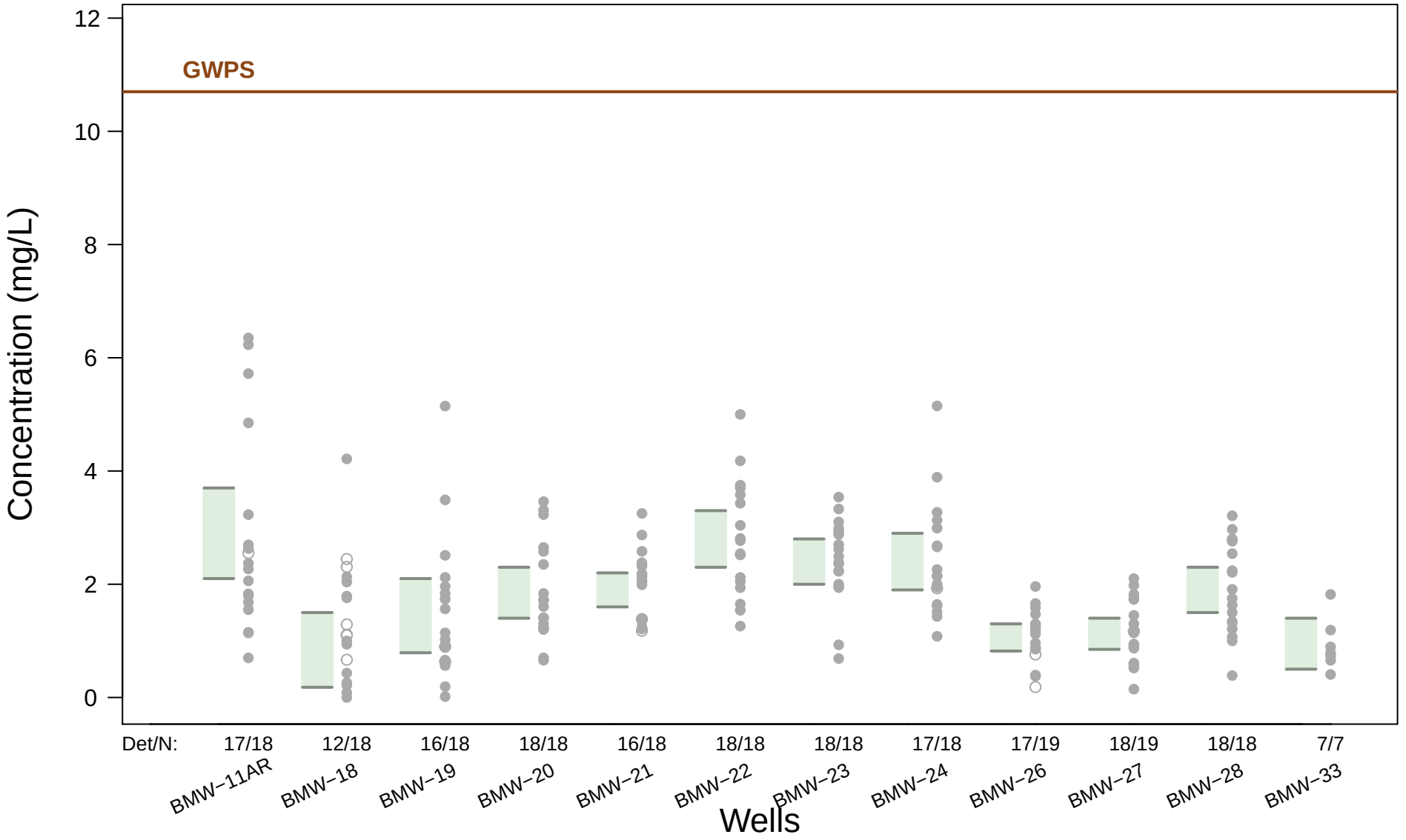
Lithium − 95% Confidence Intervals



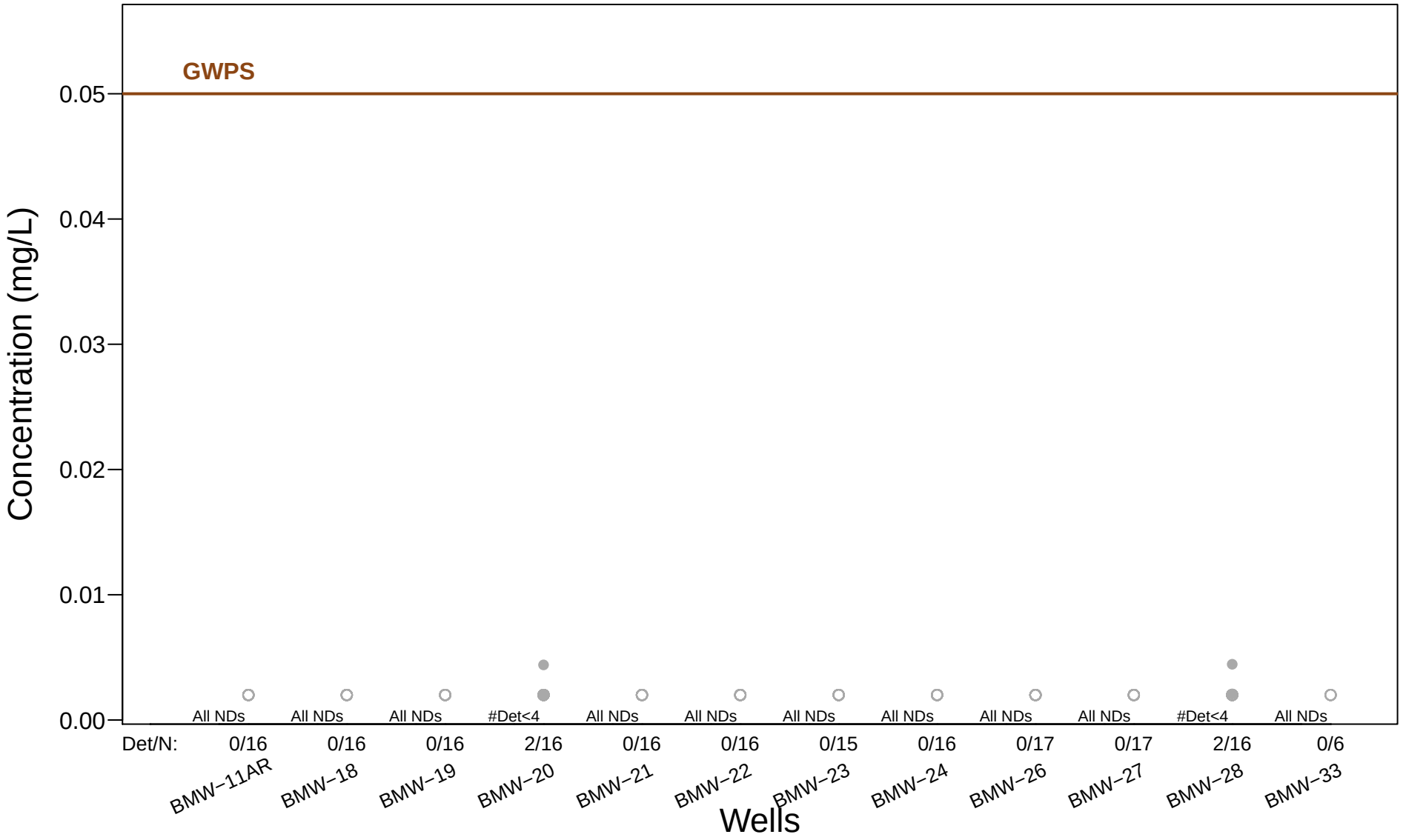
Molybdenum – 95% Confidence Intervals



Radium−226/228 combined − 95% Confidence Intervals

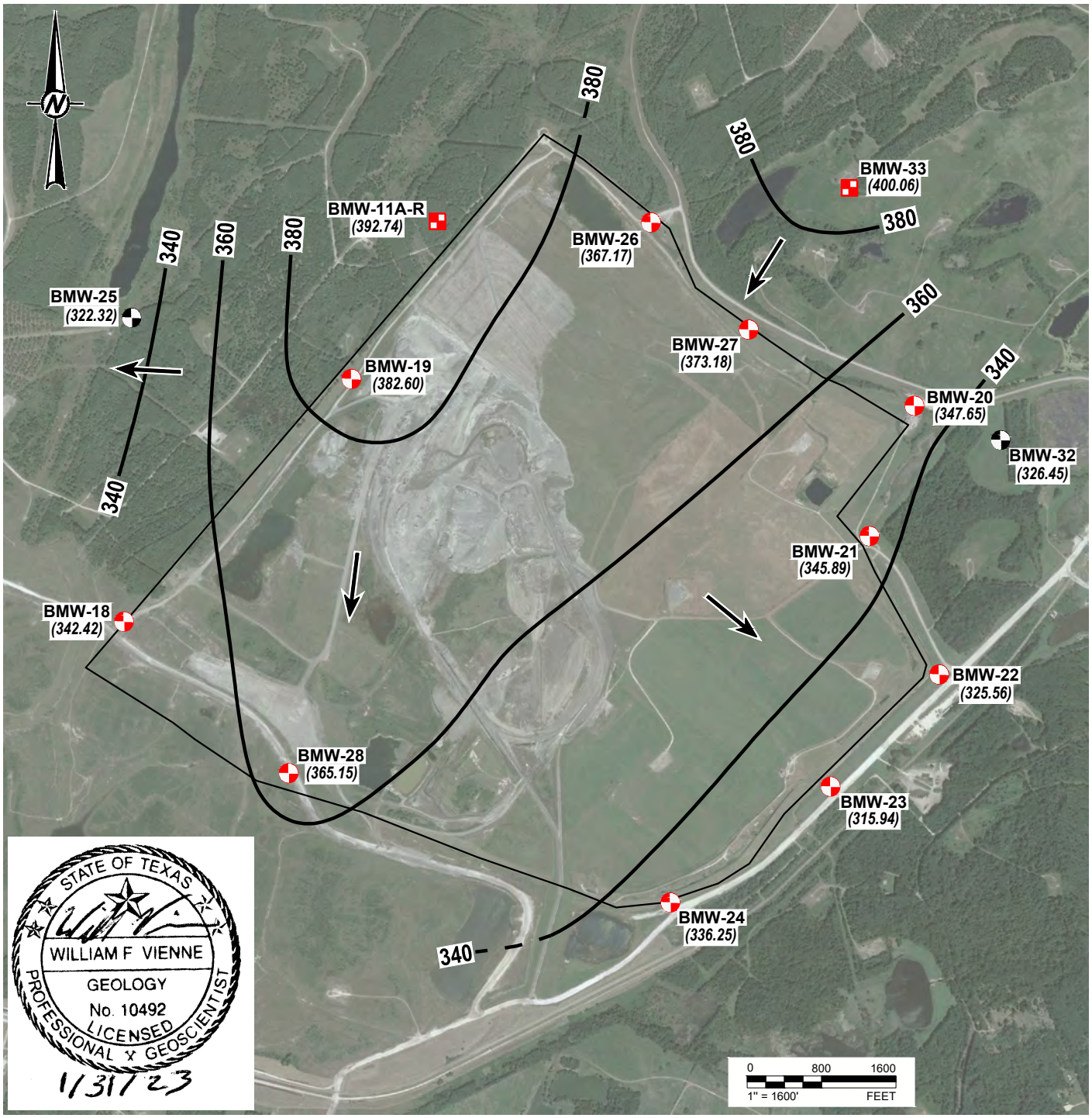


Selenium − 95% Confidence Intervals



ATTACHMENT 3

GROUNDWATER POTENTIOMETRIC SURFACE MAPS



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL
- CCR DELINEATION MONITORING WELL
- (358.02) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 360 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 20 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

CLIENT
LUMINANT

PROJECT
MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

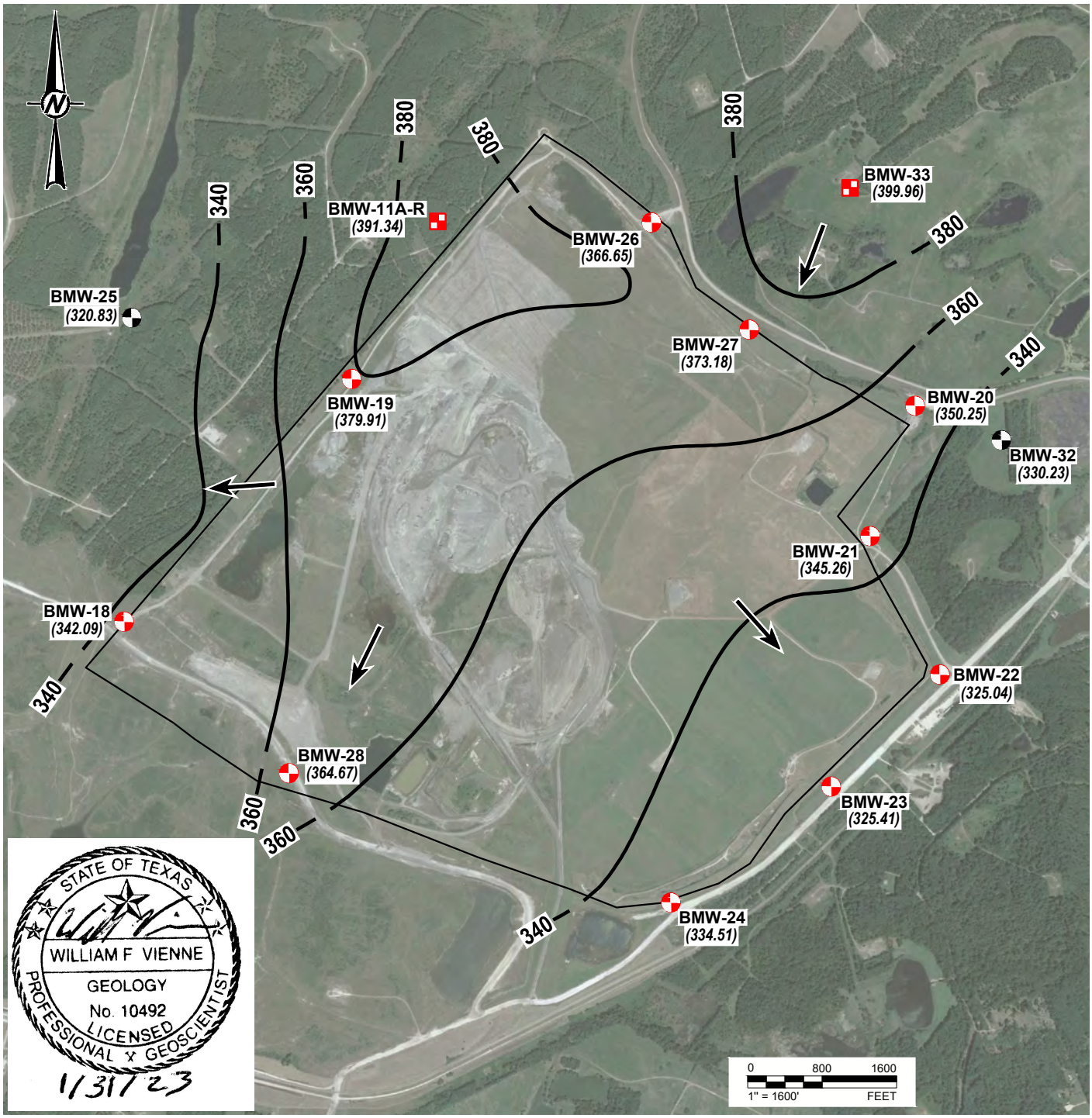
TITLE
A1 AREA LANDFILL
POTENTIOMETRIC SURFACE MAP
MAY 26, 2022

CONSULTANT

wsp

YYYY-MM-DD	2023-01-10
DESIGNED	AJD
PREPARED	AJD
REVIEWED	WFV
APPROVED	WFV

PROJECT NO. 31404097.002 | REV. 0 | FIGURE 1



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL
- CCR DELINEATION MONITORING WELL
- (358.02) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 360 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 20 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

CLIENT
LUMINANT

PROJECT
MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

TITLE
A1 AREA LANDFILL
POTENTIOMETRIC SURFACE MAP
SEPTEMBER 9, 2022

CONSULTANT

YYYY-MM-DD	2022-12-20
DESIGNED	TNB
PREPARED	TNB
REVIEWED	JJ
APPROVED	WFV

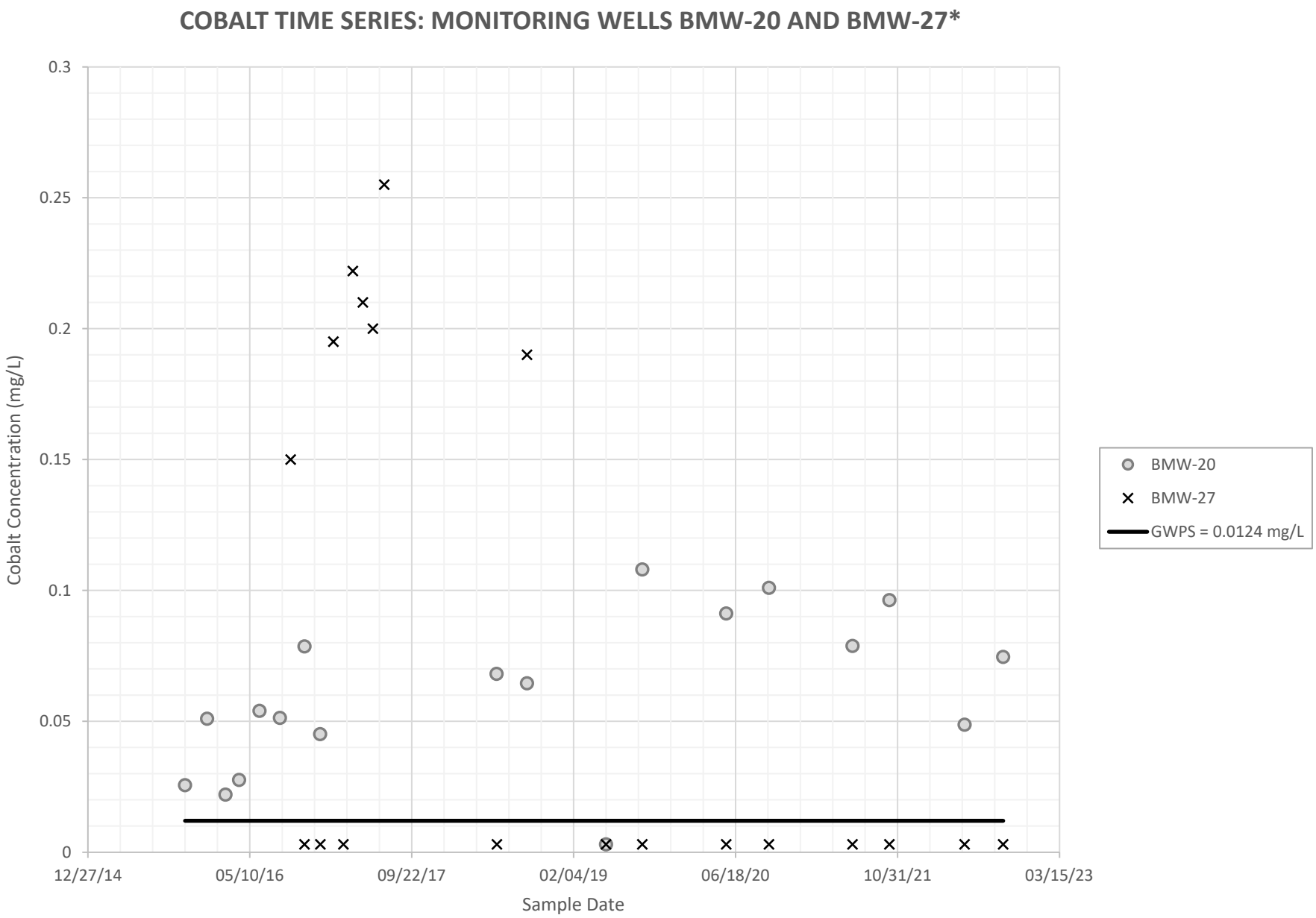
PROJECT NO.	REV.	FIGURE
31404097.002	0	2

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

0 1 in

ATTACHMENT 4

COBALT TIME SERIES PLOT



Notes:

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