

Bullock, Bennett & Associates, LLC

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### COAL COMBUSTION RESIDUAL RULE 2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

ASH LANDFILL 1 OAK GROVE STEAM ELECTRIC STATION ROBERTSON COUNTY, TEXAS

January 31, 2025

Prepared For:

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### TABLE OF CONTENTS

TABLE OF CONTENTS	ii
LIST OF FIGURES	ii
LIST OF TABLES	ii
LIST OF APPENDICES	ii
ACRONYMS AND ABBREVIATIONS	.iii
EXECUTIVE SUMMARY	.iv
1.0 INTRODUCTION	1
2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS	3
3.0 KEY ACTIONS COMPLETED IN 2024	5
4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS	6
5.0 KEY ACTIVITIES PLANNED FOR 2025	7
6.0 REFERENCES	8
SIGNATURE PAGE	9

### LIST OF FIGURES

Figure 1 Site Plan

### LIST OF TABLES

- Table 1
   Appendix III Statistical Background Values
- Table 2Appendix III Analytical Results
- Table 3
   Groundwater Elevation Summary

### LIST OF APPENDICES

- Appendix A 2024 Laboratory Analytical Reports
- Appendix B Alternate Source Demonstration Report for the 2023 Reporting Period
- Appendix C 2024 Groundwater Potentiometric Surface Maps

### ACRONYMS AND ABBREVIATIONS

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

#### **EXECUTIVE SUMMARY**

Bullock, Bennett & Associates, LLC (BBA) has prepared this report on behalf of Oak Grove Management Company LLC to satisfy the 2024 annual groundwater monitoring and corrective action reporting requirements of 40 C.F.R. Part 257 and 30 T.A.C. Chapter 352 for the Ash Landfill 1 (the "CCR unit") at the Oak Grove Steam Electric Station (OGSES) in Robertson County, Texas. The CCR unit and CCR monitoring well network are shown on Figure 1.

At the beginning and end of the 2024 reporting period, the CCR unit was operating under a Detection Monitoring Program as described in § 257.94. The Detection Monitoring Program for the Ash Landfill 1 was established in September 2017. Statistically significant increases (SSIs) above background prediction limits were identified for several Appendix III parameters as part of the 2018 through 2023 Detection Monitoring events; however, Alternate Source Demonstrations were completed which indicated that a source other than the CCR unit caused the SSIs. During 2024, SSIs above background prediction limits were identified for several Appendix III constituents, including for boron, calcium, sulfate, and total dissolved solids (TDS) in well MW-8R, sulfate in well MW-07, and calcium in well MW-09. Alternate sources for the SSIs identified in the 2024 sample data are being evaluated in accordance with § 257.94. If an alternate source is not identified to be the cause of the SSIs, an Assessment Monitoring Program will be established in accordance with § 257.94(e)(2).

#### 1.0 INTRODUCTION

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

- (1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;
- (2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
- (3) In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
- (4) A narrative discussion of any transition between monitoring programs (*e.g.*, the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over

background levels); and

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

- (6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:
  - At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;
  - (ii) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;
  - (iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):
    - (A) Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and
    - (B) Provide the date when the assessment monitoring program was initiated for the CCR unit.
  - (iv) If it was determined that there was a SSL above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:
    - (A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;
    - (B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;
    - (C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and
    - (D) Provide the date when the assessment of corrective measures was completed for the CCR unit.
  - (v) Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection; and
  - (vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

### 2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

The Ash Landfill 1 is currently in a Detection Monitoring Program. The initial Detection Monitoring Program groundwater samples were collected from the Ash Landfill 1 CCR monitoring well network in October 2017. Subsequent Detection Monitoring Program groundwater samples have been collected on a semi-annual basis. Data evaluation is completed using procedures described in the Statistical Analysis Plan (Golder, 2022) and CCR Background Groundwater Monitoring and Statistical Analysis Report (BBA, 2023) to identify SSIs of Appendix III parameters over background concentrations. The Detection Monitoring Program sampling dates and parameters are summarized in the following table:

Sampling Dates	Parameters	SSIs	Assessment Monitoring Program Established
October 2017	Appendix III	No	No
June 2018 September 2018 November 2018 (re- samples)	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2019 August 2019	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2020 September 2020	Appendix III	Yes	No (Alternate Source Demonstration Completed)
June 2021 October 2021	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2022 September 2022	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2023 August 2023	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2024 August 2024	Appendix III	Yes	To Be Determined (Alternate Source Currently Being Assessed)

**Detection Monitoring Program Summary** 

The statistical background values and Appendix III analytical data are presented in Tables 1 and 2, respectively, and the 2024 laboratory analytical reports are provided in Appendix A. SSIs of Appendix III parameters were identified during the 2018 through 2023 sampling events. An

initial Alternate Source Demonstration was completed in 2019, which indicated that a source other than the CCR unit caused SSIs observed in the 2018 sample data. Similarly, Alternate Source Demonstrations were completed each year for the 2019 to 2023 reporting periods. As a result, Ash Landfill 1 has remained in the Detection Monitoring Program. The Alternate Source Demonstration based on the 2023 sample data is presented in Appendix B, as required by § 257.94(e)(2). The completed Alternate Source Demonstration for the 2023 reporting period was submitted to the executive director via email on March 7, 2024, as required under 30 T.A.C. § 352.941(c)(2)

Detection Monitoring Program groundwater samples were collected from the CCR groundwater monitoring network on a semi-annual basis in 2024, as required by the CCR Rule. The first 2024 semi-annual Detection Monitoring Program sampling event was conducted in May 2024. The second 2024 semi-annual Detection Monitoring Program sampling event was conducted in August 2024. A resample for boron in well MW-8R was additionally collected in October 2024. The analytical data from the 2024 Detection Monitoring Program sampling events were evaluated using procedures described in the Statistical Analysis Plan to identify SSIs of Appendix III parameters over background concentrations. During 2024, SSIs above background prediction limits were identified for several Appendix III constituents, including for boron, calcium, sulfate, and TDS in well MW-8R, sulfate in well MW-07, and calcium in well MW-09. Alternate sources for the SSIs identified in the 2024 sample data are being evaluated in accordance with § 257.94. If an alternate source is not identified to be the cause of the SSIs, an Assessment Monitoring Program will be established in accordance with § 257.94(e)(2). A notification of the intent to make an Alternate Source Demonstration under 30 TAC § 352.941(c)(1) for SSIs observed in the 2024 sample data was submitted to the executive director via email on November 25, 2024.

#### 3.0 KEY ACTIONS COMPLETED IN 2024

Two semi-annual Assessment Monitoring Program groundwater monitoring events and one resampling event were performed in 2024. The number of groundwater samples that were collected for analysis from each background and downgradient well, the dates the samples were collected, and the analytical results for the groundwater samples are summarized in Table 2.

Water elevations measured in the CCR wells during the semi-annual groundwater monitoring events are summarized in Table 3 and groundwater potentiometric surface maps based on the 2024 data are presented in Appendix C. The inferred direction and magnitude of groundwater flow during the semi-annual monitoring events was generally to the east-northeast at about 16 feet per year, which is similar to previously observed conditions at the site.

No CCR wells were installed or decommissioned in 2024.

### 4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the CCR groundwater monitoring program in 2024.

### 5.0 KEY ACTIVITIES PLANNED FOR 2025

The following key activities are planned for 2025:

- Continue the Detection Monitoring Program in accordance with applicable provisions of § 257.95 and 30 T.A.C. § 352.941.
- If an alternate source is identified to be the cause of the SSIs observed in 2024, which are described in this report, a written demonstration will be completed within 90 days of SSI determination and included in the following Annual Groundwater Monitoring and Corrective Action Report. A notification of intent to make an Alternate Source Demonstration under 30 TAC § 352.941(c)(1) for SSIs observed in 2024 was submitted to the executive director via email on November 25, 2024.
- If an alternate source is not identified to be the cause of the SSIs, an Assessment Monitoring Program will be established.

#### 6.0 **REFERENCES**

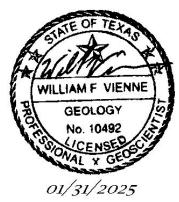
- Bullock, Bennett & Associates, LLC (BBA), 2023. CCR Rule Background Groundwater Monitoring and Statistical Analysis Summary Report, Ash Landfill 1, Oak Grove Steam Electric Station, Robertson County, Texas.
- Golder, 2022. Coal Combustion Residual Rule Statistical Analysis Plan Revision No. 1, Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas.

### SIGNATURE PAGE

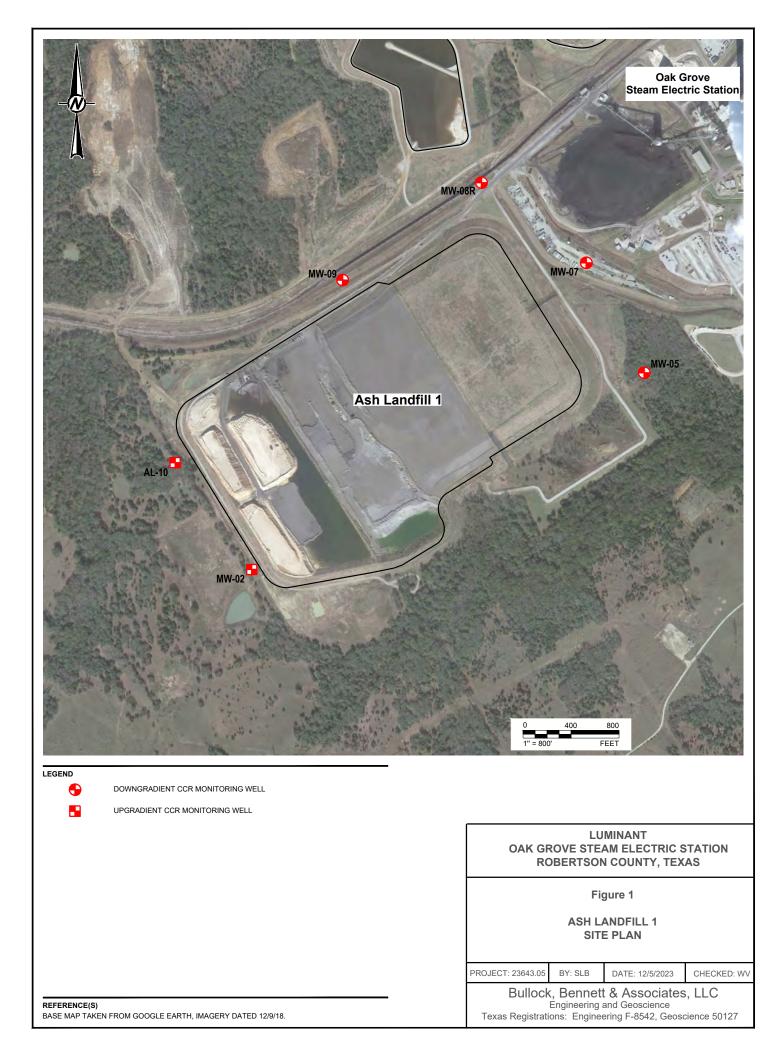
Bullock, Bennett & Associates, LLC

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William Vienne, P.G. Senior Hydrogeologist



FIGURES



TABLES

### Table 1 Statistical Background Value OGSES Ash Landfill 1

	Statistical Background
Parameter	Value
Boron (mg/L)	0.1
Calcium (mg/L)	81
Chloride (mg/L)	440
Fluoride (mg/L)	0.59
field pH (e.u.)	.3
field pH (s.u.)	7.0
Sulfate (mg/L)	190
Total Dissolved Solids (mg/L)	900

Source: BBA (2023)

### TABLE 2 APPENDIX III ANALYTICAL RESULTS OGSES ASH LANDFILL 1

Sample	Date	В	Са	CI	F	рН	SO <sub>4</sub>	TDS
Location	Sampled	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)	(mg/L)
Upgradient Wells		(	(	(	(	(0101)	( <u>g</u> , _/	(
AL-10	11/04/15	0.0682	34.5	149	0.149 J	6.86	72.6	590
	12/18/15	0.0539	37.5	81	0.15 J	6.45	20.6	414
-	02/10/16	0.0637	48.6	108	0.197 J	6.75	34.9	599
	04/15/16	0.0573	44.8	86	0.133	6.51	23.6	549
	06/16/16	0.0915	34.7	66.7	0.155 J	6.44	23.5	436
	08/25/16	0.105	87.5	444	<0.1	6.61	96.3	1120
	10/04/16	0.0756	35.1	57.3	0.278 J	6.92	20.1	507
	12/22/16	0.0759	32.5	57.2	0.195 J	6.78	21.5	527
	10/02/17	0.0973	27	50.6	0.120 J	6.85	12.2	398
	06/04/18	0.0875	21.9	62.1	0.183 J	6.67	11.6	362
	09/06/18	0.113	21.9	56.7	0.260 J	6.66	11.8	371
	05/17/19	0.114	16.8	67.9	0.262 J	6.64	12.4	340
	08/20/19	0.115	18.8	66.2	0.363 J	6.87	11.8	333
	05/07/20	0.128	18.8	52.2	<0.100	6.78	11.1	317
	09/09/20	0.139	16.8	49.2	0.208 J	6.86	10.6	301
	06/16/21	0.107	15.2	41.9	0.27 J	6.82	9.92	267
	10/12/21	0.0878	15.1	51.4	<0.1	6.82	9.84	269
	05/11/22	0.0894	11.8	39.9	0.217 J	6.63	8.47	251
	09/26/22	0.107	10.5	34.7	0.180 J	6.69	9.47	234
	05/25/23	0.0880	8.70	24.0	0.165 J	6.65	8.29	225
	08/17/23	0.122	9.13	23.3	0.2	6.54	8.25	232
	05/21/24	0.0784	11.9	17.6	0.197 J	6.58	9.29	196
	08/14/24	0.0606	26.8	9.21	<0.100	6.58	76.8	206
MW-02	11/04/15	0.064	32.5	138	0.135 J	6.92	71.4	539
	12/18/15	0.0476	29	61.7	0.118 J	6.83	15.9	308
_	02/10/16	0.0853	25.4	83.5	0.229 J	6.63	34	320
	04/15/16	0.0597	39.6	68	0.102	6.51	18.1	440
	06/16/16	0.106	26.5	87.8	0.161 J	6.89	34.8	343
-	08/25/16	0.0492	12.9	21.9	0.164 J	6.58	22.4	163
-	10/04/16	0.113	61.4	222	0.185 J	6.69	97.4	667
-	12/21/16	0.11	47.8	185	0.293 J	6.78	83.4	590
-	<u>10/02/17</u> 06/04/18	0.0567 0.144	22.2 82.4	42.4 275	<0.100 0.139 J	6.68 6.28	9.67 121	310 740
-	09/06/18	0.144	70.9	275	0.139 J 0.221 J	6.02	121	872
-	05/17/19	0.0981	20	67.6	0.221 J 0.321 J	6.63	31.1	306
-	08/20/19	0.0875	19.9	53.8	0.558	6.59	20.1	260
-	05/07/20	0.0996	11.5	2.87	<0.100	6.63	6.14	106
	09/09/20	0.166	55.6	210	0.287 J	6.76	99.2	592
	06/16/21	0.0756	48	164	0.977	6.62	35.9	646
	10/12/21	0.0848	23.8	56.6	0.36	6.62	20.7	245
	05/11/22	0.110	47.6	152	0.179	6.63	62.3	504
	09/26/22	0.126	66.4	298	0.128 J	6.52	131	755
l F	05/25/23	0.114	53.3	193	0.106	6.82	77.7	571
l F	08/17/23	0.0833	22.8	59.4	0.356	6.54	20.3	233
	05/21/24	0.117	29.1	83.6	0.207 J	6.58	36.4	335
	08/14/24	0.0973	22.9	54.6	0.115 J	6.43	22.7	243

### TABLE 2 APPENDIX III ANALYTICAL RESULTS OGSES ASH LANDFILL 1

Sample	Date	В	Са	CI	F	рН	SO <sub>4</sub>	TDS
Location	Sampled	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)	(mg/L)
Downgradient	Wells							
MW-05	11/04/15	0.0628	15.4	64.8	0.272 J	7.11	13.6	285
	12/18/15	0.0621	13	60.2	0.476	6.52	10.5	232
	02/10/16	0.0447	14	59.7	0.397 J	6.67	11.9	235
	04/15/16	0.0458	14.3	55.4	0.284	6.42	10.7	288
	06/15/16 08/24/16	0.058 0.0877	14.2 13.1	60.4 63	0.306 J 0.262 J	6.61 6.75	11.8 11.8	269 287
	10/04/16	0.059	15.1	57.9	0.262 J 0.477	6.87	10.9	253
	12/22/16	0.039	61.4	264	0.446	6.63	55.6	778
	10/02/17	0.0665	17.5	58.6	0.295 J	6.89	10.4	246
	06/05/18	0.0739	16.8	60	0.391 J	6.43	12.1	253
	09/07/18	0.077	15.8	63.3	0.392 J	6.11	10.6	249
	05/17/19	0.0686	13.5	66.4	0.462	6.57	11.2	257
	08/20/19	0.079	16	66.7	0.514	6.78	10.8	263
	05/07/20	0.0985	18	71.8	0.344 J	6.68	10.6	264
	09/09/20	0.201	20.5	79.8	0.372 J	6.81	66.5	407
	06/16/21	0.0753	17.7	77.7	0.415	6.69	10	255
	10/12/21 10/12/21 (DUP-1)	0.0615	20.9 20.9	83.6 85.5	0.433 0.425	6.52 6.52	11.7 12.1	282 272
	05/12/22	0.0703	20.9	80.9	0.425	6.74	12.1	285
	09/26/22	0.0768	19.8	87.8	0.383 J	6.73	12	290
	05/25/23	0.0642	19.8	93.3	0.353 J	6.73	11.9	310
	08/17/23	0.0675	20.9	104	0.39	6.61	12.1	300
	05/22/24	0.076	16.9	92.3	0.341 J	6.72	12.9	292
	08/15/24	0.068	22.4	106	0.252 J	6.78	12.7	327
MW-07	11/03/15	0.0483	8.57	20.2	0.289 J	6.42	11.5	276
	12/17/15	0.0539	8.75	17.7	0.319 J	6.86	14.7	243
	02/09/16	0.0547	13.3	28.9	0.276 J	7.18	25.3	283
	04/15/16	0.0567	10	20.9	0.187	6.71	16	341
	06/15/16 08/24/16	0.0639 0.0691	10.5 9.58	22.9 20.4	0.226 J 0.159 J	6.75 6.89	23.2 21.8	294 290
	10/04/16	0.0549	10.3	15.6	0.139 J 0.277 J	6.82	17.1	256
	12/22/16	0.054	12.5	22.9	0.229 J	6.3	34.7	262
	10/02/17	0.0733	13.9	15.8	0.178 J	6.59	38.4	298
	06/05/18	0.105	17.5	15.7	0.169 J	5.98	61.1	316
	09/07/18	0.151	19.7	21.5	0.250 J	6.18	80.3	357
	11/6/18 resample	0.154						
	05/17/19	0.132	17.1	20.2	0.244 J	6.83	84.1	355
	08/19/19	0.215	22.8	19.7	0.367 J	6.77	100	385
	05/07/20 09/09/20	0.302	29.7 26.9	22.4 24.7	0.234 J 0.302 J	6.84 6.58	123 121	432 413
	06/16/21	0.297	20.9	26.2	0.302 J 0.378 J	6.84	108	413
	6/16/21 (DUP-1)	0.177	25.5	26.6	0.378 J	6.84	110	399
	10/13/21	0.181	31.6	29.6	< 0.353	6.85	130	422
	05/12/22	0.297	34.6	31.4	0.208 J	6.75	144	484
	05/12/22 (DUP-1)	0.315	34.5	31.6	0.209 J	6.75	144	481
	09/26/22	0.282	35.8	33.9	0.143	6.41	150	499
	05/25/23	0.244	34.6	31.8	0.100 J	6.64	149	489
	5/25/23 (DUP-1)	0.243	33.9	31.4	0.106	6.64	147	482
	08/17/23 8/17/23 (DUP-1)	0.205	37.1 38.1	35.2 35.5	0.144 0.148 J	6.62 6.62	162 162	535 535
	05/22/24	0.220	39.9	35.5	0.146 J 0.174 J	6.64	203	535
	5/22/24 (DUP-1)	0.135	41.6	33	0.174 J	6.64	203	531
	08/15/24	0.120	42	34.1	0.115 J	6.58	216	579
	8/15/2024 DUP	0.111	41.7	34.3	0.111	6.58	215	582
MW-08	11/04/15	0.0631	120	599	0.17 J	6.81	138	2070
	12/18/15	0.0604	70.4	488	0.158 J	6.78	49.8	1140
	02/09/16	0.0695	140	612	0.175 J	6.42	170	1530
	04/15/16	0.0726	133	566	<0.1	6.61	139	1680
	06/16/16	0.0677	76.6	520	<0.1	6.76	83.6	1090
	Aug 2016			V	/ell Damage	bd		

### TABLE 2 **APPENDIX III ANALYTICAL RESULTS** OGSES ASH LANDFILL 1

Sample	Date	В	Са	CI	F	рН	SO <sub>4</sub>	TDS
Location	Sampled	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)	(mg/L)
MW-08R	12/22/16	0.0702	32.4	166	0.355 J	6.93	39.7	617
	03/21/17	0.0662	117	563	0.2 J	5.83	98.3	1220
	04/20/17	0.0696	115	560	0.149 J	5.91	94.9	1190
	10/02/17	0.061	13.1	14.4	<0.100	6.63	28.7	243
	06/05/18	0.082	18.9	53.9	0.138 J	6.37	9.66	302
	09/07/18	0.0921	106	504	0.242 J	5.84	96.9	1550
	11/6/2018 resample		15.7	19				268
	05/17/19	0.102	16.7	69.8	0.269 J	6.54	12.4	326
	08/20/19	0.096	24.9	48	0.501	6.84	30.7	255
	05/07/20	0.122	19	51.8	0.117 J	6.83	11.1	320
	09/09/20	0.0977	15.8	55.5	0.344 J	6.68	19.0	256
	06/16/21	0.116	15.3	43.5	0.263 J	6.76	9.26	266
	10/12/21	0.107	32.8	268	<0.1	6.76	136	874
	05/11/22	0.0648	43.8	111	0.979	6.89	27.3	563
	09/26/22	0.104	10.6	30.1	0.154	6.52	7.24	193
	05/25/23	0.0992	55.1	133	<0.100	6.82	102	494
	08/17/23	0.0916	11.1	15.2	0.135	6.5	34.5	231
	05/22/24	0.517	124	120	0.210 J	6.42	591	1430
	08/15/24	0.603	124	142	<0.100	6.63	521	1260
	10/23/24 resample	0.521						
MW-09	11/03/15	0.0722	36.4	155	0.149 J	6.45	74.9	583
	12/18/15	0.077	40.3	157	0.266 J	6.48	83.1	528
	02/09/16	0.072	38.4	158	0.152 J	6.16	80	445
	04/15/16	0.0734	42.2	151	<0.1	6.41	80.9	568
	06/15/16	0.0778	43.1	174	<0.1	6.52	98.7	574
	08/25/16	0.0829	45.6	195	<0.1	6.76	116	715
	10/04/16	0.0803	47.8	179	0.256 J	6.64	108	648
	12/22/16	0.0776	42.6	290	0.159 J	6.87	116	791
	10/02/17	0.106	58.2	140	<0.100	6.76	95.3	433
	06/04/18	0.091	21.7	6.48	0.162 J	6.28	6.08	135
	09/06/18	0.0999	49.8	186	0.134 J	5.61	104	704
	11/6/2018 resample						58.6	
	05/17/19	0.12	17.2	366	0.541	6.72	53.2	935
	08/20/19	0.117	26	61.2	0.359 J	6.96	22.3	331
	05/07/20	0.0988	20.2	45.1	0.234 J	6.68	17.3	212
	09/09/20	0.123	48.5	156	0.152 J	6.72	99.6	468
	06/16/21	0.0682	16.3	4.18	< 0.100	6.84	8.19	127
	10/12/21	0.0821	20.7	29.9	< 0.100	6.84	31.2	223
	05/12/22	0.111	67.9	195	0.124 J	6.57	119	582
	09/26/22	0.132	63.9	155	<0.100	6.79	108	482
	05/25/23	0.124	58.7	146	0.112 J	6.89	122	591
	08/17/23	0.136	59.8	195	0.177 J	6.58	122	633
	05/22/24	0.478	98.7	110	0.205 J	6.74	516	1270
	08/15/24	0.113	90.3	188	<0.100	6.82	96.9	518

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

	TOC Elevation	Date	Depth to Water	Water Level Elevation
Well ID	(feet amsl)	Measured	(feet btoc)	(feet amsl)
FGD Pond Area		Measureu		(leet allisi)
FGD-1	424.44	11/03/15	14.27	410.17
100-1	424.44	12/17/15	14.22	410.22
	-	02/09/16	13.89	410.55
		04/14/16	13.79	410.65
		06/14/16	13.54	410.90
	-	08/24/16	13.37	411.07
		10/04/16	13.28	411.16
	-	12/19/16	13.25	411.19
		10/03/17	13.64	410.80
		06/04/18	12.96	411.48
		12/17/18	12.57	411.87
		12/26/19	11.82	412.62
		05/06/20	11.59	412.85
		09/09/20	12.12	412.32
		06/16/21	10.11	414.33
		10/11/21	10.82	413.62
		05/10/22	11.13	413.31
		09/26/22	11.63	412.81
		05/25/23	11.28	413.16
		08/21/23	11.91	412.53
		05/20/24	10.31	414.13
		08/14/24	10.03	414.41
FGD-2	439.36	11/03/15	29.31	410.05
		12/17/15	29.39	409.97
		02/09/16	29.03	410.33
		04/14/16	28.89	410.47
		06/14/16	28.21	411.15
		08/24/16	28.22	411.14
		10/04/16	28.06	411.30
		12/19/16	28.50	410.86
		10/03/17	28.56	410.80
		06/04/18	28.58	410.78
		12/17/18	28.02	411.34
		12/26/19	27.41	411.95
		05/06/20	26.98	412.38
		09/09/20	27.49	411.87
		06/16/21	25.58	413.78
		10/11/21	25.72	413.64
		05/10/22	26.76	412.60
		09/26/22	27.12	412.24
		05/25/23	27.17	412.19
		08/21/23	27.73	411.63
		05/20/24	26.09	413.27
		08/14/24	25.53	413.83

	1			Water Level
Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Elevation (feet amsl)
FGD-3	434.90	11/03/15	24.76	410.14
		12/17/15	24.33	410.57
		02/09/16	24.08	410.82
		04/14/16	24.11	410.79
		06/14/16	23.21	411.69
		08/24/16	23.74	411.16
		10/04/16	23.39	411.51
		12/19/16	23.69	411.21
		10/03/17	23.97	410.93
		06/04/18	23.89	411.01
		12/17/18	23.21	411.69
		12/26/19	22.87	412.03
		05/06/20	22.64	412.26
		09/09/20	22.83	412.07
		06/16/21	20.86	414.04
		10/11/21	21.72	413.18
		05/10/22	22.51	412.39
		09/26/22	23.11	411.79
		05/25/23	26.58	408.32
		08/21/23	23.33	411.57
		05/20/24	21.41	413.49
		08/14/24	18.91	415.99
FGD-4	432.03	11/03/15	21.84	410.19
		12/17/15	21.89	410.14
		02/09/16	21.31	410.72
		04/14/16	21.21	410.82
		06/14/16	20.47	411.56
		08/24/16	20.99	411.04
		10/04/16	20.79	411.24
		12/19/16	21.02	411.01
		10/03/17	21.09	410.94
		06/04/18	20.91	411.12
		12/17/18	20.52	411.51
		12/26/19	19.82	412.21
		05/06/20	19.78	412.25
	Γ	09/09/20	20.04	411.99
		06/16/21	17.87	414.16
		10/11/21	19.06	412.97
		05/10/22	19.62	412.41
	I F	09/26/22	20.08	411.95
	T T	05/25/23	19.62	412.41
		08/21/23	20.31	411.72
	Γ	05/20/24	18.24	413.79
		08/14/24	18.56	413.47

				Water Level
	TOC Elevation	Date	Depth to Water	Elevation
Well ID	(feet amsl)	Measured	(feet btoc)	(feet amsl)
FGD-5	433.01	11/03/15	22.81	410.20
		12/17/15	22.58	410.43
		02/09/16	22.73	410.28
		04/14/16	22.27	410.74
		06/14/16	21.81	411.20
		08/24/16	21.68	411.33
		10/04/16	21.68	411.33
		12/19/16	21.69	411.32
		10/03/17	21.54	411.47
		06/04/18	21.33	411.68
		12/17/18	21.09	411.92
		12/26/19	20.34	412.67
		05/06/20	20.09	412.92
		09/09/20	20.48	412.53
		06/16/21	18.76	414.25
		10/11/21	18.91	414.10
		05/10/22	19.39	413.62
	[	09/26/22	20.02	412.99
		05/25/23	19.59	413.42
		08/21/23	21.77	411.24
		05/20/24	18.54	414.47
		08/14/24	18.41	414.60
FGD-6	428.62	11/03/15	18.44	410.18
		12/17/15	18.04	410.58
		02/09/16	17.96	410.66
		04/14/16	17.89	410.73
		06/14/16	17.22	411.40
	-	08/24/16	17.51	411.11
	-	<u>10/04/16</u> 12/19/16	17.37 17.72	<u>411.25</u> 410.90
		10/03/17	17.88	410.90
	-	06/04/18	17.65	410.97
		12/17/18	17.38	411.24
	-	12/26/19	16.29	412.33
	F	05/06/20	16.84	411.78
		09/09/20	16.91	411.71
		06/16/21	15.07	413.55
		10/11/21	16.04	412.58
		05/10/22	16.57	412.05
	l t	09/26/22	16.92	411.70
		05/25/23	16.74	411.88
		08/21/23	17.18	411.44
	I T	05/20/24	15.17	413.45
		08/14/24	15.59	413.03
FGD-7*	425.87	06/04/18	14.58	411.29
		12/17/18	14.17	411.70
		12/26/19	13.67	412.20
		05/06/20	13.08	412.79
		09/09/02	13.51	412.36
		06/16/21	11.64	414.23
		10/11/21	12.47	413.40
		05/10/22	13.09	412.78
		09/26/22	13.57	412.30
		05/25/23	12.93	412.94
		08/21/23	13.77	412.10
		05/20/24	11.24	414.63
		08/14/24	12.02	413.85

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
FGD-8	440.15	11/03/15	16.39	423.76
		12/17/15	16.26	423.89
		02/09/16	29.64	410.51
		04/14/16	29.54	410.61
		06/14/16	29.37	410.78
		08/24/16	29.16	410.99
		10/04/16	28.81	411.34
		12/19/16	29.21	410.94
		01/03/17	29.31	410.84
		06/04/18	29.15	411.00
		12/17/18	29.25	410.90
		12/26/19	28.92	411.23
		05/06/20	28.99	411.16
		09/09/20	29.06	411.09
		06/16/21	25.78	414.37
		10/11/21	28.41	411.74
		05/10/22	29.33	410.82
		09/26/22	29.17	410.98
		05/25/23	28.79	411.36
		08/21/23	29.77	410.38
		05/20/24	29.18	410.97
		08/14/24	28.46	411.69
FGD-9*	435.51	06/04/18	24.56	410.95
		12/17/18	24.59	410.92
		12/26/19	24.06	411.45
		05/06/20	23.97	411.54
		09/09/20	24.17	411.34
		06/16/21	23.21	412.30
		10/11/21	23.62	411.89
		05/10/22	24.38	411.13
		09/26/22	24.39	411.12
		05/25/23	23.64	411.87
		08/21/23	24.21	411.30
		05/20/24	23.31	412.20
		08/14/24	23.39	412.12
FGD-10*	424.19	06/04/18	13.44	410.75
		12/17/18	13.49	410.70
		12/26/19	12.82	411.37
		05/06/20	11.83	412.36
		09/09/20	14.26	409.93
		06/16/21	10.47	413.72
		10/11/21	11.82	412.37
		05/10/22	11.22	412.97
		09/26/22	13.11	411.08
		05/25/23	12.09	412.10
		08/21/23	13.49	410.70
		05/20/24	11.16	413.03
		08/14/24	11.24	412.95

	г			Water Level
	TOC Elevation	Date	Depth to Water	Elevation
Well ID	(feet amsl)	Measured	(feet btoc)	(feet amsl)
FGD-11	452.22	11/03/15	20.67	431.55
_		12/17/15	20.61	431.61
		02/09/16	41.62	410.60
		04/14/16	40.04	412.18
	T T	06/14/16	39.81	412.41
		08/24/16	39.59	412.63
		10/04/16	41.59	410.63
		12/19/16	42.01	410.21
		10/03/17	40.97	411.25
		06/04/18	40.4	411.82
		12/17/18	40.12	412.10
		12/26/19	39.38	412.84
		05/06/20	38.91	413.31
		09/09/20	39.97	412.25
		06/16/21	38.09	414.13
		10/11/21	38.52	413.70
		05/10/22	38.22	414.00
		09/26/22	39.82	412.4
		05/25/23	40.79	411.43
		08/21/23	40.18	412.04
		05/20/24	39.54	412.68
		08/14/24	37.93	414.29
FGD-12	443.16	11/03/15	33.82	409.34
		12/17/15	33.69	409.47
		02/09/16	32.42	410.74
		04/14/16	32.04	411.12
		06/14/16	32.02	411.14
		08/24/16	31.89	411.27
		10/04/16	31.77	411.39
		12/19/16	31.96	411.20
		10/03/17	31.31	411.85
		06/04/18	31.19	411.97
		12/17/18	30.67	412.49
		12/26/19	30.04	413.12
		05/06/20	29.97	413.19
		09/09/20	30.31	412.85
		06/16/21	29.12	414.04
		10/11/21	28.91	414.25
		05/10/22	29.06	<u>414.10</u> 413.57
		09/26/22	29.59	
		05/25/23	29.61	413.55
		08/21/23	29.72	413.44 414.61
		05/20/24	28.55	414.61 414.99
		08/14/24	28.17	414.99

				Water Level
	TOC Elevation	Date	Depth to Water	Elevation
Well ID	(feet amsl)	Measured	(feet btoc)	(feet amsl)
Ash Landfill 1 A	rea			
AL-10	460.81	11/03/15	43.19	417.62
		12/17/15	43.09	417.72
		02/10/16	42.51	418.30
		04/15/16	42.14	418.67
		06/14/16	41.61	419.20
	-	08/24/16	41.89	418.92
		<u>10/04/16</u> 12/19/16	41.92 43.68	418.89 417.13
		10/02/17	43.00	417.13
		06/04/18	42.32	418.49
		09/15/18	43.01	417.8
		05/17/19	41.04	419.77
		05/06/20	40.80	420.01
		09/09/20	41.46	419.35
	1 1	06/16/21	40.61	420.20
		10/11/21	39.02	421.79
	[	05/11/22	40.32	420.49
	[	09/26/22	41.37	419.44
		05/25/23	41.17	419.64
		08/17/23	41.63	419.18
		05/21/24	40.66	420.15
	454.00	08/14/24	40.29	420.52
MW-01*	454.30	06/05/18	34.86	419.44
	-	12/17/18 12/26/19	34.47 33.57	419.83 420.73
		05/07/20	33.14	420.73
		09/09/20	34.19	420.11
	-	06/16/21	32.31	421.99
		10/12/21	32.51	421.79
		05/11/22	32.83	421.47
		09/26/22	34.09	420.21
		05/25/23	33.78	420.52
		08/17/23	34.37	419.93
		05/21/24	32.46	421.84
		08/14/24	32.34	421.96
MW-02	463.65	11/03/15	47.61	416.04
		12/17/15	47.49	416.16
		02/10/16	45.93	417.72
		04/15/16	46.69 44.84	416.96 418.81
		06/14/16 08/24/16	44.84 44.61	418.81 419.04
		10/04/16	45.24	419.04
		12/19/16	46.96	416.69
		10/02/17	45.54	418.11
		06/05/18	45.48	418.17
		12/17/18	45.91	417.74
		12/26/19	44.27	419.38
	l t	05/06/20	42.29	421.36
		09/09/20	44.57	419.08
		06/16/21	43.58	420.07
		10/12/21	43.08	420.57
		05/11/22	43.54	420.11
		09/26/22	44.54	419.11
		05/25/23	44.27	419.38
		08/17/23	44.64	419.01
		05/21/24	43.58	420.07
		08/14/24	43.11	420.54

				Water Level
	TOC Elevation	Date	Depth to Water	Elevation
Well ID	(feet amsl)	Measured	(feet btoc)	(feet amsl)
MW-03*	440.48	06/05/18	26.11	414.37
		12/17/18	26.21	414.27
		12/26/19	24.81 24.33	415.67
	-	05/07/20 09/09/20	23.31	<u>416.15</u> 417.17
	-	06/16/21	23.41	417.07
		10/12/21	23.63	416.85
		05/11/22	23.14	417.34
		09/26/22	25.12	415.36
		05/25/23	24.83	415.65
		08/17/23	25.12	415.36
		05/21/24	23.36	417.12
		08/14/24	23.23	417.25
MW-04*	436.63	06/05/18	25.73	410.9
		12/17/18	25.77	410.86
	_	12/26/19	24.68	411.95
		05/07/20	24.96	411.67
	F	09/09/20	25.69 23.72	410.94
	-	06/16/21		412.91
	F	<u>10/12/21</u> 05/11/22	23.81 23.63	<u>412.82</u> 413.00
	-	09/26/22	23.03	413.00
		05/25/23	24.19	412.44
		08/17/23	24.72	411.91
		05/21/24	22.97	413.66
		08/14/24	23.19	413.44
MW-05	436.98	11/03/15	29.94	407.04
		12/17/15	29.71	407.27
		02/10/16	28.93	408.05
		04/15/16	28.02	408.96
		06/14/16	27.57	409.41
	_	08/24/16	28.38	408.60
		10/04/16	27.94	409.04
	-	12/19/16	30.02	406.96
	-	<u>10/02/17</u> 06/05/18	29.06 28.17	<u>407.92</u> 408.81
		12/17/18	28.74	408.24
		12/26/19	27.17	409.81
		05/06/20	26.68	410.30
		09/09/20	27.09	409.89
		06/16/21	26.21	410.77
		10/12/21	26.46	410.52
		05/11/22	26.09	410.89
		09/26/22	27.47	409.51
		05/25/23	26.51	410.47
		08/17/23	27.59	409.39
		05/21/24 08/14/24	26.22 25.82	<u>410.76</u> 411.16
	420.07			
MW-06*	432.97	06/05/18 12/17/18	25.79 25.52	<u>407.18</u> 407.45
	F	12/17/18	23.52	407.45
	F	05/07/20	NM	NM
	l F	09/09/20	25.13	407.84
	l F	06/16/21	22.46	410.51
		10/12/21	NM	NM
		05/11/22	NM	NM
	I T	09/26/22	29.12	403.85
		05/25/23	28.22	404.75
	[	08/17/23	29.03	403.94
		05/21/24	27.36	405.61
	1	08/14/24	27.13	405.84

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
MW-07	438.84	11/03/15	28.54	410.30
		12/17/15	28.07	410.77
		02/09/16	27.71	411.13
		04/15/16	27.43	411.41
		06/14/16	27.11	411.73
		08/24/16	27.11	411.73
		10/04/16	27.62	411.22
		12/19/16	26.79	412.05
		10/02/17	26.21	412.63
		06/05/18	26.71	412.13
		12/17/18	26.11	412.73
		12/26/19	26.04	412.80
		05/07/20	25.82	413.02
		09/09/20	25.78	413.06
		06/16/21	25.79	413.05
		10/12/21	27.86	410.98
		05/11/22	25.09	413.75
		09/26/22	25.58	413.26
		05/25/23	25.08	413.76
		08/17/23	25.27	413.57
		05/21/24	24.02	414.82
		08/14/24	23.92	414.92
MW-08	443.38	11/03/15	32.77	410.61
		12/17/15	32.63	410.75
		02/09/16	32.47	410.91
		04/15/16	32.12	411.26
		06/14/16	29.96	413.42
			Well Damaged	
MW-08R	443.84	12/19/16	33.97	409.87
		03/21/17	31.89	411.95
		04/20/17	31.80	412.04
		10/02/17	31.66	412.18
		06/05/18	31.74	412.10
		12/17/18	46.26	397.58
		12/26/19	41.02	402.82
		05/07/20	33.62	410.22
		09/09/20	30.68	413.16
		06/16/21	29.61	414.23
		10/12/21	29.41	414.43
		05/11/22	42.26	401.58
		09/26/22	30.08	413.76
		05/25/23	29.77	414.07
		08/17/23	30.06	413.78
		05/21/24	28.92	414.92
	1 1	08/14/24	28.54	415.30

Well ID	TOC Elevation (feet amsl)	Date Measured	Depth to Water (feet btoc)	Water Level Elevation (feet amsl)
MW-09	461.46	11/03/15	48.43	413.03
		12/17/15	48.71	412.75
		02/09/16	48.20	413.26
		04/15/16	47.69	413.77
		06/14/16	47.31	414.15
		08/24/16	47.56	413.90
		10/04/16	47.22	414.24
		12/19/16	50.38	411.08
		10/02/17	47.11	414.35
		06/05/18	47.21	414.25
		12/17/18	47.51	413.95
		12/26/19	46.09	415.37
		05/06/20	38.62	422.84
		09/09/20	46.07	415.39
		06/16/21	45.71	415.75
		10/12/21	44.89	416.57
		05/11/22	45.21	416.25
	I Ī	09/26/22	45.76	415.70
	I T	05/25/23	45.77	415.69
		08/17/23	45.82	415.64
		05/21/24	43.16	418.30
		08/14/24	44.67	416.79

Notes:

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

2024 LABORATORY ANALYTICAL REPORTS



June 03, 2024

Craig Bennett BBA Engineering 165 N. Lampasas St. Bertram, TX 78605 TEL: (512) 925-2549 FAX: (512) 355-9197 RE: OGSES-ASH LANDFILL CCR

Order No.: 2405272

Dear Craig Bennett:

DHL Analytical, Inc. received 7 sample(s) on 5/22/2024 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 - TX-C24-00120



2300 Double Creek Drive • Round Rock, TX 78664 • Phone (512) 388-8222 • FAX (512) 388-8229 www.dhlanalytical.com

### Table of Contents

Miscellaneous Documents	
CaseNarrative 2405272	
WorkOrderSampleSummary 2405272	7
PrepDatesReport 2405272	
AnalyticalDatesReport 2405272	
Analytical Report 2405272	
AnalyticalQCSummaryReport 2405272	

ANALYTICAL Email: login@dhlanalytical.com PAGE OF	
	_
CLIENT: BDH ADDRESS: 165 NI, UATAPASAS ST. BETRAM, 12 PO#: 23643V-20 DHL WORKORDER #: 2405272	2
PHONE: 512-355-9198 EMAIL: DATA REPORTED TO: WILL VIENNE PROJECT LOCATION OR NAME: DGSES-ASH LANDFILL CCR	
ADDITIONAL REPORT COPIES TO: CLIENT PROJECT # 236431-20 COLLECTOR: JOHN BRAYION	
Authorize 5% surcharge W=WATER SE=SEDIMENT PRESERVATION	
for TRRP report?	
□ Yes □ No Use S=SOIL SL=SLUDGE vor the state of the sta	
for TRRP report:       Lab       L=LIQUID       P=PAINT       Lab       Lab <thlab< th=""> <thlab< th=""> <thlab< th=""> <thla< td=""><td></td></thla<></thlab<></thlab<></thlab<>	
Only       SO=SOLID         DHL       Collection         DHL       Collection         Matrix       Container         Type       The Loss         ANALAS       Social of the state size of the sta	
Authorize 5% surcharge for TRRP report?       Lab       V=WATER       SE=SEDIMENT       PRESERVATION       Image: Constraint of the second of the seco	s
AL-10 02 b 1545 W P 2 X X	
MW05 03 5-22-24 0800 W P 2 X X	
MW09 of 1 0910 W P 2 X X IIIIIIIIIIIX	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
DVP-1 of $V$ 110 $W$ P 2 X X	
	$\neg$
	$\neg$
Relinquished By: (Sign)     Date/Time     Received by:     TURN AROUND TIME     LAB USE ONLY     THERMO #:       Vunt     5-22-24     13:26     WUUU     (CALL FIRST FOR RUSH)     RECEIVING TEMP (°C):     0.1°C     78	
Relinquished By: (Sign) DATE/TIME Received by: RUSH-1 DAY RUSH-2 DAY IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES TNO	·
RUSH-3 DAY CUSTODY SEALS ON ICE CHEST: D BROKEN D INTAGT D'NOT US	
Relinquished By: (Sign) DATE/TIME Received by: NORMAL 🗲 OTHER 🗆 CARRIER: 🗋 LSO 🗆 FEDEX 🗆 UPS 🗆 COURIER 🖄 HAND DELIVER	ED

### 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

### DHL Analytical, Inc.

Sample Receipt Checklist						
Client Name: BBA Engineering			Date Received: 5/22/2024			
Work Order Number: 2405272			Received by: KAO			
5°						
Checklist completed by: 5/22/20				wed by: 54 5/22/2024		
Signature	Date		Reviewed by: 04		Date	
	Carrier name:	Hand Delivered				
	Camer name.	Hand Delivered				
Shipping container/cooler in good condition?		Yes 🗹	Νο	Not Present		
Custody seals intact on shipping container/coo	ler?	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	d received?	Yes 🔽	No 🗌			
Chain of custody agrees with sample labels?		Yes 🖌	No 🗌			
Samples in proper container/bottle?		Yes 🔽	No 🗌			
Sample containers intact?		Yes 🗹	No 🗌			
Sufficient sample volume for indicated test?		Yes 🗹	No 🗌			
All samples received within holding time?		Yes 🗹	No 🗌			
Water - VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA vials submitte	ed 🗹 NA 🗌	
Water - pH<2 acceptable upon receipt?		Yes 🗹	No 🗌	NA 🗌 LOT #	13171	
		Adjusted?	0	Checked by	L	
Water - ph>9 (S) or ph>10 (CN) acceptable up	on receipt?	Yes	No 🗌	NA 🗹 LOT #		
		Adjusted?		Checked by		
Container/Temp Blank temperature in complian	nce?	Yes 🗹	No 🗌			
Cooler # 1						
Temp °C 0.1						
Seal Intact NP						
Any No response must be detailed in the comm	nents section below.	N ANTALAS ANTALAS destando advance concerno N ANTALAS, statutos destalas concerno				
Client contacted:	Date contacted:		Per	rson contacted:		
Contacted by:	Regarding:					
Comments:						
Corrective Action:	Corrective Action:					

### **DHL Analytical, Inc.**

CLIENT:BBA EngineeringProject:OGSES-ASH LANDFILL CCRLab Order:2405272

### CASE NARRATIVE

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

Method SW6020A - Metals Analysis Method E300 - Anions Analysis Method M2540C - TDS Analysis

#### LOG IN

The samples were received and log-in performed on 5/22/24. A total of 7 samples were received. The samples arrived in good condition and were properly packaged.

#### METALS ANALYSIS

For Metals analysis performed on 5/29/24 the RPD for the serial dilution was above control limits for Boron. This is flagged accordingly in the QC summary report. The PDS was within control limits for this analyte. No further corrective actions were taken.

\_

**Date:** 03-Jun-24

CLIENT:BBA EngineProject:OGSES-ASLab Order:2405272	eering H LANDFILL CCR	Work Order Sample Summary					
Lab Smp ID Client Sample I	D Tag Number	Date Collected	Date Recved				
2405272-01 MW02		05/21/24 01:35 PM	05/22/2024				
2405272-02 AL-10		05/21/24 03:45 PM	05/22/2024				
2405272-03 MW05		05/22/24 08:00 AM	05/22/2024				
2405272-04 MW09		05/22/24 09:10 AM	05/22/2024				
2405272-05 MW08R		05/22/24 10:15 AM	05/22/2024				
2405272-06 MW07		05/22/24 11:10 AM	05/22/2024				
2405272-07 DUP-1		05/22/24 11:10 AM	05/22/2024				

Lab Order:	2405272
Client:	<b>BBA</b> Engineering
Project:	OGSES-ASH LAN

OGSES-ASH LANDFILL CCR

# PREP DATES REPORT

Sample ID	Client Sample ID	<b>Collection Date</b>	Matrix	Test Number	Test Name	Prep Date	Batch ID
2405272-01A	MW02	05/21/24 01:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW02	05/21/24 01:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW02	05/21/24 01:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
2405272-01B	MW02	05/21/24 01:35 PM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW02	05/21/24 01:35 PM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW02	05/21/24 01:35 PM	Aqueous	M2540C	TDS Preparation	05/24/24 12:30 PM	115544
2405272-02A	AL-10	05/21/24 03:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	AL-10	05/21/24 03:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
2405272-02B	AL-10	05/21/24 03:45 PM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	AL-10	05/21/24 03:45 PM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	AL-10	05/21/24 03:45 PM	Aqueous	M2540C	TDS Preparation	05/24/24 12:30 PM	115544
2405272-03A	MW05	05/22/24 08:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW05	05/22/24 08:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
2405272-03B	MW05	05/22/24 08:00 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW05	05/22/24 08:00 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW05	05/22/24 08:00 AM	Aqueous	M2540C	TDS Preparation	05/24/24 12:30 PM	115544
2405272-04A	MW09	05/22/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW09	05/22/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW09	05/22/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
2405272-04B	MW09	05/22/24 09:10 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW09	05/22/24 09:10 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW09	05/22/24 09:10 AM	Aqueous	M2540C	TDS Preparation	05/24/24 12:30 PM	115544
2405272-05A	MW08R	05/22/24 10:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW08R	05/22/24 10:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW08R	05/22/24 10:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
2405272-05B	MW08R	05/22/24 10:15 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW08R	05/22/24 10:15 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW08R	05/22/24 10:15 AM	Aqueous	M2540C	TDS Preparation	05/24/24 12:30 PM	115544

Page 1 of 2

Lab Order: 2405272 **Client:** BBA Engineering Project:

OGSES-ASH LANDFILL CCR

# PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2405272-06A	MW07	05/22/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW07	05/22/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	MW07	05/22/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
2405272-06B	MW07	05/22/24 11:10 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW07	05/22/24 11:10 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	MW07	05/22/24 11:10 AM	Aqueous	M2540C	TDS Preparation	05/24/24 12:30 PM	115544
405272-07A	DUP-1	05/22/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	DUP-1	05/22/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
	DUP-1	05/22/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/24/24 07:02 AM	115539
2405272-07B	DUP-1	05/22/24 11:10 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	DUP-1	05/22/24 11:10 AM	Aqueous	E300	Anion Preparation	05/28/24 10:31 AM	115561
	DUP-1	05/22/24 11:10 AM	Aqueous	M2540C	TDS Preparation	05/24/24 12:30 PM	115544

Lab Order: 2405272 **Client:** 

BBA Engineering

**Project:** OGSES-ASH LANDFILL CCR

# ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2405272-01A	MW02	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/28/24 10:54 AM	ICP-MS5_240528A
	MW02	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	5	05/28/24 11:52 AM	ICP-MS5_240528A
	MW02	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/29/24 11:20 AM	ICP-MS4_240529A
2405272-01B	MW02	Aqueous	E300	Anions by IC method - Water	115561	10	05/29/24 04:23 PM	IC4_240529A
	MW02	Aqueous	E300	Anions by IC method - Water	115561	1	05/30/24 02:31 AM	IC4_240529A
	MW02	Aqueous	M2540C	Total Dissolved Solids	115544	1	05/24/24 04:05 PM	WC_240524A
2405272-02A	AL-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/29/24 11:13 AM	ICP-MS4_240529A
	AL-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/28/24 10:44 AM	ICP-MS5_240528A
2405272-02B	AL-10	Aqueous	E300	Anions by IC method - Water	115561	1	05/30/24 02:50 AM	IC4_240529A
	AL-10	Aqueous	E300	Anions by IC method - Water	115561	10	05/29/24 04:42 PM	IC4_240529A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	115544	1	05/24/24 04:05 PM	WC_240524A
2405272-03A	MW05	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/28/24 10:57 AM	ICP-MS5_240528A
	MW05	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/29/24 11:22 AM	ICP-MS4_240529A
2405272-03B	MW05	Aqueous	E300	Anions by IC method - Water	115561	10	05/29/24 05:39 PM	IC4_240529A
	MW05	Aqueous	E300	Anions by IC method - Water	115561	1	05/30/24 03:09 AM	IC4_240529A
	MW05	Aqueous	M2540C	Total Dissolved Solids	115544	1	05/24/24 04:05 PM	WC_240524A
2405272-04A	MW09	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	2	05/29/24 11:24 AM	ICP-MS4_240529A
	MW09	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/28/24 10:59 AM	ICP-MS5_240528A
	MW09	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	10	05/28/24 12:01 PM	ICP-MS5_240528A
2405272-04B	MW09	Aqueous	E300	Anions by IC method - Water	115561	1	05/30/24 03:28 AM	IC4_240529A
	MW09	Aqueous	E300	Anions by IC method - Water	115561	10	05/29/24 05:58 PM	IC4_240529A
	MW09	Aqueous	M2540C	Total Dissolved Solids	115544	1	05/24/24 04:05 PM	WC_240524A
2405272-05A	MW08R	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	2	05/29/24 11:26 AM	ICP-MS4_240529A
	MW08R	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/28/24 11:02 AM	ICP-MS5_240528A
	MW08R	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	10	05/28/24 12:04 PM	ICP-MS5_240528A
2405272-05B	MW08R	Aqueous	E300	Anions by IC method - Water	115561	10	05/29/24 06:17 PM	IC4_240529A
	MW08R	Aqueous	E300	Anions by IC method - Water	115561	1	05/30/24 03:47 AM	IC4_240529A
	MW08R	Aqueous	M2540C	Total Dissolved Solids	115544	1	05/24/24 04:05 PM	WC_240524A

Page 1 of 2

Lab Order:2405272Client:BBA Eng

Client: BBA Engineering

Project: OGSES-ASH LANDFILL CCR

# ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2405272-06A	MW07	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/28/24 11:04 AM	ICP-MS5_240528A
	MW07	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	5	05/28/24 12:06 PM	ICP-MS5_240528A
	MW07	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/29/24 11:28 AM	ICP-MS4_240529A
2405272-06B	MW07	Aqueous	E300	Anions by IC method - Water	115561	1	05/30/24 04:06 AM	IC4_240529A
	MW07	Aqueous	E300	Anions by IC method - Water	115561	10	05/29/24 06:36 PM	IC4_240529A
	MW07	Aqueous	M2540C	Total Dissolved Solids	115544	1	05/24/24 04:05 PM	WC_240524A
2405272-07A	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/29/24 11:30 AM	ICP-MS4_240529A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	1	05/28/24 11:07 AM	ICP-MS5_240528A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115539	5	05/28/24 12:09 PM	ICP-MS5_240528A
2405272-07B	DUP-1	Aqueous	E300	Anions by IC method - Water	115561	10	05/29/24 06:55 PM	IC4_240529A
	DUP-1	Aqueous	E300	Anions by IC method - Water	115561	1	05/30/24 04:25 AM	IC4_240529A
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	115544	1	05/24/24 04:05 PM	WC_240524A

CLIENT:	<b>BBA</b> Engineering			Cli	ent Sam	ple ID: MW	02		
Project:	OGSES-ASH LANDF	ILL CCR	Lab ID: 2405272-01						
Project No:	23643V-20			C	ollection	n Date: 05/2	1/24 01:35	PM	
Lab Order:	2405272		Matrix: AQUEOUS						
Analyses		Result	MDL	RL	Qual	Units	DF	Date Analyzed	
TOTAL METALS: ICP-MS - WATER			SW6020B				Analyst: SP		
Boron		0.117	0.0100	0.0300		mg/L	1	05/29/24 11:20 AN	
Calcium		29.1	0.500	1.50		mg/L	5	05/28/24 11:52 AN	
ANIONS BY IC	METHOD - WATER		E30	0			Analyst: <b>KES</b>		
Chloride		83.6	3.00	10.0		mg/L	10	05/29/24 04:23 PN	
Fluoride		0.207	0.100	0.400	J	mg/L	1	05/30/24 02:31 AN	
Sulfate		36.4	1.00	3.00		mg/L	1	05/30/24 02:31 AN	
TOTAL DISSOLVED SOLIDS			M2540C				Analyst: <b>JS</b>		
Total Dissolved Filterable)	Solids (Residue,	335	10.0	10.0		mg/L	1	05/24/24 04:05 PN	

Qualifiers:

\* Value exceeds TCLP Maximum Concentration Level

DF Dilution Factor

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

C Sample Result or QC discussed in the Case Narrative

E TPH pattern not Gas or Diesel Range Pattern

- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified

CLIENT:	BBA Engineering			Cli	ent Sam	ple ID: AL-1	10		
Project:	OGSES-ASH LANDF	FILL CCR	Lab ID: 2405272-02						
Project No:	23643V-20			C	ollection	n Date: 05/2	1/24 03:45	PM	
Lab Order:	2405272		Matrix: AQUEOUS						
Analyses		Result	MDL	RL	Qual	Units	DF	Date Analyzed	
TOTAL METALS: ICP-MS - WATER			SW6020B				Analyst: SP		
Boron		0.0784	0.0100	0.0300		mg/L	1	05/29/24 11:13 AM	
Calcium		11.9	0.100	0.300		mg/L	1	05/28/24 10:44 AM	
ANIONS BY IC	METHOD - WATER		E30	0			Analyst: <b>KES</b>		
Chloride		17.6	0.300	1.00		mg/L	1	05/30/24 02:50 AM	
Fluoride		0.197	0.100	0.400	J	mg/L	1	05/30/24 02:50 AM	
Sulfate		9.29	1.00	3.00		mg/L	1	05/30/24 02:50 AM	
TOTAL DISSOLVED SOLIDS			M2540C				Analyst: <b>JS</b>		
Total Dissolved Filterable)	Solids (Residue,	196	10.0	10.0		mg/L	1	05/24/24 04:05 PM	

Qualifiers:
-------------

\* Value exceeds TCLP Maximum Concentration Level

DF Dilution Factor

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

- C Sample Result or QC discussed in the Case Narrative
- E TPH pattern not Gas or Diesel Range Pattern
- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified

CLIENT:	BBA Engineering			Cli	ent Sam	ple ID: MW	05				
Project:	OGSES-ASH LANDF	ILL CCR	Lab ID: 2405272-03								
Project No:	23643V-20		<b>Collection Date: </b> 05/22/24 08:00 AM								
Lab Order:	2405272		Matrix: AQUEOUS								
Analyses		Result	MDL	RL	Qual	Units	DF	Date Analyzed			
TOTAL METALS: ICP-MS - WATER			SW6020B				Analyst: <b>SP</b>				
Boron		0.0760	0.0100	0.0300		mg/L	1	05/29/24 11:22 AM			
Calcium		16.9	0.100	0.300		mg/L	1	05/28/24 10:57 AM			
ANIONS BY IC	METHOD - WATER		E30	0			Analyst: <b>KES</b>				
Chloride		92.3	3.00	10.0		mg/L	10	05/29/24 05:39 PM			
Fluoride		0.341	0.100	0.400	J	mg/L	1	05/30/24 03:09 AM			
Sulfate		12.9	1.00	3.00		mg/L	1	05/30/24 03:09 AM			
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: <b>JS</b>					
Total Dissolved Filterable)	I Solids (Residue,	292	10.0	10.0		mg/L	1	05/24/24 04:05 PM			

Qualifiers:

\* Value exceeds TCLP Maximum Concentration Level

DF Dilution Factor

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

S Spike Recovery outside control limits

C Sample Result or QC discussed in the Case Narrative

E TPH pattern not Gas or Diesel Range Pattern

MDL Method Detection Limit

RL Reporting Limit

N Parameter not NELAP certified

CLIENT:	BBA Engineering			Cli	ent Sam	ple ID: MW	09		
Project:	OGSES-ASH LANDF	ILL CCR	Lab ID: 2405272-04						
Project No:	23643V-20			С	ollection	n Date: 05/22	2/24 09:10	AM	
Lab Order:	2405272		Matrix: AQUEOUS						
Analyses		Result	MDL	RL	Qual	Units	DF	Date Analyzed	
TOTAL METALS: ICP-MS - WATER			SW6020B				Analyst: SP		
Boron		0.478	0.0200	0.0600		mg/L	2	05/29/24 11:24 AM	
Calcium		98.7	1.00	3.00		mg/L	10	05/28/24 12:01 PM	
ANIONS BY IC	METHOD - WATER		E30	0			Analyst: <b>KES</b>		
Chloride		110	3.00	10.0		mg/L	10	05/29/24 05:58 PM	
Fluoride		0.205	0.100	0.400	J	mg/L	1	05/30/24 03:28 AM	
Sulfate		516	10.0	30.0		mg/L	10	05/29/24 05:58 PM	
TOTAL DISSOLVED SOLIDS			M2540C				Analyst: <b>JS</b>		
Total Dissolved Filterable)	I Solids (Residue,	1270	50.0	50.0		mg/L	1	05/24/24 04:05 PM	

Qualifiers:

\* Value exceeds TCLP Maximum Concentration Level

DF Dilution Factor

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

C Sample Result or QC discussed in the Case Narrative

E TPH pattern not Gas or Diesel Range Pattern

- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified

CLIENT:	<b>BBA</b> Engineering			08R						
Project:	OGSES-ASH LANDF	ILL CCR	Lab ID: 2405272-05							
Project No:	23643V-20			C	ollection	n Date: 05/2	2/24 10:15	2/24 10:15 AM		
Lab Order:	2405272		Matrix: AQUEOUS							
Analyses		Result	MDL	RL	Qual	Units	DF	Date Analyzed		
TOTAL METALS: ICP-MS - WATER			SW6020B				Analyst: SP			
Boron		0.517	0.0200	0.0600		mg/L	2	05/29/24 11:26 AN		
Calcium		124	1.00	3.00		mg/L	10	05/28/24 12:04 PN		
ANIONS BY IC	METHOD - WATER		E30	0			Analyst: <b>KES</b>			
Chloride		120	3.00	10.0		mg/L	10	05/29/24 06:17 PN		
Fluoride		0.210	0.100	0.400	J	mg/L	1	05/30/24 03:47 AN		
Sulfate		591	10.0	30.0		mg/L	10	05/29/24 06:17 PN		
TOTAL DISSOLVED SOLIDS			M2540C					Analyst: <b>JS</b>		
Total Dissolved Filterable)	Solids (Residue,	1430	50.0	50.0		mg/L	1	05/24/24 04:05 PN		

Qualifiers:

\* Value exceeds TCLP Maximum Concentration Level

DF Dilution Factor

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

C Sample Result or QC discussed in the Case Narrative

E TPH pattern not Gas or Diesel Range Pattern

- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified

CLIENT:	BBA Engineering		Client Sample ID: MW07									
Project:	OGSES-ASH LANDF	ILL CCR	Lab ID: 2405272-06									
Project No:	23643V-20		Collection Date: 05/22/24 11:10 AM Matrix: AQUEOUS									
Lab Order:	2405272											
Analyses		Result	MDL	RL	Qual	Units	DF	Date Analyzed				
TOTAL METAL	.S: ICP-MS - WATER		SW60	20B			Analyst: <b>SP</b>					
Boron		0.133	0.0100	0.0300		mg/L	1	05/29/24 11:28 AN				
Calcium		39.9	0.500	1.50		mg/L	5	05/28/24 12:06 PN				
ANIONS BY IC	METHOD - WATER		E30	00			Analyst: <b>KES</b>					
Chloride		32.7	0.300	1.00		mg/L	1	05/30/24 04:06 AN				
Fluoride		0.174	0.100	0.400	J	mg/L	1	05/30/24 04:06 AN				
Sulfate		203	10.0	30.0		mg/L	10	05/29/24 06:36 PM				
TOTAL DISSO	LVED SOLIDS		M254	10C				Analyst: <b>JS</b>				
Total Dissolved Solids (Residue, Filterable)		540	10.0	10.0		mg/L	1	05/24/24 04:05 PN				

Qualifiers:

\* Value exceeds TCLP Maximum Concentration Level

DF Dilution Factor

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

- C Sample Result or QC discussed in the Case Narrative
- E TPH pattern not Gas or Diesel Range Pattern
- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified

CLIENT:	<b>BBA</b> Engineering		Client Sample ID: DUP-1 CCR Lab ID: 2405272-07										
Project:	OGSES-ASH LANDF	ILL CCR											
Project No:	23643V-20		<b>Collection Date:</b> 05/22/24 11:10 AM										
Lab Order:	2405272	Matrix: AQUEOUS											
Analyses		Result	MDL	RL	Qual	Units	DF	Date Analyzed					
TOTAL METAL	.S: ICP-MS - WATER		SW60	20B			Analyst: SP						
Boron		0.126	0.0100	0.0300		mg/L	1	05/29/24 11:30 AM					
Calcium		41.6	0.500	1.50		mg/L	5	05/28/24 12:09 PM					
ANIONS BY IC	METHOD - WATER		E30	0			Analyst: <b>KES</b>						
Chloride		33.0	0.300	1.00		mg/L	1	05/30/24 04:25 AN					
Fluoride		0.171	0.100	0.400	J	mg/L	1	05/30/24 04:25 AN					
Sulfate		202	10.0	30.0		mg/L	10	05/29/24 06:55 PM					
TOTAL DISSO	LVED SOLIDS		M254	0C				Analyst: <b>JS</b>					
TOTAL DISSOLVED SOLIDS Total Dissolved Solids (Residue, Filterable)		531	10.0	10.0		mg/L	1	05/24/24 04:05 PM					

Qualifiers:

\* Value exceeds TCLP Maximum Concentration Level

DF Dilution Factor

- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

C Sample Result or QC discussed in the Case Narrative

E TPH pattern not Gas or Diesel Range Pattern

- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified

**BBA** Engineering

**CLIENT:** 

#### ANALYTICAL QC SUMMARY REPORT Work Order: 2405272 **RunID: ICP-MS4 240529A Project:** OGSES-ASH LANDFILL CCR The QC data in batch 115539 applies to the following samples: 2405272-01A, 2405272-02A, 2405272-03A, 2405272-04A, 2405272-05A, 2405272-06A, 2405272-07A Sample ID: MB-115539 Batch ID: 115539 TestNo: SW6020B Units: mg/L SampType: MBLK Run ID: ICP-MS4 240529A Analysis Date: 5/29/2024 11:05:00 AM Prep Date: 5/24/2024 Analyte Result RL SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Boron < 0.0100 0.0300 Sample ID: LCS-115539 Batch ID: 115539 TestNo: SW6020B Units: mg/L SampType: LCS Run ID: ICP-MS4 240529A Analysis Date: 5/29/2024 11:07:00 AM Prep Date: 5/24/2024 Result RL SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Analyte Boron 0.202 0.0300 0.200 0 101 80 120 Sample ID: LCSD-115539 Batch ID: 115539 SW6020B TestNo: Units: mg/L Run ID: ICP-MS4\_240529A SampType: LCSD Analysis Date: 5/29/2024 11:09:00 AM Prep Date: 5/24/2024 RL SPK value Ref Val LowLimit HighLimit %RPD RPDLimit Qual Analyte Result %REC Boron 0.206 0.0300 0.200 0 103 80 120 1.86 15 SW6020B Sample ID: 2405272-02A SD Batch ID: 115539 TestNo: Units: mg/L SampType: SD Run ID: ICP-MS4\_240529A Analysis Date: 5/29/2024 11:18:00 AM Prep Date: 5/24/2024 Analyte Result RL SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 0.107 0.150 0 0.0784 30.8 R Boron 20 Sample ID: 2405272-02A PDS Batch ID: 115539 TestNo: SW6020B Units: mg/L SampType: PDS Run ID: ICP-MS4\_240529A Analysis Date: 5/29/2024 11:39:00 AM Prep Date: 5/24/2024 SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Analyte Result RL 0.264 0.0300 0.200 0.0784 Boron 92.6 75 125 Sample ID: 2405272-02A MS Batch ID: 115539 TestNo: SW6020B Units: mg/L SampType: MS Run ID: Analysis Date: 5/29/2024 11:41:00 AM Prep Date: ICP-MS4 240529A 5/24/2024 Analyte Result RL SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Boron 0.291 0.0300 0.200 0.0784 106 75 125 Sample ID: 2405272-02A MSD Batch ID: 115539 TestNo: SW6020B Units: mg/L SampType: MSD Run ID: ICP-MS4 240529A Prep Date: 5/24/2024 Analysis Date: 5/29/2024 11:43:00 AM Analyte Result RL SPK value Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Boron 0.292 0.0300 0.200 0.0784 107 75 125 0.544 15

**Qualifiers:** 

- Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit

В

J Analyte detected between SDL and RL

DF **Dilution Factor** MDL Method Detection Limit

RPD outside accepted control limits

Page 1 of 8

- S Spike Recovery outside control limits
- Parameter not NELAP certified Ν

R

Project: OC	GSES-ASH LAN	DFILL C	CR			RunID	): ]	ICP-MS4	_240529A
Sample ID: ICV-240529	Batch ID	R1332	72	TestNo:	SW	/6020B		Units:	mg/L
SampType: <b>ICV</b>	Run ID:	ICP-M	S4_240529A	Analysis	Date: 5/2	9/2024 9:25:0	00 AM	Prep Date	:
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit	%RPD RPDLimit Qual
Boron		0.101	0.0300	0.100	0	101	90	110	
Sample ID: LCVL-2405	29 Batch ID	R1332	72	TestNo:	SW	/6020B		Units:	mg/L
SampType: <b>LCVL</b>	Run ID:	ICP-M	S4_240529A	Analysis	Date: 5/2	9/2024 9:42:0	00 AM	Prep Date	:
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit	%RPD RPDLimit Qual
Boron		0.0240	0.0300	0.0200	0	120	80	120	
Sample ID: CCV2-2405	29 Batch ID	R1332	72	TestNo:	SW	/6020B		Units:	mg/L
SampType: <b>ССV</b>	Run ID:	ICP-M	S4_240529A	Analysis	Date: 5/2	9/2024 11:00	:00 AM	Prep Date	r:
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit	%RPD RPDLimit Qual
Boron		0.198	0.0300	0.200	0	98.9	90	110	
Sample ID: CCV3-2405	29 Batch ID	R1332	72	TestNo:	SW	/6020B		Units:	mg/L
SampType: <b>ССV</b>	Run ID:	ICP-M	S4_240529A	Analysis	Date: 5/2	9/2024 11:47	:00 AM	Prep Date	:
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLin	nit HighLimit	%RPD RPDLimit Qual
Boron		0.207	0.0300	0.200	0	104	90	110	

**BBA** Engineering

2405272

**CLIENT:** 

Work Order:

Page 2 of 8

ANALYTICAL QC SUMMARY REPORT

-				
Qualifiers:	В	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	Ν	Parameter not NELAP certified

Draiaati O	COEC ACTITAN		D			RunID	. т	CP-MS5	710570	<b>\</b>
Project: O The QC data in batch 1	GSES-ASH LAN			5272-01A, 2405	272-02A, 2			_		
06A, 2405272-07A				o=== 0, =			2.002.12			
Sample ID: MB-11553	9 Batch ID:	115539		TestNo:	SW	6020B		Units:	mg/L	
SampType: <b>MBLK</b>	Run ID:	ICP-MS5	5_240528A	Analysis	s Date: 5/28	8/2024 10:31	00 AM	Prep Date:	5/24/202	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD RP	DLimit Qual
Calcium		<0.100	0.300							
Sample ID: LCS-1155	39 Batch ID:	115539		TestNo:	SW	6020B		Units:	mg/L	
SampType: <b>LCS</b>	Run ID:	ICP-MS5	5_240528A	Analysis	a Date: 5/28	8/2024 10:35	:00 AM	Prep Date:	5/24/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD RP	DLimit Qual
Calcium		4.82	0.300	5.00	0	96.5	80	120		
Sample ID: LCSD-115	539 Batch ID:	115539		TestNo:	SW	6020B		Units:	mg/L	
SampType: <b>LCSD</b>	Run ID:	ICP-MS5	5_240528A	Analysis	a Date: 5/28	8/2024 10:39	00 AM	Prep Date:	5/24/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD RP	DLimit Qual
Calcium		4.92	0.300	5.00	0	98.4	80	120	1.94	15
Sample ID: 2405272-0	2A SD Batch ID:	115539		TestNo:	SW	6020B		Units:	mg/L	
SampType: <b>SD</b>	Run ID:	ICP-MS	5_240528A	Analysis	s Date: 5/28	8/2024 10:46	00 AM	Prep Date:	5/24/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD RP	DLimit Qual
Calcium		11.5	1.50	0	11.9				3.54	20
Sample ID: 2405272-0	2A PDS Batch ID:	115539		TestNo:	SW	6020B		Units:	mg/L	
SampType: <b>PDS</b>	Run ID:	ICP-MS	5_240528A	Analysis	s Date: 5/28	8/2024 11:12:	00 AM	Prep Date:	5/24/202	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD RP	DLimit Qual
Calcium		15.9	0.300	5.00	11.9	81.2	75	125		
Sample ID: 2405272-0	2A MS Batch ID:	115539		TestNo:	SW	6020B		Units:	mg/L	
SampType: <b>MS</b>	Run ID:	ICP-MS	5_240528A	Analysis	a Date: 5/28	8/2024 11:15:	00 AM	Prep Date:	5/24/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD RP	DLimit Qual
Calcium		16.6	0.300	5.00	11.9	94.9	75	125		
Sample ID: 2405272-0	2A MSD Batch ID:	115539		TestNo:	SW	6020B		Units:	mg/L	
SampType: <b>MSD</b>	Run ID:	ICP-MS	5_240528A	Analysis	s Date: 5/28	8/2024 11:17:	00 AM	Prep Date:	5/24/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD RP	DLimit Qual
Calcium		16.5	0.300	5.00	11.9	93.0	75	125	0.563	15

**Qualifiers:** 

#### В Analyte detected in the associated Method Blank

- J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit R RPD outside accepted control limits
  - S Spike Recovery outside control limits

Page 3 of 8

Ν Parameter not NELAP certified

#### ANALYTICAL QC SUMMARY REPORT

**CLIENT: BBA** Engineering

2405272

Work Order:

CLIENT:	BBA Engineering							
Work Order:	2405272							
Project:	OGSES-ASH LANDFILL CCR							
Sample ID: ICV-24	40528 Batch ID: R133250							

### ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_240528A

V-240528	Batch ID:	R133250		TestNo:	SW6	020B		Units:	mg/L
V	Run ID:	ICP-MS5_	240528A	Analysis	a Date: <b>5/28/</b>	2024 10:02	:00 AM	Prep Date	:
		Result	RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit	%RPD RPDLimit Qua
		2.56	0.300	2.50	0	102	90	110	
VL-240528	Batch ID:	R133250		TestNo:	SW6	020B		Units:	mg/L
VL	Run ID:	ICP-MS5_	240528A	Analysis	a Date: 5/28/	2024 10:08	:00 AM	Prep Date	:
		Result	RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit	%RPD RPDLimit Qua
		0.0909	0.300	0.100	0	90.9	80	120	
V1-240528	Batch ID:	R133250		TestNo:	SW6	020B		Units:	mg/L
SV	Run ID:	ICP-MS5_	240528A	Analysis	s Date: <b>5/28/</b>	2024 10:25	:00 AM	Prep Date	:
		Result	RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit	%RPD RPDLimit Qua
		5.07	0.300	5.00	0	101	90	110	
SV2-240528	Batch ID:	5.07 <b>R133250</b>	0.300	5.00 TestNo:			90	110 Units:	mg/L
	Batch ID: Run ID:			TestNo:		020B			•
	Run ID:	R133250		TestNo:	SW6	020B	::00 AM	Units: Prep Date	•
	Run ID:	R133250 ICP-MS5_	240528A	TestNo: Analysis	SW6 3 Date: 5/28/	020B 2024 11:22	::00 AM	Units: Prep Date	:
:v	Run ID:	R133250 ICP-MS5_ Result	<b>240528A</b> RL	TestNo: Analysis SPK value	<b>SW6</b> 5 Date: <b>5/28/</b> Ref Val 0	020B 2024 11:22 %REC 100	2:00 AM	Units: Prep Date t HighLimit	:
:V :V3-240528	Run ID:	<b>R133250</b> <b>ICP-MS5_</b> Result 5.00	<b>240528A</b> RL 0.300	TestNo: Analysis SPK value 5.00 TestNo:	<b>SW6</b> 5 Date: <b>5/28/</b> Ref Val 0	020B 2024 11:22 %REC 100 020B	LowLimit	Units: Prep Date t HighLimit 110	: %RPD RPDLimit Qua mg/L
:V :V3-240528	Run ID: Batch ID: Run ID:	R133250 ICP-MS5_ Result 5.00 R133250	<b>240528A</b> RL 0.300	TestNo: Analysis SPK value 5.00 TestNo:	SW6 5 Date: 5/28/ Ref Val 0 SW6	020B 2024 11:22 %REC 100 020B	::00 AM LowLimit 90 ::00 AM	Units: Prep Date t HighLimit 110 Units: Prep Date	: %RPD RPDLimit Qua mg/L
:V :V3-240528	Run ID: Batch ID: Run ID:	R133250 ICP-MS5_ Result 5.00 R133250 ICP-MS5_	240528A RL 0.300 240528A	TestNo: Analysis SPK value 5.00 TestNo: Analysis	SW6 3 Date: 5/28/ Ref Val 0 SW6 3 Date: 5/28/	020B 2024 11:22 %REC 100 020B 2024 11:55	::00 AM LowLimit 90 ::00 AM	Units: Prep Date t HighLimit 110 Units: Prep Date	: %RPD RPDLimit Qua mg/L :
:V :V3-240528 :V	Run ID: Batch ID: Run ID:	R133250 ICP-MS5_ Result 5.00 R133250 ICP-MS5_ Result	240528A RL 0.300 240528A RL	TestNo: Analysis SPK value 5.00 TestNo: Analysis SPK value	SW6 5 Date: 5/28/ Ref Val 0 SW6 5 Date: 5/28/ Ref Val 0	020B 2024 11:22 %REC 100 020B 2024 11:55 %REC 98.9	::00 AM LowLimit 90 ::00 AM LowLimit	Units: Prep Date t HighLimit 110 Units: Prep Date t HighLimit	: %RPD RPDLimit Qua mg/L :
:V :V3-240528 :V :V :V4-240528	Run ID: Batch ID: Run ID:	R133250 ICP-MS5_ Result 5.00 R133250 ICP-MS5_ Result 4.95	240528A RL 0.300 240528A RL 0.300	TestNo: Analysis SPK value 5.00 TestNo: Analysis SPK value 5.00 TestNo:	SW6 5 Date: 5/28/ Ref Val 0 SW6 5 Date: 5/28/ Ref Val 0	020B 2024 11:22 %REC 100 020B 2024 11:55 %REC 98.9 020B	2:00 AM LowLimit 90 5:00 AM LowLimit 90	Units: Prep Date t HighLimit 110 Units: Prep Date t HighLimit 110	<pre>%RPD RPDLimit Qua mg/L %RPD RPDLimit Qua mg/L </pre>
:V :V3-240528 :V :V :V4-240528	Run ID: Batch ID: Run ID: Batch ID: Run ID:	R133250         ICP-MS5_         Result         5.00         R133250         ICP-MS5_         Result         4.95         R133250	240528A RL 0.300 240528A RL 0.300	TestNo: Analysis SPK value 5.00 TestNo: Analysis SPK value 5.00 TestNo:	SW6 3 Date: 5/28/ Ref Val 0 SW6 3 Date: 5/28/ Ref Val 0 SW6	020B 2024 11:22 %REC 100 020B 2024 11:55 %REC 98.9 020B	2:00 AM LowLimit 90 5:00 AM LowLimit 90 2:00 PM	Units: Prep Date t HighLimit 110 Units: Prep Date t HighLimit 110 Units: Prep Date	<pre>%RPD RPDLimit Qua mg/L %RPD RPDLimit Qua mg/L </pre>
v ;\;\	/L-240528 /L /1-240528	Run ID: /L-240528 Batch ID: /L Run ID: /1-240528 Batch ID:	Run ID:         ICP-MS5_ Result           2.56           /L-240528         Batch ID:         R133250           /L         Run ID:         ICP-MS5_           Result         0.0909           /1-240528         Batch ID:         R133250           Result         0.0909         R133250           // Run ID:         ICP-MS5_           Run ID:         ICP-MS5_	Run ID:       ICP-MS5_240528A         Result       RL         2.56       0.300         /L-240528       Batch ID:       R133250         /L       Run ID:       ICP-MS5_240528A         Result       RL       RL         0.0909       0.300         /1-240528       Batch ID:       R133250         //L       Run ID:       ICP-MS5_240528A	Run ID:       ICP-MS5_240528A       Analysis         Result       RL       SPK value         2.56       0.300       2.50         /L-240528       Batch ID:       R133250       TestNo:         /L       Run ID:       ICP-MS5_240528A       Analysis         Result       RL       SPK value         0.0909       0.300       0.100         /1-240528       Batch ID:       R133250       TestNo:         0.0909       0.300       0.100         /1-240528       Batch ID:       R133250       TestNo:         //       Run ID:       ICP-MS5_240528A       Analysis	Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/         Result       RL       SPK value       Ref Val         2.56       0.300       2.50       0         /L-240528       Batch ID:       R133250       TestNo:       SW6         /L       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/         /L       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/         /L       Result       RL       SPK value       Ref Val         0.0909       0.300       0.100       0         /1-240528       Batch ID:       R133250       TestNo:       SW6         //       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/	Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:02         Result       RL       SPK value       Ref Val       %REC         2.56       0.300       2.50       0       102         /L-240528       Batch ID:       R133250       TestNo:       SW6020B         /L       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:08         /L       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:08         /L       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:08         /L       Result       RL       SPK value       Ref Val       %REC         0.0909       0.300       0.100       0       90.9         /1-240528       Batch ID:       R133250       TestNo:       SW6020B         //       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:25	Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:02:00 AM         Result       RL       SPK value       Ref Val       %REC       LowLimit         2.56       0.300       2.50       0       102       90         /L-240528       Batch ID:       R133250       TestNo:       SW6020B         /L       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:08:00 AM         /L       Result       RL       SPK value       Ref Val       %REC       LowLimit         0.0909       0.300       0.100       0       90.9       80         /1-240528       Batch ID:       R133250       TestNo:       SW6020B         // Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:25:00 AM	Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:02:00 AM       Prep Date         Result       RL       SPK value       Ref Val       %REC       LowLimit HighLimit         2.56       0.300       2.50       0       102       90       110         /L-240528       Batch ID:       R133250       TestNo:       SW6020B       Units:         /L       Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:08:00 AM       Prep Date         Run ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:08:00 AM       Prep Date         Result       RL       SPK value       Ref Val       %REC       LowLimit HighLimit         0.0909       0.300       0.100       0       90.9       80       120         /1-240528       Batch ID:       R133250       TestNo:       SW6020B       Units:         /1-240528       Batch ID:       R133250       TestNo:       SW6020B       Units:         /1-240528       Batch ID:       R133250       TestNo:       SW6020B       Units:         /1-240528       Batch ID:       ICP-MS5_240528A       Analysis Date: 5/28/2024 10:25:00 AM       Prep Date

**Qualifiers:** 

B Analyte detected in the associated Method Blank

Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J

J Analyte detected between SDL and RL

DF Dilution Factor

MDLMethod Detection LimitRRPD outside accepted control limits

S Spike Recovery outside control limits

Page 4 of 8

N Parameter not NELAP certified

#### **CLIENT: BBA** Engineering

Work Order:

#### ANALYTICAL QC SUMMARY REPORT

2405272 **Project:** OGSES-ASH LANDFILL CCR

**RunID:** IC4\_240529A

The QC data in batch 115561 applies to the following samples: 2405272-01B, 2405272-02B, 2405272-03B, 2405272-04B, 2405272-05B, 2 06B, 2405272-07B

Sample ID: MB-115561	Batch ID:	115561		TestNo	: E300	)		Units:	mg/L	
SampType: <b>MBLK</b>	Run ID:	IC4_2405	29A	Analysi	s Date: <b>5/29/</b>	2024 12:46	:53 PM	Prep Date:	5/28/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RP	DLimit Qual
Chloride Fluoride Sulfate		<0.300 <0.100 <1.00	1.00 0.400 3.00							
Sample ID: LCS-115561	Batch ID:	115561		TestNo	: E300	)		Units:	mg/L	
SampType: <b>LCS</b>	Run ID:	IC4_2405	29A	Analysis Date: 5/29/2024 1:05:53 PM				Prep Date:	5/28/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RP	DLimit Qual
Chloride Fluoride Sulfate		10.5 4.01 30.5	1.00 0.400 3.00	10.00 4.000 30.00	0 0 0	105 100 102	90 90 90	110 110 110		
Sample ID: LCSD-115561	Batch ID:	115561		TestNo	: E300	)		Units:	mg/L	
SampType: <b>LCSD</b>	Run ID:	IC4_2405	29A	Analysi	s Date: <b>5/29/</b>	2024 1:24:	53 PM	Prep Date:	5/28/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RP	DLimit Qual
Chloride Fluoride Sulfate		10.5 4.01 30.6	1.00 0.400 3.00	10.00 4.000 30.00	0 0 0	105 100 102	90 90 90	110 110 110	0.133 0.161 0.285	20 20 20
Sample ID: 2405272-02BMS	Batch ID:	115561		TestNo	E300			Units:	mg/L	
SampType: <b>MS</b>	Run ID:	IC4_2405	29A	Analysi	s Date: <b>5/29/</b>	2024 5:01:	42 PM	Prep Date:	5/28/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RP	DLimit Qual
Chloride Fluoride Sulfate		236 207 217	10.0 4.00 30.0	200.0 200.0 200.0	15.83 0 0	110 103 109	90 90 90	110 110 110		
Sample ID: 2405272-02BMSD	Batch ID:	115561		TestNo	E300	)		Units:	mg/L	
SampType: <b>MSD</b>	Run ID:	IC4_2405	29A	Analysi	s Date: <b>5/29/</b>	2024 5:20:	42 PM	Prep Date:	5/28/20	24
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD RP	DLimit Qual
Chloride Fluoride Sulfate		236 207 217	10.0 4.00 30.0	200.0 200.0 200.0	15.83 0 0	110 103 109	90 90 90	110 110 110	0.040 0.029 0.069	20 20 20

**Qualifiers:** Analyte detected in the associated Method Blank DF Dilution Factor В 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

- Analyte detected between SDL and RL J

Parameter not NELAP certified

Page 5 of 8

Ν

#### CLIENT: BBA Engineering Work Order: 2405272

### ANALYTICAL QC SUMMARY REPORT

Project: OGSES-ASH LANDFILL CCR

RunID: IC4\_240529A

Sample ID: 2405273-02BMS	Batch ID:	115561		TestNo	: <b>E30</b>			Units:	mg/L	
SampType: <b>MS</b>	Run ID:	IC4_2405	529A	Analysi	is Date: <b>5/29</b>	/2024 7:52:	42 PM	Prep Date:	5/28/2	2024
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	%RPD F	RPDLimit Qual
Chloride		375	10.0	200.0	187.3	93.8	90	110		
Fluoride		202	4.00	200.0	0	101	90	110		
Sulfate		248	30.0	200.0	40.14	104	90	110		
Sample ID: 2405273-02BMSD	Batch ID:	115561		TestNo	E30	)		Units:	mg/L	
Sample ID: 2405273-02BMSD SampType: MSD	Batch ID: Run ID:	115561 IC4_2405	529A		: <b>E30</b> is Date: <b>5/29</b>		42 PM	Units: Prep Date:	mg/L 5/28/2	2024
			<b>529A</b> RL					Prep Date:	5/28/2	2 <b>024</b> RPDLimit Qual
SampType: <b>MSD</b>		IC4_2405		Analysi	is Date: 5/29	/2024 8:11:		Prep Date:	5/28/2	
SampType: <b>MSD</b> Analyte		IC4_2405 Result	RL	Analysi SPK value	is Date: <b>5/29</b> Ref Val	/2024 8:11: %REC	LowLimi	Prep Date: t HighLimit %	5/28/2 %RPD F	RPDLimit Qual

**Qualifiers:** 

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

- Detected at the Method Detection Elinit
- RL Reporting Limit

В

- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDLMethod Detection LimitRRPD outside accepted control limits

Page 6 of 8

- R RPD outside accepted control limitsS Spike Recovery outside control limits
- 5 Spike Recovery outside control limit
- N Parameter not NELAP certified

#### **CLIENT:** BBA Engineering

Work Order:

### ANALYTICAL QC SUMMARY REPORT

Project: OGSES-ASH LANDFILL CCR

2405272

<b>RunID:</b>	IC4_240529A
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Sample ID: ICV-240529	Batch ID:	R133275		TestNo	): <b>E30</b>	0		Units:	mg/L	
SampType: <b>ICV</b>	Run ID:	IC4_2405	29A	Analys	is Date: <b>5/29</b>	9/2024 11:49	:53 AM	Prep Date	:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Chloride		26.3	1.00	25.00	0	105	90	110		
Fluoride		10.2	0.400	10.00	0	102	90	110		
Sulfate		77.8	3.00	75.00	0	104	90	110		
Sample ID: CCV1-240528	Batch ID:	R133275		TestNo	): <b>E30</b>	0		Units:	mg/L	
SampType: <b>CCV</b>	Run ID:	IC4_2405	29A	Analys	is Date: <b>5/29</b>	9/2024 9:27:	42 PM	Prep Date	:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Chloride		10.5	1.00	10.00	0	105	90	110		
Fluoride		4.04	0.400	4.000	0	101	90	110		
Sulfate		30.7	3.00	30.00	0	102	90	110		
Sample ID: CCV2-240528	Batch ID:	R133275		TestNo	): <b>E30</b>	0		Units:	mg/L	
SampType: <b>ССV</b>	Run ID:	IC4_2405	29A	Analys	is Date: <b>5/30</b>	)/2024 1:53:	42 AM	Prep Date	:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Chloride		10.6	1.00	10.00	0	106	90	110		
Fluoride		4.04	0.400	4.000	0	101	90	110		
Sulfate		30.8	3.00	30.00	0	103	90	110		
Sample ID: CCV3-240528	Batch ID:	R133275		TestNo	): <b>E30</b>	0		Units:	mg/L	
SampType: <b>CCV</b>	Run ID:	IC4_2405	29A	Analys	is Date: <b>5/30</b>	)/2024 6:19:	42 AM	Prep Date	:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD R	PDLimit Qual
Chloride		10.6	1.00	10.00	0	106	90	110		
Fluoride		4.08	0.400	4.000	0	102	90	110		
Sulfate		30.8	3.00	30.00	0	103	90	110		

Qualifiers:	
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#### B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

RL Reporting Limit

- J Analyte detected between SDL and RL
- DF Dilution Factor

MDLMethod Detection LimitRRPD outside accepted control limits

Page 7 of 8

S Spike Recovery outside control limits

N Parameter not NELAP certified

#### **CLIENT: BBA** Engineering

Work Order:

### ANALYTICAL QC SUMMARY REPORT

**RunID:** 

WC\_240524A

Page 8 of 8

2405272 **Project:** OGSES-ASH LANDFILL CCR

The QC data in batch 115544 applies to the following samples: 2405272-01B, 2405272-02B, 2405272-03B, 2405272-04B, 2405272-05B, 2405272-06B, 2405272-07B

Sample ID: MB-115544	Batch ID:	115544		TestNo:	M25	40C		Units:	mg/L	
SampType: <b>MBLK</b>	Run ID:	WC_240524	4A	Analysis	Date: 5/24	2024 4:05:	00 PM	Prep Date:	5/24/2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPDL	imit Qual
Total Dissolved Solids (Residue,	Filtera	<10.0	10.0							
Sample ID: LCS-115544	Batch ID:	115544		TestNo:	M25	40C		Units:	mg/L	
SampType: <b>LCS</b>	Run ID:	WC_240524	4A	Analysis	Date: 5/24/	2024 4:05:	00 PM	Prep Date:	5/24/2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPDL	imit Qual
Total Disselved Calida (Desidue	Filtora	738	10.0	745.6	0	99.0	90	113		
Total Dissolved Solids (Residue,	Fillera	130	10.0	743.0	0	99.0	90	115		
Sample ID: 2405259-14B-DUP	Batch ID:	115544	10.0	TestNo:	M254		90	Units:	mg/L	
				TestNo:		40C			mg/L 5/24/2024	
Sample ID: 2405259-14B-DUP	Batch ID: Run ID:	115544		TestNo:	M25	40C	00 PM	Units:	5/24/2024	imit Qual
Sample ID: 2405259-14B-DUP SampType: DUP	Batch ID: Run ID:	115544 WC_240524	4A	TestNo: Analysis	<b>M25</b> Date: <b>5/24</b>	40C /2024 4:05:	00 PM	Units: Prep Date: it HighLimit %	5/24/2024	
Sample ID: 2405259-14B-DUP SampType: DUP Analyte	Batch ID: Run ID:	115544 WC_240524 Result	<b>1A</b> RL	TestNo: Analysis SPK value	<b>M25</b> Date: <b>5/24</b> Ref Val	40C /2024 4:05: %REC	00 PM	Units: Prep Date: it HighLimit %	5/24/2024	
Sample ID: 2405259-14B-DUP SampType: DUP Analyte Total Dissolved Solids (Residue,	Batch ID: Run ID: Filtera	<b>115544</b> WC_240524 Result 4800	<b>4A</b> RL 50.0	TestNo: Analysis SPK value 0 TestNo:	<b>M25</b> 4 Date: <b>5/24</b> Ref Val 4815	40C /2024 4:05: %REC 40C	00 PM LowLimi	Units: Prep Date: it HighLimit %	5/24/2024 5RPD RPDLi 0.416 5	
Sample ID: 2405259-14B-DUP SampType: DUP Analyte Total Dissolved Solids (Residue, Sample ID: 2405259-15B-DUP	Batch ID: Run ID: Filtera Batch ID: Run ID:	115544 WC_240524 Result 4800 115544	<b>4A</b> RL 50.0	TestNo: Analysis SPK value 0 TestNo:	M254 Date: 5/24 Ref Val 4815 M254	40C /2024 4:05: %REC 40C	00 PM LowLimi 00 PM	Units: Prep Date: it HighLimit % Units:	5/24/2024 5RPD RPDLi 0.416 5 mg/L 5/24/2024	

Qualifiers:	В	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	Ν	Parameter not NELAP certified



August 27, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198
FAX:
RE: OGSES-Ash Landfill-CCR

Order No.: 2408199

Dear Will Vienne:

DHL Analytical, Inc. received 7 sample(s) on 8/15/2024 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 - TX-C24-00120



2300 Double Creek Drive • Round Rock, TX 78664 • Phone (512) 388-8222 • FAX (512) 388-8229 www.dhlanalytical.com

# Table of Contents

Miscellaneous Documents	
CaseNarrative 2408199	9
WorkOrderSampleSummary 2408199	10
PrepDatesReport 2408199	11
AnalyticalDatesReport 2408199	
Analytical Report 2408199	
AnalyticalQCSummaryReport 2408199	22
MQLSummaryReport 2408199	33



2300 Double Creek Dr. Round Rock, TX 78664

# CHAIN-OF-CUSTODY

Phone 512.388.8222 Web: www.dhlanalytical.com

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	DHL	Collection	Collection		Container	# of Containers			NaOH 🗌 Zn Acetate 🗍	UNPRESERVI		TPH 1005 🗆 TPH 1006 🔲 HOLD 1006 🗆	GRO 8015 🗆 DRO 8015 🗆	VOC 8260 UOC 624.1 SVOC 8270 SVOC 8270 SVOC 625.1	РАН 8270 🗆 НОЦО РАН 🗆	PEST 8270 🗆 625.1 🗆 O-P PEST 8270 🗆	PCB 8082	METALS 6020 0 200.8 0 DISS. METALS	RCRA 8 🗆 TX11 🗆	PHD HEX CHROMD ALKALINITYD CODD			DGA	TDS 🗆 TSS 🗆 % MOIST 🗆 CYANIDE 🗆	9			
Field Sample I.D.	Lab #	Date	Time	Matrix	Type	5 O	HCL HNO	H <sub>2</sub> SO <sub>4</sub>		3		005	3015	3260 [ 8270 ]	270	8270 [	082	172 E02	8 1	HEX CI	VOC 1		IND	TSS [	2EN			
							뇌	Ŧ			BTEX	TPH 1	GRO E	VOC 5 SVOC	PAH 8	PEST	PCB 8	META	RCRA	Hd	ANIO			10S	RPENDIX		FIEI	D NOTES
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										R	USH	-3 D	AY□					ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO DY SEALS ON ICE CHEST: D BROKEN D INTACT D NOT USED			//							
Relinquished By: (Sign) DATE/TIME Reco				Receiv	/ed by	:				ORM			OTHE					:  LSO  FEDEX  UPS  COURIER  HAND DELIVERED										
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#### 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

	Sample	<b>Receipt Chec</b>	klist		
Client Name: BBA Engineering			Date Recei	ved: 8/15/2024	
Work Order Number: 2408199			Received b	y: KAO	
Checklist completed by: Signature	B/15/202 Date Carrier name:	4 Hand Delivered	Reviewed b	by: SH Initials	8/15/2024 Date
Shipping container/cooler in good condition?		Yes 🗹	No 🗌	Not Present	
Custody seals intact on shipping container/cool	ler?	Yes	No 🗌	Not Present 🗹	
Custody seals intact on sample bottles?		Yes	No 🗌	Not Present	
Chain of custody present?		Yes 🗹	No 🗌		
Chain of custody signed when relinquished and	received?	Yes 🗹	No 🗌		
Chain of custody agrees with sample labels?		Yes 🗹	No 🗌		
Samples in proper container/bottle?		Yes 🗹	No 🗌		
Sample containers intact?		Yes 🗹	No 🗌		
Sufficient sample volume for indicated test?		Yes 🗹	No 🗌		
All samples received within holding time?		Yes 🗹	No 🗌		
Water - VOA vials have zero headspace?		Yes	Νο	No VOA vials submitte	d 🗹 NA 🗌
Water - pH<2 acceptable upon receipt?		Yes 🗹	No 🗌		3171
		Adjusted?	70	Checked by	$\mathcal{M}$
Water - ph>9 (S) or ph>10 (CN) acceptable upo	on receipt?	Yes	No 🗌	NA 🗹 LOT #	
		Adjusted?		Checked by	
Container/Temp Blank temperature in complian	ce?	Yes 🗹	No 🗌		
Cooler # 1					
Temp °C 0.9					
Seal Intact NP					
Any No response must be detailed in the comm	ents section below.	1998 - 85 500 Addition			
Client contacted:	Date contacted:		Per	son contacted:	
Contacted by:	Regarding:			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
Comments:					
Corrective Action:					

Revie	ewer I	me: OGSES-Ash Landfill-CCR LRC	D	_				
Prep #1			<b>Date:</b> 8/27/2024					
#1		Name: Angie O'Donnell Labo	oratory Work Order: 2408199					
#1	Batch	Number(s): See Prep Dates Report Run	Batch: See Analytical Dates Report					
	$A^2$	Description		Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1		Chain-of-Custody (C-O-C)						
	OI	1) Did samples meet the laboratory's standard conditions of samp	ble acceptability upon receipt?	Χ				R1-01
		2) Were all departures from standard conditions described in an e				Χ		
R2	OI	Sample and Quality Control (QC) Identification						
		1) Are all field sample ID numbers cross-referenced to the labora		Χ				
		2) Are all laboratory ID numbers cross-referenced to the correspondence of the correspon	onding QC data?	Χ			_	
R3	OI	Test Reports						
		1) Were all samples prepared and analyzed within holding times?		X				
		2) Other than those results $\leq$ MQL, were all other raw values brack	cketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?		X X				
		<ul><li>4) Were all analyte identifications checked by a peer or supervise</li><li>5) Were sample detection limits reported for all analytes not detection</li></ul>		X X			-+	
		6) Were all results for soil and sediment samples reported on a dr		Λ		X		
		7) Were % moisture (or solids) reported for all soil and sediment		╞──┤		A X		
		8) Were bulk soils/solids samples for volatile analysis extracted v				X		
		9) If required for the project, TICs reported?				X		
R4	0	Surrogate Recovery Data						
		1) Were surrogates added prior to extraction?				Χ		
		2) Were surrogate percent recoveries in all samples within the lab	poratory QC limits?			Χ		
R5	OI	Test Reports/Summary Forms for Blank Samples						
		1) Were appropriate type(s) of blanks analyzed?		Χ				
		2) Were blanks analyzed at the appropriate frequency?		Χ				
		3) Where method blanks taken through the entire analytical process, including preparation and, if						
		applicable, cleanup procedures?		X				
		4) Were blank concentrations < MDL?		Χ				
		<b>5)</b> For analyte(s) detected in a blank sample, was the concentration factors, in all associated field samples, <b>greater</b> than 10 times the				Х		
R6	OI	Laboratory Control Samples (LCS):	concentration in the blank sample:					
no	01	1) Were all COCs included in the LCS?		Χ				
		2) Was each LCS taken through the entire analytical procedure, in	ncluding prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?		Χ				
		4) Were LCS (and LCSD, if applicable) %Rs within the laborator	ry QC limits?	Χ				
		5) Does the detectability data document the laboratory's capabilit	ty to detect the COCs at the MDL used	X				
		to calculate the SDLs?						
		6) Was the LCSD RPD within QC limits (if applicable)?		Χ			_	
<b>R</b> 7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data						
		1) Were the project/method specified analytes included in the MS	S and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?		X	v			D7 01
		<ul><li>3) Were MS (and MSD, if applicable) %Rs within the laboratory</li><li>4) Were MS/MSD RPDs within laboratory QC limits?</li></ul>	QC limits?	X	X			R7-03
<b>R8</b>	OI	Analytical Duplicate Data		Λ				
NO	01	1) Were appropriate analytical duplicates analyzed for each matri	v?	X				
		2) Were analytical duplicates analyzed at the appropriate frequen		X				
		3) Were RPDs or relative standard deviations within the laborator		X				
R9	OI	Method Quantitation Limits (MQLs):						
		1) Are the MQLs for each method analyte included in the laborat	ory data package?	Χ				
		2) Do the MQLs correspond to the concentration of the lowest no		Χ				
		3) Are unadjusted MQLs and DCSs included in the laboratory da		Χ				
R10	OI	Other Problems/Anomalies						
		1) Are all known problems/anomalies/special conditions noted in		Χ				
		2) Was applicable and available technology used to lower the SD	L to minimize the matrix interference	X				
		affects on the sample results?						
		3) Is the laboratory NELAC-accredited under the Texas Laborato analytes, matrices and methods associated with this laboratory da		X				

Lab	ora	tory Name: DHL Analytical, Inc.						
Lab	ora	tory Review Checklist (continued): Supporting	Data					
Proje	ct Na	me: OGSES-Ash Landfill-CCR LRC	Date: 8/27/2024					
Revie	wer	Name: Angie O'Donnell Labor	atory Work Order: 2408199					
		-	Satch: See Analytical Dates Report					
#1	A <sup>2</sup>	Description		Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
<b>S1</b>		Initial Calibration (ICAL)		105	110			111
		1) Were response factors and/or relative response factors for each a	nalyta within OC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	haryte within QC limits?	X				
		3) Was the number of standards recommended in the method used it	or all analytes?	X				
		4) Were all points generated between the lowest and highest standa		X				
		5) Are ICAL data available for all instruments used?	d used to calculate the curve?	X				
		<ul><li>6) Has the initial calibration curve been verified using an appropria</li></ul>	a second source standard?	A X				
S2	OI	Initial and Continuing calibration Verification (ICCV and CCV		Λ				
54		blank (CCB):	) and Continuing Cambration					
		1) Was the CCV analyzed at the method-required frequency?		X				
		<ol> <li>Was the CCV analyzed at the method-required frequency?</li> <li>Were percent differences for each analyte within the method-req</li> </ol>	vigad OC limits?	A X				
		3) Was the ICAL curve verified for each analyte?		A X				
		<ul><li>4) Was the absolute value of the analyte concentration in the inorga</li></ul>	min CCP < MDI 2	A X				
<b>S</b> 3	0	Mass Spectral Tuning:	IIIC CCB < MDL?	Λ				
33	0	1) Was the appropriate compound for the method used for tuning?		v				
		<ol> <li>Was the appropriate compound for the method used for tuning?</li> <li>Were ion abundance data within the method-required QC limits?</li> </ol>		X X				
64	0			Λ				
<b>S4</b>		Internal Standards (IS):		X				
<b>SF</b>		1) Were IS area counts and retention times within the method-requi	red QC limits?	Λ				
<b>S5</b>	OI	Raw Data (NELAC Section 5.5.10)		v				
		1) Were the raw data (for example, chromatograms, spectral data) r		X				
66	0	2) Were data associated with manual integrations flagged on the ray	v data?	Χ				
<b>S6</b>	0	Dual Column Confirmation				X		
07	0	1) Did dual column confirmation results meet the method-required	<u>ر ۲</u>			Λ		
<b>S7</b>	0	Tentatively Identified Compounds (TICs):				v		
60	т	1) If TICs were requested, were the mass spectra and TIC data subj	ect to appropriate checks?			Χ		
<b>S8</b>	1	Interference Check Sample (ICS) Results:		X				
60	т	1) Were percent recoveries within method QC limits?		λ				
<b>S9</b>	Ι	Serial Dilutions, Post Digestion Spikes, and Method of Standard						
		1) Were percent differences, recoveries, and the linearity within method?	n the QC limits specified in the	X				
<b>S10</b>		Method Detection Limit (MDL) Studies						
510		1) Was a MDL study performed for each reported analyte?		Χ				
		2) Is the MDL either adjusted or supported by the analysis of DCSs	?	X				
<b>S11</b>		Proficiency Test Reports:	·					
	01	1) Was the lab's performance acceptable on the applicable proficier	cy tests or evaluation studies?	Χ				
S12	OI	Standards Documentation						
512	01	1) Are all standards used in the analyses NIST-traceable or obtained	from other appropriate sources?	Χ				
S13	OI	Compound/Analyte Identification Procedures						
~ • • •		1) Are the procedures for compound/analyte identification document	nted?	Χ				
S14	OI	Demonstration of Analyst Competency (DOC)						
~ • •	~ *	1) Was DOC conducted consistent with NELAC Chapter 5 – Appen	ndix C?	Х				
		2) Is documentation of the analyst's competency up-to-date and on		X				
S15		Verification/Validation Documentation for Methods (NELAC C		-				
~		1) Are all the methods used to generate the data documented						
		applicable?	, vomiteu, and vanualeu, wildre	X				
<b>S16</b>	OI	Laboratory Standard Operating Procedures (SOPs):						
		1) Are laboratory SOPs current and on file for each method perform	ped?	X				
		1) The aboratory 501 s current and on the for each method perform	icu:	Δ				

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 1 the letter "S" should be retained and made available upon request for the appropriate retention period. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

<sup>2</sup> 

<sup>3</sup> NA = Not applicable.

<sup>4</sup> NR = Not Reviewed.

<sup>5</sup> 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:

R4

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).
  - Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) The amount of analyte measured in the duplicate,
  - b) The calculated RPD, and
  - c) The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.

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

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

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

Name: John DuPont Official Title: General Manager

Name: Dr. Derhsing Luu Official Title: Technical Director

dep wit

08/27/24 Date

CLIENT:BBA EngineeringProject:OGSES-Ash Landfill-CCRLab Order:2408199

#### CASE NARRATIVE

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

Method SW6020B - Metals Analysis Method E300 - Anions Analysis Method M2540C - TDS Analysis

Exception Report R1-01

The samples were received and log-in performed on 8/15/2024. A total of 7 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions Analysis, for Batch 116819, the recovery of one anion (each) for the Matrix Spike and Matrix Spike Duplicate(s) (2408190-01 and 2408236-01 MS/MSD) was below the method control limits. These are flagged accordingly in the QC Summary Report. These anions were within method control limits in the associated LCS. No further corrective action was taken.

**CLIENT: BBA** Engineering **Project:** OGSES-Ash Landfill-CCR Work Order Sample Summary Lab Order: 2408199 Lab Smp ID Client Sample ID **Tag Number Date Collected Date Recved** 2408199-01 MW-02 08/14/24 03:50 PM 08/15/2024 2408199-02 AL-10 08/14/24 06:00 PM 08/15/2024 2408199-03 MW-09 08/15/24 07:50 AM 08/15/2024 2408199-04 MW-08R 08/15/24 09:00 AM 08/15/2024 2408199-05 MW-05 08/15/24 10:35 AM 08/15/2024 08/15/24 11:35 AM 08/15/2024

2408199-06 MW-07 2408199-07 DUP-1

### **Date:** 27-Aug-24

08/15/24 11:35 AM

08/15/2024

2408199

BBA Engineering

OGSES-Ash Landfill-CCR

Lab Order:

**Client:** 

Project:

# PREP DATES REPORT

Sample ID	Client Sample ID	<b>Collection Date</b>	Matrix	Test Number	Test Name	Prep Date	Batch ID
2408199-01A	MW-02	08/14/24 03:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
	MW-02	08/14/24 03:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
2408199-01B	MW-02	08/14/24 03:50 PM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-02	08/14/24 03:50 PM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-02	08/14/24 03:50 PM	Aqueous	M2540C	TDS Preparation	08/19/24 11:24 AM	116812
2408199-02A	AL-10	08/14/24 06:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
	AL-10	08/14/24 06:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
	AL-10	08/14/24 06:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
2408199-02B	AL-10	08/14/24 06:00 PM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	AL-10	08/14/24 06:00 PM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	AL-10	08/14/24 06:00 PM	Aqueous	M2540C	TDS Preparation	08/19/24 11:24 AM	116812
2408199-03A	MW-09	08/15/24 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
	MW-09	08/15/24 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
	MW-09	08/15/24 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
2408199-03B	MW-09	08/15/24 07:50 AM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-09	08/15/24 07:50 AM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-09	08/15/24 07:50 AM	Aqueous	M2540C	TDS Preparation	08/19/24 11:24 AM	116812
2408199-04A	MW-08R	08/15/24 09:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
	MW-08R	08/15/24 09:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
2408199-04B	MW-08R	08/15/24 09:00 AM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-08R	08/15/24 09:00 AM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-08R	08/15/24 09:00 AM	Aqueous	M2540C	TDS Preparation	08/19/24 11:24 AM	116812
2408199-05A	MW-05	08/15/24 10:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
	MW-05	08/15/24 10:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884
2408199-05B	MW-05	08/15/24 10:35 AM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-05	08/15/24 10:35 AM	Aqueous	E300	Anion Preparation	08/19/24 09:00 AM	116819
	MW-05	08/15/24 10:35 AM	Aqueous	M2540C	TDS Preparation	08/19/24 11:24 AM	116812
2408199-06A	MW-07	08/15/24 11:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/22/24 06:55 AM	116884

Page 1 of 2

2408199

**BBA** Engineering

OGSES-Ash Landfill-CCR

Lab Order:

**Client:** 

**Project:** 

### **PREP DATES REPORT**

Sample ID **Client Sample ID Collection Date** Matrix **Test Number** Test Name **Prep Date Batch ID** MW-07 SW3005A 116884 2408199-06A 08/15/24 11:35 AM Aqueous Aq Prep Metals : ICP-MS 08/22/24 06:55 AM MW-07 SW3005A 116884 08/15/24 11:35 AM Aqueous Aq Prep Metals : ICP-MS 08/22/24 06:55 AM 2408199-06B MW-07 08/15/24 11:35 AM Aqueous E300 Anion Preparation 08/19/24 09:00 AM 116819 MW-07 E300 Anion Preparation 08/19/24 09:00 AM 116819 08/15/24 11:35 AM Aqueous MW-07 M2540C 116812 08/15/24 11:35 AM Aqueous **TDS** Preparation 08/19/24 11:24 AM 2408199-07A DUP-1 08/15/24 11:35 AM SW3005A Aq Prep Metals : ICP-MS 08/22/24 06:55 AM 116884 Aqueous DUP-1 08/15/24 11:35 AM SW3005A Aq Prep Metals : ICP-MS 116884 Aqueous 08/22/24 06:55 AM DUP-1 08/15/24 11:35 AM Aqueous SW3005A Aq Prep Metals : ICP-MS 08/22/24 06:55 AM 116884 2408199-07B DUP-1 08/15/24 11:35 AM E300 Anion Preparation 08/19/24 09:00 AM 116819 Aqueous DUP-1 E300 Anion Preparation 116819 08/15/24 11:35 AM Aqueous 08/19/24 09:00 AM DUP-1 08/15/24 11:35 AM M2540C **TDS** Preparation 08/19/24 11:24 AM 116812 Aqueous

Lab Order:2408199Client:BBA Engineering

**Project:** OGSES-Ash Landfill-CCR

# ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2408199-01A	MW-02	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/23/24 11:02 AM	ICP-MS5_240823C
	MW-02	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/26/24 11:25 AM	ICP-MS4_240826A
2408199-01B	MW-02	Aqueous	E300	Anions by IC method - Water	116819	10	08/19/24 08:16 PM	IC2_240819B
	MW-02	Aqueous	E300	Anions by IC method - Water	116819	1	08/20/24 07:58 AM	IC2_240819B
	MW-02	Aqueous	M2540C	Total Dissolved Solids	116812	1	08/19/24 04:35 PM	WC_240819C
2408199-02A	AL-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/26/24 11:33 AM	ICP-MS4_240826A
	AL-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/23/24 11:15 AM	ICP-MS5_240823C
	AL-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	5	08/23/24 01:47 PM	ICP-MS5_240823C
2408199-02B	AL-10	Aqueous	E300	Anions by IC method - Water	116819	10	08/19/24 08:34 PM	IC2_240819B
	AL-10	Aqueous	E300	Anions by IC method - Water	116819	1	08/20/24 08:16 AM	IC2_240819B
	AL-10	Aqueous	M2540C	Total Dissolved Solids	116812	1	08/19/24 04:35 PM	WC_240819C
2408199-03A	MW-09	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/26/24 11:35 AM	ICP-MS4_240826A
	MW-09	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/23/24 11:17 AM	ICP-MS5_240823C
	MW-09	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	10	08/23/24 01:50 PM	ICP-MS5_240823C
2408199-03B	MW-09	Aqueous	E300	Anions by IC method - Water	116819	10	08/19/24 08:52 PM	IC2_240819B
	MW-09	Aqueous	E300	Anions by IC method - Water	116819	1	08/20/24 08:34 AM	IC2_240819B
	MW-09	Aqueous	M2540C	Total Dissolved Solids	116812	1	08/19/24 04:35 PM	WC_240819C
2408199-04A	MW-08R	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/23/24 11:20 AM	ICP-MS5_240823C
	MW-08R	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	10	08/26/24 11:37 AM	ICP-MS4_240826A
2408199-04B	MW-08R	Aqueous	E300	Anions by IC method - Water	116819	10	08/19/24 09:10 PM	IC2_240819B
	MW-08R	Aqueous	E300	Anions by IC method - Water	116819	1	08/20/24 08:52 AM	IC2_240819B
	MW-08R	Aqueous	M2540C	Total Dissolved Solids	116812	1	08/19/24 04:35 PM	WC_240819C
2408199-05A	MW-05	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/26/24 11:39 AM	ICP-MS4_240826A
	MW-05	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/23/24 11:22 AM	ICP-MS5_240823C
2408199-05B	MW-05	Aqueous	E300	Anions by IC method - Water	116819	10	08/19/24 09:28 PM	IC2_240819B
	MW-05	Aqueous	E300	Anions by IC method - Water	116819	1	08/20/24 09:10 AM	IC2_240819B
	MW-05	Aqueous	M2540C	Total Dissolved Solids	116812	1	08/19/24 04:35 PM	WC_240819C
2408199-06A	MW-07	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/23/24 11:25 AM	ICP-MS5_240823C

Page 1 of 2

Lab Order:2408199Client:BBA Engineering

Project: OGSES-Ash Landfill-CCR

# ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2408199-06A	MW-07	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	5	08/23/24 01:53 PM	ICP-MS5_240823C
	MW-07	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/26/24 11:41 AM	ICP-MS4_240826A
2408199-06B	MW-07	Aqueous	E300	Anions by IC method - Water	116819	1	08/20/24 09:28 AM	IC2_240819B
	MW-07	Aqueous	E300	Anions by IC method - Water	116819	10	08/19/24 09:46 PM	IC2_240819B
	MW-07	Aqueous	M2540C	Total Dissolved Solids	116812	1	08/19/24 04:35 PM	WC_240819C
2408199-07A	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/26/24 11:43 AM	ICP-MS4_240826A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	1	08/23/24 11:28 AM	ICP-MS5_240823C
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	116884	5	08/23/24 01:55 PM	ICP-MS5_240823C
2408199-07B	DUP-1	Aqueous	E300	Anions by IC method - Water	116819	10	08/19/24 10:04 PM	IC2_240819B
	DUP-1	Aqueous	E300	Anions by IC method - Water	116819	1	08/20/24 09:46 AM	IC2_240819B
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	116812	1	08/19/24 04:35 PM	WC_240819C

CLIENT:	BBA Engineering
Project:	OGSES-Ash Landfill-CCR
<b>Project No:</b>	23643V-20
Lab Order:	2408199

Client Sample ID: MW-02 Lab ID: 2408199-01

**Collection Date:** 08/14/24 03:50 PM

#### Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		SW60	20B				Analyst: SP
Boron	0.0973	0.0100	0.0300		mg/L	1	08/26/24 11:25 AM
Calcium	22.9	0.100	0.300		mg/L	1	08/23/24 11:02 AM
ANIONS BY IC METHOD - WATER		E30	00				Analyst: <b>KES</b>
Chloride	54.6	3.00	10.0		mg/L	10	08/19/24 08:16 PM
Fluoride	0.115	0.100	0.400	J	mg/L	1	08/20/24 07:58 AM
Sulfate	22.7	1.00	3.00		mg/L	1	08/20/24 07:58 AM
TOTAL DISSOLVED SOLIDS	M2540C			Analyst: KER			
Total Dissolved Solids (Residue, Filterable)	243	10.0	10.0		mg/L	1	08/19/24 04:35 PM

Qualifiers:	ND - Not Detected at the SDL
Quanners.	

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

#### Date: 27-Aug-24 **DHL** Analytical, Inc. **CLIENT: BBA** Engineering Client Sample ID: AL-10 **Project:** OGSES-Ash Landfill-CCR Lab ID: 2408199-02 **Project No:** 23643V-20 Collection Date: 08/14/24 06:00 PM Lab Order: 2408199 Matrix: AQUEOUS DF Analyses Result SDL RL Oual Units **Date Analyzed** TOTAL METALS: ICP-MS - WATER SW6020B Analyst: SP 0.0606 Boron 0.0100 0.0300 mg/L 08/26/24 11:33 AM 1 Calcium 26.8 0.500 1.50 mg/L 5 08/23/24 01:47 PM **ANIONS BY IC METHOD - WATER** E300 Analyst: KES

0.300

0.100

1.00

10.0

M2540C

1.00

0.400

3.00

10.0

mg/L

mg/L

mg/L

mg/L

1

1

1

1

08/20/24 08:16 AM

08/20/24 08:16 AM

08/20/24 08:16 AM

08/19/24 04:35 PM

Analyst: KER

9.21

76.8

206

<0.100

Qualifiers:	ND - Not Detected at the SDL

Chloride

Fluoride

Sulfate

Filterable)

TOTAL DISSOLVED SOLIDS

Total Dissolved Solids (Residue,

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 Ana	<b>Date:</b> 27-Aug-24								
CLIENT:	BBA Engineering	Client Sample ID: MW-09							
Project:	OGSES-Ash Landfill-	CCR	Lab ID: 2408199-03						
Project No:	23643V-20		<b>Collection Date: </b> 08/15/24 07:50 AM						
Lab Order:	2408199		Matrix: AQUEOUS						
Analyses		Result	SDL	RL	Qual Units	DF	Date Analyzed		
TOTAL METALS: ICP-MS - WATER			SW6020B			Analyst: <b>SP</b>			
	S: ICP-MS - WATER		3000	208			Analyst. SP		
Boron	.S: ICP-MS - WATER	0.113	0.0100	2 <b>0B</b> 0.0300	mg/L	1	•		
Boron Calcium	.S: ICP-MS - WATER	0.113 90.3			mg/L mg/L	1 10	08/26/24 11:35 AM 08/23/24 01:50 PM		
Calcium	S: ICP-MS - WATER		0.0100	0.0300 3.00	•	1 10	08/26/24 11:35 AM		
Calcium			0.0100 1.00	0.0300 3.00	•	1 10 10	08/26/24 11:35 AM 08/23/24 01:50 PM		
Calcium ANIONS BY IC		90.3	0.0100 1.00 <b>E30</b>	0.0300 3.00	mg/L	-	08/26/24 11:35 AM 08/23/24 01:50 PM Analyst: <b>KES</b>		

10.0

mg/L

TOTAL DISSOLVED SOLIDS M2540C Total Dissolved Solids (Residue, 518 10.0 Filterable)

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

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Analyst: KER

1

08/19/24 04:35 PM

DHL Analytical, Inc.			<b>Date:</b> 27-Aug-24						
CLIENT:	<b>BBA</b> Engineering			-08R					
Project:	OGSES-Ash Landfill-	1-CCR Lab ID: 2408199-04							
Project No:	23643V-20	<b>Collection Date: </b> 08/15/24 09:00 AM							
Lab Order:	2408199		Matrix: AQUEOUS						
Analyses		Result	SDL	RL	Qual Units	DF	Date Analyzed		
TOTAL META	LS: ICP-MS - WATER		SW6020B			Analyst: <b>SP</b>			
Boron		0.603	0.100	0.300	mg/L	10	08/26/24 11:37 AM		
Calcium		124	1.00	3.00	mg/L	10	08/26/24 11:37 AM		
ANIONS BY IC	METHOD - WATER		E300			Analyst: <b>KES</b>			
Chloride		142	3.00	10.0	mg/L	10	08/19/24 09:10 PM		
Fluoride		<0.100	0.100	0.400	mg/L	1	08/20/24 08:52 AM		
Sulfate		521	10.0	30.0	mg/L	10	08/19/24 09:10 PM		
			MOEA	~~			Analysty KED		

TOTAL DISSOLVED SOLIDS M2540C Analyst: **KER** Total Dissolved Solids (Residue, 1260 50.0 08/19/24 04:35 PM 50.0 mg/L 1

Filterable)

- 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 Ana	<b>Date:</b> 27-Aug-24								
CLIENT:	BBA Engineer	ing	Client Sample ID: MW-05						
Project:	OGSES-Ash L	andfill-CCR	R Lab ID: 2408199-05						
<b>Project No:</b>	23643V-20		<b>Collection Date: </b> 08/15/24 10:35 AM						
Lab Order:	2408199		Matrix: AQUEOUS						
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed	
TOTAL METAL	S: ICP-MS - WAT	ER	SW6020B				Analyst: SP		
Boron		0.0680	0.0100	0.0300		mg/L	1	08/26/24 11:39 AM	
Calcium		22.4	0.100	0.300		mg/L	1	08/23/24 11:22 AM	
ANIONS BY IC METHOD - WATER			E300					Analyst: <b>KES</b>	
Chloride		106	3.00	10.0		mg/L	10	08/19/24 09:28 PM	
Fluoride		0.252	0.100	0.400	J	mg/L	1	08/20/24 09:10 AM	

**-**

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Sulfate	12.7	1.00	3.00	mg/L	1	08/20/24 09:10 AM
TOTAL DISSOLVED SOLIDS	M2540C					Analyst: <b>KER</b>
Total Dissolved Solids (Residue, Filterable)	327	10.0	10.0	mg/L	1	08/19/24 04:35 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 Ana			Dates	:	27-Aug-24				
CLIENT:	<b>BBA</b> Engineering		Client Sample ID: MW-07						
Project:	OGSES-Ash Landfill-	CCR	Lab ID: 2408199-06						
<b>Project No:</b>	23643V-20		<b>Collection Date: </b> 08/15/24 11:35 AM						
Lab Order:	2408199		Matrix: AQUEOUS						
Analyses		Result	SDL	RL	Qual (	J <b>nits</b>	DF	Date Analyzed	
TOTAL METAL	LS: ICP-MS - WATER		SW6020B				Analyst: <b>SP</b>		
Boron		0.121	0.0100	0.0300	m	g/L	1	08/26/24 11:41 AM	
Calcium		42.0	0.500	1.50	m	g/L	5	08/23/24 01:53 PM	
ANIONS BY IC	METHOD - WATER		E300				Analyst: <b>KES</b>		
Chloride		34.1	0.300	1.00	m	g/L	1	08/20/24 09:28 AM	

Fluoride Sulfate	0.115 216	0.100 10.0	0.400 30.0	J mg mg		08/20/24 09:28 AM 0 08/19/24 09:46 PM		
TOTAL DISSOLVED SOLIDS	M2540C					Analyst: KER		
Total Dissolved Solids (Residue, Filterable)	579	10.0	10.0	mg	J/L 1	08/19/24 04:35 PM		

<b>Oualifiers:</b>	ND - Not Detected at the SDL
Quanners.	THE THE DELECTED IN THE BEE

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 Anal			D	ate:	27-Aug-24				
CLIENT:	BBA Engineeri	ng	Client Sample ID: DUP-1						
Project:	OGSES-Ash La	andfill-CCR	Lab ID: 2408199-07						
<b>Project No:</b>	23643V-20		Collection Date: 08/15/24 11:35 AM						
Lab Order:	2408199		Matrix: AQUEOUS						
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed	
TOTAL METAL	S: ICP-MS - WATI	ER	SW6020B				Analyst: SP		
Boron		0.111	0.0100	0.0300		mg/L	1	08/26/24 11:43 AM	
Calcium		41.7	0.500	1.50		mg/L	5	08/23/24 01:55 PM	
ANIONS BY IC METHOD - WATER			E300					Analyst: <b>KES</b>	
Chloride		34.3	0.300	1.00		mg/L	1	08/20/24 09:46 AM	
Fluoride		0.111	0.100	0.400	J	mg/L	1	08/20/24 09:46 AM	

#### Sulfate 215 10.0 10 08/19/24 10:04 PM 30.0 mg/L TOTAL DISSOLVED SOLIDS M2540C Analyst: KER Total Dissolved Solids (Residue, 08/19/24 04:35 PM 582 10.0 10.0 mg/L 1 Filterable)

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

**Date:** 27-Aug-24

Page 1 of 11

## CLIENT:BBA EngineeringWork Order:2408199Project:OGSES-Ash Landfill-CCR

#### ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_240606B

Sample ID: DCS2-115670	Batch ID	115670		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>DCS2</b>	Run ID:	ICP-MS4_	240606B	Analysis	Date: 6/6/2	2024 9:52:00	MA (	Prep Date:	6/5/2	024
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD I	RPDLimit Qual
Calcium		0.270	0.300	0.300	0	90.2	70	130	0	0
Sample ID: DCS4-115670	Batch ID	115670		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>DCS4</b>	Run ID:	ICP-MS4_	240606B	Analysis	Date: 6/6/2	2024 9:57:00	MA (	Prep Date:	6/5/2	024
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD I	RPDLimit Qual
Boron		0.0298	0.0300	0.0300	0	99.4	70	130	0	0

**Qualifiers:** 

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

- D Not Detected at the Method Detection Emitt
- RL Reporting Limit
- J Analyte detected between SDL and RL

DF Dilution Factor

MDLMethod Detection LimitRRPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAP certified

	100177										
Project: O	GSES-Ash L	andfil	ll-CCR				RunID	): I	CP-MS4_2	240826	A
The QC data in batch 1 06A, 2408199-07A	16884 applies	to the	following sa	amples: 240	8199-01A, 2408	199-02A, 24	408199-03A	, 2408199	9-04A, 24081	99-05A, :	2408199-
Sample ID: MB-11688	4 Ba	tch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>MBLK</b>	Ru	n ID:	ICP-MS4	_240826A	Analysis	a Date: 8/26	/2024 11:17	:00 AM	Prep Date:	8/22/20	)24
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD R	PDLimit Qual
Boron		~	<0.0100	0.0300							
Sample ID: LCS-1168	<b>34</b> Ba	tch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>LCS</b>	Ru	n ID:	ICP-MS4	_240826A	Analysis	Date: 8/26	/2024 11:19	:00 AM	Prep Date:	8/22/20	24
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD R	PDLimit Qual
Boron			0.198	0.0300	0.200	0	99.2	80	120		
Sample ID: LCSD-116	<b>884</b> Ba	tch ID:	116884		TestNo:	SW6	6020B		Units:	mg/L	
SampType: <b>LCSD</b>	Ru	n ID:	ICP-MS4	_240826A	Analysis	a Date: <b>8/26</b>	/2024 11:21	:00 AM	Prep Date:	8/22/20	24
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD R	PDLimit Qual
Boron			0.208	0.0300	0.200	0	104	80	120	4.86	15
Sample ID: 2408199-0	<b>1A SD</b> Ba	tch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>SD</b>	Ru	n ID:	ICP-MS4	_240826A	Analysis	5 Date: 8/26	/2024 11:29	:00 AM	Prep Date:	8/22/20	24
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD R	PDLimit Qual
Boron			0.117	0.150	0	0.0973				18.6	20
Sample ID: 2408199-0	1A PDS Ba	tch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>PDS</b>	Ru	n ID:	ICP-MS4	_240826A	Analysis	a Date: <b>8/26</b>	/2024 11:51	:00 AM	Prep Date:	8/22/20	)24
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD R	PDLimit Qual
Boron			0.288	0.0300	0.200	0.0973	95.2	75	125		
Sample ID: <b>2408199-0</b>	1AMS Ba	tch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>MS</b>	Ru	n ID:	ICP-MS4	_240826A	Analysis	a Date: 8/26	/2024 11:53	:00 AM	Prep Date:	8/22/20	24
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD R	PDLimit Qual
Boron			0.280	0.0300	0.200	0.0973	91.2	75	125		
Sample ID: 2408199-0	1A MSD Ba	tch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType: <b>MSD</b>	Ru	n ID:	ICP-MS4	_240826A	Analysis	a Date: 8/26	/2024 11:55	:00 AM	Prep Date:	8/22/20	)24
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	6RPD R	PDLimit Qual
Boron			0.286	0.0300	0.200	0.0973	94.2	75	125	2.16	15

**Qualifiers:** 

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

Page 2 of 11

Ν Parameter not NELAP certified

#### ANALYTICAL QC SUMMARY REPORT

**CLIENT: BBA** Engineering

2408199

Work Order:

#### **CLIENT: BBA** Engineering Work Order: 2408199

#### **Project:**

## ANALYTICAL QC SUMMARY REPORT

Project:	OGSES-A	sh Landfil	ll-CCR				RunID	: IC	CP-MS4	_240826A
Sample ID:	ICV-240826	Batch ID:	R134882		TestNo:	SW6	020B		Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_2	240826A	Analysis	Date: 8/26/2	2024 11:01	00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD RPDLimit Qual
Boron			0.0933	0.0300	0.100	0	93.3	90	110	
Calcium			2.55	0.300	2.50	0	102	90	110	
Sample ID:	LCVL-240826	Batch ID:	R134882		TestNo:	SW6	020B		Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_2	240826A	Analysis	Date: 8/26/2	2024 11:11:	00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD RPDLimit Qual
Boron			0.0220	0.0300	0.0200	0	110	80	120	
Calcium			0.0940	0.300	0.100	0	94.0	80	120	
Sample ID:	CCV1-240826	Batch ID:	R134882		TestNo:	SW6	020B		Units:	mg/L
SampType:	ссу	Run ID:	ICP-MS4_2	240826A	Analysis	Date: 8/26/2	2024 11:58	00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD RPDLimit Qual

0.200

5.00

0

0

97.4

102

90

90

110

110

Boron

Calcium

В Analyte detected in the associated Method Blank

0.195

5.10

0.0300

0.300

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

Page 3 of 11

# CLIENT: BBA Engineering Work Order: 2408199 Project: OGSES-Ash Landfill-CCR Sample ID: DCS2-115670 Batch ID: 115670 Te

#### ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_240606A

Sample ID: DCS2-115670 SampType: DCS2	Batch ID: Run ID:	115670 ICP-MS5	2406064	TestNo:		W6020B 6/2024 10:20:0	0.4M	Units: Prep Date	mg/	
Analyte	-	Result	RL	SPK value	Ref Val			-		RPDLimit Qual
Calcium		0.301	0.300	0.300	0	100	70	130	0	0

**Qualifiers:** 

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

- D Not Detected at the Method Detection Emili
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit

Page 4 of 11

- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

Project:	OGSES-A	sh Landfil	l-CCR				RunID	): I	CP-MS5_2	240823C	1 ,
The QC data 06A, 240819	a in batch 116884 ap 99-07A	plies to the	following sa	mples: 2408	8199-01A, 2408	199-02A, 2	408199-03A	, 2408199	9-04A, 240819	99-05A, 24	08199-
Sample ID:	MB-116884	Batch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType:	MBLK	Run ID:	ICP-MS5	_240823C	Analysis	3 Date: 8/23	/2024 10:49	:00 AM	Prep Date:	8/22/202	4
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPE	DLimit Qual
Calcium			<0.100	0.300							
Sample ID:	LCS-116884	Batch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType:	LCS	Run ID:	ICP-MS5	_240823C	Analysis	a Date: 8/23	/2024 10:54	:00 AM	Prep Date:	8/22/202	4
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPD	DLimit Qual
Calcium			4.83	0.300	5.00	0	96.6	80	120		
Sample ID:	LCSD-116884	Batch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType:	LCSD	Run ID:	ICP-MS5	_240823C	Analysis	a Date: 8/23	/2024 10:57	:00 AM	Prep Date:	8/22/202	4
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPD	DLimit Qual
Calcium			4.90	0.300	5.00	0	97.9	80	120	1.37	15
Sample ID:	2408199-01A SD	Batch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType:	SD	Run ID:	ICP-MS5	_240823C	Analysis	a Date: 8/23	/2024 11:04	:00 AM	Prep Date:	8/22/202	4
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPD	DLimit Qual
Calcium			22.8	1.50	0	22.9				0.341	20
Sample ID:	2408199-01A PDS	Batch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType:	PDS	Run ID:	ICP-MS5	_240823C	Analysis	a Date: 8/23	/2024 11:30	:00 AM	Prep Date:	8/22/202	4
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPD	DLimit Qual
Calcium			26.6	0.300	5.00	22.9	74.6	75	125		
Sample ID:	2408199-01A MS	Batch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType:	MS	Run ID:	ICP-MS5	_240823C	Analysis	a Date: 8/23	/2024 11:33	:00 AM	Prep Date:	8/22/202	4
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPE	DLimit Qual
Calcium			27.1	0.300	5.00	22.9	85.0	75	125		
Sample ID:	2408199-01A MSD	Batch ID:	116884		TestNo:	SWe	6020B		Units:	mg/L	
SampType:	MSD	Run ID:	ICP-MS5	_240823C	Analysis	s Date: 8/23	/2024 11:36	:00 AM	Prep Date:	8/22/202	4
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit %	RPD RPE	DLimit Qual
Calcium			27.5	0.300	5.00	22.9	93.0	75	125	1.47	15

**Qualifiers:** 

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

Page 5 of 11

Ν Parameter not NELAP certified

#### ANALYTICAL QC SUMMARY REPORT

**CLIENT: BBA** Engineering

Work Order: 2408199

Work Order:	2408199				AN		TCAL Q	ĮC SL		RY REPORT
Project:	OGSES-As	h Landfil	l-CCR				RunID	): I	CP-MS5_	_240823C
Sample ID: ICV-24	0823	Batch ID:	R134859		TestNo:	SM	V6020B		Units:	mg/L
SampType: ICV		Run ID:	ICP-MS5_	240823C	Analysis	Date: 8/2	3/2024 8:51:0	00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit	%RPD RPDLimit Qual
Calcium			2.53	0.300	2.50	0	101	90	110	
Sample ID: LCVL-2	240823	Batch ID:	R134859		TestNo:	SM	V6020B		Units:	mg/L
SampType: <b>LCVL</b>		Run ID:	ICP-MS5_	240823C	Analysis	Date: 8/2	3/2024 8:56:0	00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit	%RPD RPDLimit Qual
Calcium			0.0971	0.300	0.100	0	97.1	80	120	
Sample ID: CCV2-2	240823	Batch ID:	R134859		TestNo:	SM	V6020B		Units:	mg/L
SampType: CCV		Run ID:	ICP-MS5_	240823C	Analysis	Date: 8/2	3/2024 10:39	:00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit	%RPD RPDLimit Qual
Calcium			5.05	0.300	5.00	0	101	90	110	
Sample ID: CCV3-2	240823	Batch ID:	R134859		TestNo:	SM	V6020B		Units:	mg/L
SampType: CCV		Run ID:	ICP-MS5_	240823C	Analysis	Date: 8/2	3/2024 11:38	:00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit	%RPD RPDLimit Qual
Calcium			5.00	0.300	5.00	0	100	90	110	
Sample ID: CCV6-2	240823	Batch ID:	R134859		TestNo:	SM	V6020B		Units:	mg/L
SampType: CCV		Run ID:	ICP-MS5_	240823C	Analysis	Date: 8/2	3/2024 1:34:0	00 PM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit	%RPD RPDLimit Qual
Calcium			4.91	0.300	5.00	0	98.2	90	110	
Sample ID: CCV7-2	240823	Batch ID:	R134859		TestNo:	SM	V6020B		Units:	mg/L
SampType: <b>CCV</b>		Run ID:	ICP-MS5_	240823C	Analysis	Date: 8/2	3/2024 2:06:0	00 PM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimi	it HighLimit	%RPD RPDLimit Qual
Calcium			4.95	0.300	5.00	0	99.0	90	110	

ANALYTICAL QC SUMMARY REPORT

**Qualifiers:** 

**CLIENT:** 

**BBA** Engineering

#### В Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND

- Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit R RPD outside accepted control limits
- S Spike Recovery outside control limits

Page 6 of 11

Ν Parameter not NELAP certified

## CLIENT:BBA EngineeringWork Order:2408199Project:OGSES-Ash Landfill-CCR

#### ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_240801A

Sample ID: DCS3-116527	Batch ID:	116527		TestNo	E30	0		Units:	mg/	L
SampType: <b>DCS3</b>	Run ID:	IC2_240	0801A	Analys	is Date: <b>8/1/</b>	2024 2:22:4	4 PM	Prep Date	: 8/1/2	2024
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit	%RPD	RPDLimit Qual
Chloride		1.02	1.00	1.000	0	102	70	130	0	0
Fluoride		0.452	0.400	0.4000	0	113	70	130	0	0
Sulfate		2.92	3.00	3.000	0	97.5	70	130	0	0

**Qualifiers:** 

Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

- RL Reporting Limit

В

- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits

Page 7 of 11

- S Spike Recovery outside control limits
- N Parameter not NELAP certified

#### **CLIENT:** BBA Engineering

#### Work Order: 2408199

#### ANALYTICAL QC SUMMARY REPORT

IC2\_240819B

**RunID**:

Project: OGSES-Ash Landfill-CCR

The QC data in batch 116819 applies to the following samples: 2408199-01B, 2408199-02B, 2408199-03B, 2408199-04B, 2408199-05B, 2408199-06B, 2408199-07B

Sample ID: MB-116819	Batch ID:	116819		TestNo:	E30	0		Units:	mg/L		
SampType: <b>MBLK</b>	Run ID:	IC2_2408	819B	Analysis	s Date: <b>8/19</b>	/2024 1:13:	34 PM	Prep Date:	8/19/2	2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD F	RPDLimit	Qual
Chloride		<0.300	1.00								
Fluoride		<0.100	0.400								
Sulfate		<1.00	3.00								
Sample ID: LCS-116819	Batch ID:	116819		TestNo:	E30	0		Units:	mg/L		
SampType: <b>LCS</b>	Run ID:	IC2_2408	819B	Analysis	s Date: <b>8/19</b>	/2024 1:31:	34 PM	Prep Date:	8/19/2	2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD F	RPDLimit	Qual
Chloride		10.0	1.00	10.00	0	100	90	110			
Fluoride		4.15	0.400	4.000	0	104	90	110			
Sulfate		30.0	3.00	30.00	0	100	90	110			
Sample ID: LCSD-116819	Batch ID:	116819		TestNo:	E30	0		Units:	mg/L		
SampType: <b>LCSD</b>	Run ID:	IC2_2408	819B	Analysis	s Date: <b>8/19</b>	/2024 1:49:	34 PM	Prep Date:	8/19/2	2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD F	RPDLimit	Qual
Chloride		9.85	1.00	10.00	0	98.5	90	110	1.84	20	
Fluoride		4.08	0.400	4.000	0	102	90	110	1.81	20	
Sulfate		29.5	3.00	30.00	0	98.5	90	110	1.61	20	
Sample ID: 2408190-01BMS	Batch ID:	116819		TestNo:	E30	0		Units:	mg/L		
SampType: <b>MS</b>	Run ID:	IC2_2408	819B	Analysis	s Date: <b>8/19</b>	/2024 6:46:	21 PM	Prep Date:	8/19/2	2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD F	RPDLimit	Qual
Chloride		4430	100	2000	2779	82.8	90	110			S
Fluoride		2100	40.0	2000	16.96	104	90	110			
Sulfate		4420	300	2000	2532	94.5	90	110			
Sample ID: 2408190-01BMSD	Batch ID:	116819		TestNo:	E30	0		Units:	mg/L		
SampType: <b>MSD</b>	Run ID:	IC2_2408	819B	Analysis	s Date: <b>8/19</b>	/2024 7:04:	21 PM	Prep Date:	8/19/2	2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit %	6RPD F	RPDLimit	Qual
Chloride		4460	100	2000	2779	84.0	90	110	0.566	20	S
Fluoride		2100	40.0	2000	16.96	104	90	110	0.060	20	
Sulfate		4460	300	2000	2532	96.3	90	110	0.816	20	

**Qualifiers:** Analyte detected in the associated Method Blank DF Dilution Factor В J Analyte detected between MDL and RL MDL Method Detection Limit RPD outside accepted control limits ND Not Detected at the Method Detection Limit R RL Reporting Limit S Spike Recovery outside control limits

Analyte detected between SDL and RL

J

N Parameter not NELAP certified

Page 8 of 11

#### **CLIENT: BBA** Engineering Work Order: 2408199

#### ANALYTICAL QC SUMMARY REPORT

**Project:** 

#### IC2 240819B **RunID:** OGSES-Ash Landfill-CCR Sample ID: 2408236-01BMS Batch ID: 116819 TestNo: E300 Units: mg/L SampType: MS Run ID: IC2\_240819B Analysis Date: 8/19/2024 7:40:21 PM Prep Date: 8/19/2024 RL SPK value LowLimit HighLimit %RPD RPDLimit Qual Analyte Result Ref Val %REC Chloride 237 10.0 200.0 41.80 97.8 90 110 Fluoride 207 4.00 200.0 3.054 102 90 110 Sulfate 1300 30.0 200.0 1176 62.0 90 110 S Sample ID: 2408236-01BMSD Batch ID: 116819 TestNo: E300 Units: mg/L SampType: MSD IC2\_240819B Run ID: Analysis Date: 8/19/2024 7:58:21 PM Prep Date: 8/19/2024

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimi	t %RPD	RPDLimit	Qual
Chloride	240	10.0	200.0	41.80	98.9	90	110	0.943	20	
Fluoride	209	4.00	200.0	3.054	103	90	110	0.916	20	
Sulfate	1310	30.0	200.0	1176	68.5	90	110	0.993	20	S

Qualifiers:

В

Analyte detected in the associated Method Blank

Analyte detected between MDL and RL J Not Detected at the Method Detection Limit ND

RL Reporting Limit

Analyte detected between SDL and RL J

Dilution Factor DF

MDL Method Detection Limit R RPD outside accepted control limits

- S Spike Recovery outside control limits
- Ν Parameter not NELAP certified

Page 9 of 11

#### **CLIENT: BBA** Engineering

Work Order:

#### ANALYTICAL QC SUMMARY REPORT

2408199 **Project:** OGSES-Ash Landfill-CCR

Sample ID: ICV-240819	Batch ID:	R134743		TestNo	E300	D		Units:	mg/L	
SampType: <b>ICV</b>	Run ID:	IC2_2408	19B	Analysi	s Date: <b>8/19</b>	/2024 12:15	5:01 PM	Prep Date	e:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPD	Limit Qual
Chloride		25.1	1.00	25.00	0	100	90	110		
Fluoride		10.2	0.400	10.00	0	102	90	110		
Sulfate		76.6	3.00	75.00	0	102	90	110		
Sample ID: CCV1-240819	Batch ID:	R134743		TestNo	E300	D		Units:	mg/L	
SampType: <b>ССV</b>	Run ID:	IC2_2408	19B	Analysi	s Date: <b>8/19</b>	/2024 2:51:	56 PM	Prep Date	e:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPD	Limit Qual
Chloride		9.82	1.00	10.00	0	98.2	90	110		
Fluoride		4.09	0.400	4.000	0	102	90	110		
Sulfate		29.5	3.00	30.00	0	98.4	90	110		
Sample ID: CCV2-240819	Batch ID:	R134743		TestNo	E300	D		Units:	mg/L	
SampType: <b>ССV</b>	Run ID:	IC2_2408	19B	Analysi	s Date: <b>8/19</b>	/2024 10:58	3:21 PM	Prep Date	e:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPD	Limit Qual
Chloride		10.1	1.00	10.00	0	101	90	110		
Fluoride		4.24	0.400	4.000	0	106	90	110		
Sulfate		30.5	3.00	30.00	0	102	90	110		
Sample ID: CCV4-240819	Batch ID:	R134743		TestNo	E300	D		Units:	mg/L	
SampType: <b>ССV</b>	Run ID:	IC2_2408	19B	Analysi	s Date: <b>8/20</b>	/2024 7:40:	21 AM	Prep Date	):	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPD	Limit Qual
Chloride		10.1	1.00	10.00	0	101	90	110		
Fluoride		4.27	0.400	4.000	0	107	90	110		
Sulfate		30.7	3.00	30.00	0	102	90	110		
Sample ID: CCV5-240819	Batch ID:	R134743		TestNo	E300	D		Units:	mg/L	
SampType: <b>ССV</b>	Run ID:	IC2_2408	19B	Analysi	s Date: <b>8/20</b>	/2024 11:16	6:21 AM	Prep Date	e:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPD	Limit Qual
Chloride		10.1	1.00	10.00	0	101	90	110		
Fluoride		4.29	0.400	4.000	0	107	90	110		
Sulfate		30.8	3.00	30.00	0	103	90	110		

**Qualifiers:** В 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

Page 10 of 11

Ν Parameter not NELAP certified

CLIENT:	BBA Engineering	A NT A T X7/T

#### ANALYTICAL QC SUMMARY REPORT

**RunID:** 

WC\_240819C

Page 11 of 11

Project: OGSES-Ash Landfill-CCR

2408199

Work Order:

The QC data in batch 116812 applies to the following samples: 2408199-01B, 2408199-02B, 2408199-03B, 2408199-04B, 2408199-05B, 2408199-06B, 2408199-07B

Sample ID: MB-116812	Batch ID:	116812		TestNo:	M25	40C		Units:	mg/L	
SampType: <b>MBLK</b>	Run ID:	WC_240819	C	Analysis	a Date: <b>8/19</b> /	/2024 4:35:	00 PM	Prep Date:	8/19/2024	4
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	RPD RPD	Limit Qual
Total Dissolved Solids (Residue,	Filtera	<10.0	10.0							
Sample ID: LCS-116812	Batch ID:	116812		TestNo:	M25	40C		Units:	mg/L	
SampType: <b>LCS</b>	Run ID:	WC_240819	C	Analysis	a Date: <b>8/19</b> /	/2024 4:35:	00 PM	Prep Date:	8/19/2024	4
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimi	t HighLimit %	RPD RPD	Limit Qual
Total Dissolved Solids (Residue,	Filtera	751	10.0	745.6	0	101	90	113		
Sample ID: 2408200-04B-DUP	Batch ID:	116812		TestNo:	M25	40C		Units:	mg/L	
Sample ID: <b>2408200-04B-DUP</b> SampType: <b>DUP</b>	Batch ID: Run ID:	116812 WC_240819	)C		M25 Date: 8/19/		00 PM	Units: Prep Date:	mg/L 8/19/2024	4
-	Run ID:		P <b>C</b> RL		-				8/19/2024	
SampType: <b>DUP</b>	Run ID:	WC_240819		Analysis	a Date: 8/19/	/2024 4:35:		Prep Date:	8/19/2024	
SampType: <b>DUP</b> Analyte	Run ID:	WC_240819 Result	RL	Analysis SPK value	B Date: <b>8/19/</b> Ref Val 2120	/2024 4:35: %REC		Prep Date:	8/19/2024	Limit Qual
SampType: <b>DUP</b> Analyte Total Dissolved Solids (Residue,	Run ID: Filtera	WC_240819 Result 2030	RL 50.0	Analysis SPK value 0 TestNo:	B Date: <b>8/19/</b> Ref Val 2120	/2024 4:35: %REC 40C	LowLimi	Prep Date: t HighLimit %	8/19/2024 5RPD RPD 4.58	Limit Qual
SampType: <b>DUP</b> Analyte Total Dissolved Solids (Residue, Sample ID: <b>2408200-08B-DUP</b>	Run ID: Filtera Batch ID: Run ID:	WC_240819 Result 2030 116812	RL 50.0	Analysis SPK value 0 TestNo:	Date: <b>8/19</b> Ref Val 2120 <b>M25</b>	/2024 4:35: %REC 40C	LowLimi	Prep Date: t HighLimit % Units:	8/19/2024 5RPD RPD 4.58 mg/L 8/19/2024	Limit Qual 5 4

Qualifiers:	В	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	Ν	Parameter not NELAP certified

#### CLIENT: BBA Engineering

Work Order:2408199Project:OGSES-Ash Landfill-CCR

0								
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						
Boron	0.0100	0.0300						
Calcium	0.100	0.300						
TestNo: M2540C	MDL	MQL						
Analyte	mg/L	mg/L						
Total Dissolved Solids (Residue, Filt 10.0 10.0								

#### **MQL SUMMARY REPORT**



October 31, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198
FAX:
RE: OGSES-Ash Landfill-CCR

Order No.: 2410212

Dear Will Vienne:

DHL Analytical, Inc. received 1 sample(s) on 10/23/2024 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,

Joel Grice Executive VP of Environmental

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211 - TX-C24-00120



## Table of Contents

Miscellaneous Documents	
CaseNarrative 2410212	
WorkOrderSampleSummary 2410212	
PrepDatesReport 2410212	
AnalyticalDatesReport 2410212	
Analytical Report 2410212	
AnalyticalQCSummaryReport 2410212	
MQLSummaryReport 2410212	

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	NA I	. Y T I	CAL					ww logii				-			1													DA.	GE	ł	OF	١
CLIENT: BBA						Email: login@dhlanalytical.com DATE: 10-23-24									AB	USE	0		,							1						
ADDRESS: 165 N. LA	MDQ	585 55	REY	onea	M. N	P(	)#:	: 2	31	<u>د م</u> 4	131	<u> </u>	Ń	7							)HL	wc	RK	OR	DEI	R #:	$\widehat{\mathcal{A}}$	14		02	21.	2
PHONE: 512-355-9	198	EMAIL:		- 11-11	<u>equa</u>										1	$\sim$	<u>.</u>	~	~													
DATA REPORTED TO:	4/1		NALE					ECT L									56	2 -	-14	SH	Ľ	H		F	n	<i>L</i> -	- (	_C	R			
ADDITIONAL REPORT CO	PIES TO					CL	IEN	T PR	OJE	CT i	# 🎾	23(	64	31	-2	D				C	OLL	EC1	OR		ЪH	N	B	eA	41	on		
Authorize 5% surcharge		W=WATE	R	SE=SE	DIMENT			ESER								T		11														
for TRRP report?	Lab	L=LIQUID		P=PAI	NT							[05	0 1006				r 8270	□ 625	ONIA	METAI	0		ERB		ASE	DE						
🗆 Yes 🛛 No	Use	S=SOIL		SL=SL	UDGE	s	04		tate	ŽE[	្រ	D 82(	ног				P PES	8270	AMM	DISS. I				14	& GRE	CVAN						
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						nta				NPR	Į		TPH 1	DRO		Ы	625.1	08.3	ΤPH			1 905	VOC		DGAS	W WC	RORON					
Field Sample I.D.	DHL	Collection	Collection	Matrix	Container	l S		പ്പ	칠도		ן₹	MTB		15 [	270 0		2	20	321 🗆	5 6020	<   분 기 법	3300	۵ ۱	ETALS		TSS []	R					
	Lab #	Date	Time		Туре	# of Containers	HCL 🗆	HNO <sub>3</sub>				втех 🗆 мтве 🗆 [метнор 8260]	TPH 1005 🗆 TPH 1006 🗆 HOLD 1006 🗆	GRO 8015 🗆 DRO 8015 🗆	VOC 8260 □ VOC 624.1 □ SVOC 8270 □ SVOC 625.1 □	РАН 8270 🗌 НОІЪ РАН 🗌	PEST 8270 🗆 625.1 🗆 O-P PEST 8270 🗆	PCB 8082 🗆 608.3 🗆 PCB 8270 🗆 625.1 🗆	HERB 8321 🗆 T PHOS 🗆 AMMONIA 🗆	METALS 6020 🗆 200.8 🗆 DISS. METALS 🗆		ANIONS 300 0 9056 0	TCLP-SVOC	TCLP-METALS 🗆 RCRA 8 🗆 TX-11 🗆 Pb 🗇	rci 🗆 ign 🗆 dgas 🗆 oil&grease 🗆	TDS 🗆 TSS 🗆 % MOIST 🗆 CYANIDE 🗆	函	;		FIEI	LD NO	TES
MW-08R	01	10-23-24	1010	4	P	5		X	$\dagger$	X						<u>†</u>	Ť					T	T				X	Ħ				
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Relinquibled By: (ATET) DATE/TIME Receiv				l red b	V:			$\frac{1}{1}$													<u> </u>		<u> </u>				<u> </u>	RMO #	25	2		
Sohn		10-2	23-24	165	2			_						OUN ST FC						e on Ng t		? (°C)	):	م سر	5.	. 1	r		1 112		: 70	,
Relinquished By: (Sign)		<b>_</b>	DATE/TIME		Receiv						IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO																					
														-3 D																NTACT	•	
Relinquished By: (Sign)			DATE/TIME		Receiv	ed b	y:					DRM/ DATE		×	отн	ERD		1	RIE	R: □	LSO	□ F	EDE	XC	וט ב	PS [	] CC	)URI	IER	∑(ĤANI	D DELIV	/ERED

	Sample	Receipt Check	klist		
Client Name: BBA Engineering			Date Receive	ed: 10/23/2024	
Work Order Number: 2410212			Received by:	EL	
5					
Checklist completed by: Signature	10/23/20 Date	24	Reviewed by:	Initials	10/23/2024 Date
				" Male	
	Carrier name:	Hand Delivered			
Shipping container/cooler in good condition?		Yes 🗹	No 🗌	Not Present	
Custody seals intact on shipping container/cool	er?	Yes	Νο	Not Present 🗹	
Custody seals intact on sample bottles?		Yes	Νο	Not Present	
Chain of custody present?		Yes 🗹	Νο		
Chain of custody signed when relinquished and	received?	Yes 🗹	No 🗌		
Chain of custody agrees with sample labels?		Yes 🗹	Νο		
Samples in proper container/bottle?		Yes 🗹	Νο		
Sample containers intact?		Yes 🗹	No 🗌		
Sufficient sample volume for indicated test?		Yes 🗹	No 🗌		
All samples received within holding time?		Yes 🗹	No 🗌		
Water - VOA vials have zero headspace?		Yes 🗌	No 🗌 🛛 🛛	No VOA vials submitte	ed 🗹 NA 🗌
Water - pH<2 acceptable upon receipt?		Yes 🗹	No 🗌 🛛 🛚 N		13171
		Adjusted? 1	0	Checked by	
Water - ph>9 (S) or ph>10 (CN) acceptable upo	n receipt?	Yes	No 🗌 🛛 N	NA 🗹 LOT #	
		Adjusted?		Checked by	
Container/Temp Blank temperature in complian	ce?	Yes 🗹	No 🗌		
Cooler # 1					
Temp °C 3.4					
Seal Intact NP					
Any No response must be detailed in the comm	ents section below.				
Client contacted:	Date contacted:		Pers	on contacted:	
Contacted by:	Regarding:				
Comments:					
Corrective Action:					

		tory Name: DHL Analytical, Inc. tory Review Checklist: Reportable Data					
Proje	ect Na	me: OGSES-Ash Landfill-CCR LRC D	ate: 10/31/2024				
Revie	ewer l	Name: Angie O'Donnell Labora	tory Work Order: 2410212				
			tch: See Analytical Dates Report				
#1	A <sup>2</sup>	Description		Yes	No N	A <sup>3</sup> NR <sup>4</sup>	ER# <sup>5</sup>
		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
		<ul><li>2) Were all departures from standard conditions described in an exception report?</li></ul>				X	
R2	OI	Sample and Quality Control (QC) Identification	▲ ▲				
		1) Are all field sample ID numbers cross-referenced to the laborator		Χ			
-		2) Are all laboratory ID numbers cross-referenced to the correspond	ling QC data?	Χ			
R3	OI	Test Reports		X			
		1) Were all samples prepared and analyzed within holding times?	4 - 4 h1:h4:444	X X			
		<ul><li>2) Other than those results &lt; MQL, were all other raw values bracked</li><li>3) Were calculations checked by a peer or supervisor?</li></ul>	eted by calibration standards?	X X			
		<ul><li>4) Were all analyte identifications checked by a peer or supervisor?</li></ul>		A X			
		5) Were sample detection limits reported for all analytes not detected					<u> </u>
		6) Were all results for soil and sediment samples reported on a dry v				X	<u> </u>
		7) Were % moisture (or solids) reported for all soil and sediment sa	0			X	
		8) Were bulk soils/solids samples for volatile analysis extracted wit				X	
		9) If required for the project, TICs reported?				X	
R4	0	Surrogate Recovery Data					
		1) Were surrogates added prior to extraction?				X	
		2) Were surrogate percent recoveries in all samples within the labor	atory 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?	including any action and if	Χ			
		<b>3)</b> Where method blanks taken through the entire analytical process applicable, cleanup procedures?	, including preparation and, if	Χ			
		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 co				X	
<b>R6</b>	OI	Laboratory Control Samples (LCS):					
		1) Were all COCs included in the LCS?		Χ			
		2) Was each LCS taken through the entire analytical procedure, include	uding prep and cleanup steps?	Χ			
		3) Were LCSs analyzed at the required frequency?		Χ			
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory		Χ			<u> </u>
		5) Does the detectability data document the laboratory's capability to $\frac{1}{2}$	to detect the COCs at the MDL used	X			
		to calculate the SDLs? 6) Was the LCSD RPD within QC limits (if applicable)?		X			
<b>R</b> 7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data		Λ			1
		1) Were the project/method specified analytes included in the MS a	nd MSD?	Χ			
		2) Were MS/MSD analyzed at the appropriate frequency?	·	X			
		3) Were MS (and MSD, if applicable) %Rs within the laboratory Q	C limits?	X			
		4) Were MS/MSD RPDs within laboratory QC limits?		Χ			
<b>R8</b>	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):		N.Y.			
		1) Are the MQLs for each method analyte included in the laboratory		X			<u> </u>
		2) Do the MQLs correspond to the concentration of the lowest non-		X X			
R10	OI	3) Are unadjusted MQLs and DCSs included in the laboratory data Other Problems/Anomalies	package?	Λ			
N10	01	1) Are all known problems/anomalies/special conditions noted in th	is LRC and FR?	X			
		<ol> <li>Ale an known problems/anomanes/special conditions noted in the</li> <li>Was applicable and available technology used to lower the SDL to</li> </ol>		A X			
	affects on the sample results?						
		3) Is the laboratory NELAC-accredited under the Texas Laboratory	Accreditation Program for the	v			
		analytes, matrices and methods associated with this laboratory data		X			

Labor Project Reviewe Prep Ba # <sup>1</sup> 2	rat t Na ver I		0								
Review Prep Ba #1 A	ver I	me: OGSES-Ash Landfill-CCR LRC		Laboratory Review Checklist (continued): Supporting Data							
Prep Ba #1 A			<b>C Date:</b> 10/31/2024								
Prep Ba #1 A		Name: Angie O'Donnell Lab	ooratory Work Order: 2410212								
# <sup>1</sup> A	Prep Batch Number(s): See Prep Dates Report Run Batch: See Analytical Dates Report										
	$A^2$	Description	· · ·	es	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>			
		Initial Calibration (ICAL)									
		1) Were response factors and/or relative response factors for each	a analyta within OC limita?	X							
	-	2) Were percent RSDs or correlation coefficient criteria met?		A X							
		3) Was the number of standards recommended in the method used		X							
		4) Were all points generated between the lowest and highest stand	, ,	X							
		5) Are ICAL data available for all instruments used?		X							
		6) Has the initial calibration curve been verified using an appropr		X							
S2 (		Initial and Continuing calibration Verification (ICCV and CC									
		blank (CCB):	ev) and continuing canoration								
		1) Was the CCV analyzed at the method-required frequency?	,	X							
		2) Were percent differences for each analyte within the method-re		X							
		3) Was the ICAL curve verified for each analyte?		X							
		4) Was the absolute value of the analyte concentration in the inor		X							
S3 (		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 limit		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?										
		2) Were data associated with manual integrations flagged on the r		X X							
S6 (	S6         O         Dual Column Confirmation										
~~		1) Did dual column confirmation results meet the method-require	ed QC?			Χ					
S7 (		Tentatively Identified Compounds (TICs):									
		1) If TICs were requested, were the mass spectra and TIC data su	bject to appropriate checks?			Χ					
<b>S8</b>		Interference Check Sample (ICS) Results:									
		1) Were percent recoveries within method QC limits?	2	X							
<b>S9</b>		Serial Dilutions, Post Digestion Spikes, and Method of Standa	ard Additions								
		1) Were percent differences, recoveries, and the linearity with	thin the OC limits specified in the								
		method?		X							
<b>S10</b>	OI	Method Detection Limit (MDL) Studies									
510 (		1) Was a MDL study performed for each reported analyte?		X							
		2) Is the MDL either adjusted or supported by the analysis of DCS		X							
<b>S11</b> (		Proficiency Test Reports:		Λ							
511 (		1) Was the lab's performance acceptable on the applicable profici-	iency tests or evaluation studies?	X							
<b>S12</b> (		Standards Documentation									
~~~		1) Are all standards used in the analyses NIST-traceable or obtain	ned from other appropriate sources?	X							
<b>S13</b> (		Compound/Analyte Identification Procedures		-							
~~~		1) Are the procedures for compound/analyte identification docum	nented?	X							
S14 (		Demonstration of Analyst Competency (DOC)		-							
		1) Was DOC conducted consistent with NELAC Chapter 5 – App	pendix C?	X							
		2) Is documentation of the analyst's competency up-to-date and o		X							
<b>S15</b> (		Verification/Validation Documentation for Methods (NELAC									
		1) Are all the methods used to generate the data document	ted verified and validated where								
		applicable?		X							
<b>S16</b>		Laboratory Standard Operating Procedures (SOPs):									
			armod2	v							
		1) Are laboratory SOPs current and on file for each method perfor		X							

<sup>1</sup> 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.

<sup>2</sup> O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

<sup>3</sup> NA = Not applicable.

<sup>4</sup> NR = Not Reviewed.

<sup>5</sup> 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:

R4

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).
  - Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) The amount of analyte measured in the duplicate,
  - b) The calculated RPD, and
  - c) The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.

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

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

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

Name:	Joel Grice
Official Title:	Executive VP
	of Environmental

Name: Don Winston Official Title: Technical Director

Signature 10/31/2024 Date

CLIENT:BBA EngineeringProject:OGSES-Ash Landfill-CCRLab Order:2410212

#### CASE NARRATIVE

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

Method SW6020B - Metals Analysis

Exception Report R1-01

The samples were received and log-in performed on 10/23/2024. A total of 1 sample was received and analyzed. The sample arrived in good condition and was properly packaged.

\_

CLIENT:	BBA Engineering	
Project:	OGSES-Ash Landfill-CCR	Work Order Sample Summary
Lab Order:	2410212	

Tag Number

#### Lab Smp ID Client Sample ID

2410212-01 MW-08R

**Date:** 31-Oct-24

Date Collected	Date Recved
10/23/24 10:10 AM	10/23/2024

\_

Lab Order:	2410212
Client:	<b>BBA</b> Engineering
Project:	OGSES-Ash Landfill-CCR

## PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2410212-01A	MW-08R	10/23/24 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/25/24 06:59 AM	117696
	MW-08R	10/23/24 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/25/24 06:59 AM	117696

Lab Order: Client: Project:	2410212 BBA Engineerir OGSES-Ash Lat	-			ANALYTICAL DATES REPORT
Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID Dilution Analysis Date Run ID

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2410212-01A	MW-08R	Aqueous	SW6020B	Total Metals: ICP-MS - Water	117696	1	10/28/24 11:17 AM	ICP-MS5_241028A
	MW-08R	Aqueous	SW6020B	Total Metals: ICP-MS - Water	117696	1	10/28/24 12:06 PM	ICP-MS4_241028B

DHL Ana	lytical, Inc.							
CLIENT:	BBA Engineering			Clier	t Sampl	<b>e ID:</b> MW-0	8R	
Project:	OGSES-Ash Landfill-	CCR			La	<b>b ID:</b> 24102	12-01	
Project No:	23643V-20	Collection Date: 10/23/24 10:10 AM						
Lab Order:	2410212				Ma	atrix: AQUE	EOUS	
Analyses		Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METAL Boron	-S: ICP-MS - WATER	0.521	<b>SW60</b> 0.0100	<b>20B</b> 0.0300		mg/L	1	Analyst: <b>CMC</b> 10/28/24 12:06 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

Page 1 of 3

## CLIENT:BBA EngineeringANALYTICWork Order:2410212Project:OGSES-Ash Landfill-CCR

#### ANALYTICAL QC SUMMARY REPORT

#### RunID: ICP-MS4\_240910A

	- Ion Bundin										
Sample ID: DCS4-117075	Batch ID:	117075		TestNo	): <b>SV</b>	W6020B		Units:	mg/	L	
SampType: <b>DCS4</b>	Run ID:	ICP-MS	64_240910A	Analys	is Date: <b>9/</b> *	10/2024 11:10	00 AM	Prep Date	e: 9/6/	2024	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD	RPDLimit (	Qual
Boron		0.0292	0.0300	0.0300	0	97.3	70	130	0	0	

**Qualifiers:** 

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit

- RL Reporting Limit
- J Analyte detected between SDL and RL
- DF Dilution Factor
- MDL Method Detection Limit
  - R RPD outside accepted control limits
  - S Spike Recovery outside control limits
  - N Parameter not NELAP certified

	A Engineering 0212		A	NALYT	ICAL (	)C SU	MMAR	RY REPO	RT
	SES-Ash Landfill	-CCR			RunID	): I(	CP-MS4_2	241028B	
The QC data in batch 117	7696 applies to the f	ollowing samples:	2410212-01A						
Sample ID: MB-117696	Batch ID:	117696	TestN	lo: SW6	6020B		Units:	mg/L	
SampType: <b>MBLK</b>	Run ID:	ICP-MS4_241028	BB Analy	vsis Date: 10/2	8/2024 11:5	0:00 A	Prep Date:	10/25/2024	
Analyte	F	Result RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit %	6RPD RPDLimi	it Qual
Boron	<	0.0100 0.030	0						
Sample ID: LCS-117696	Batch ID:	117696	TestN	lo: SW6	6020B		Units:	mg/L	
SampType: <b>LCS</b>	Run ID:	ICP-MS4_241028	BB Analy	vsis Date: 10/2	8/2024 11:5	2:00 A	Prep Date:	10/25/2024	
Analyte	F	Result RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit %	6RPD RPDLimi	it Qual
Boron		0.191 0.030	0 0.200	0	95.4	80	120		
Sample ID: LCSD-11769	Batch ID:	117696	TestN	lo: SW6	6020B		Units:	mg/L	
SampType: <b>LCSD</b>	Run ID:	ICP-MS4_241028	BB Analy	vsis Date: 10/2	8/2024 11:5	4:00 A	Prep Date:	10/25/2024	
Analyte	F	Result RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit %	6RPD RPDLimi	it Qual
Boron		0.208 0.030	0 0.200	0	104	80	120	8.57 15	
Sample ID: 2410196-138	B SD Batch ID:	117696	TestN	lo: SW6	6020B		Units:	mg/L	
SampType: <b>SD</b>	Run ID:	ICP-MS4_241028	BB Analy	vsis Date: 10/2	8/2024 12:0	3:00 P	Prep Date:	10/25/2024	
Analyte	F	Result RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit %	%RPD RPDLimi	it Qual
Boron		7.98 3.00	0	7.39				7.73 20	
Sample ID: 2410196-138	B PDS Batch ID:	117696	TestN	lo: SW6	6020B		Units:	mg/L	
SampType: <b>PDS</b>	Run ID:	ICP-MS4_241028	BB Analy	vsis Date: 10/2	8/2024 12:1	8:00 P	Prep Date:	10/25/2024	
Analyte	F	Result RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit %	6RPD RPDLimi	it Qual
Boron		11.6 0.60	0 4.00	7.39	105	75	125		
Sample ID: 2410196-13	BMS Batch ID:	117696	TestN	lo: SW6	6020B		Units:	mg/L	
SampType: <b>MS</b>	Run ID:	ICP-MS4_241028	BB Analy	vsis Date: <b>10/2</b>	8/2024 12:2	0:00 P	Prep Date:	10/25/2024	
Analyte	F	Result RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit %	6RPD RPDLimi	it Qual
Boron		7.88 0.60	0 0.200	7.39	245	75	125		S
Sample ID: 2410196-13	B MSD Batch ID:	117696	TestN	lo: SWe	6020B		Units:	mg/L	
SampType: <b>MSD</b>	Run ID:	ICP-MS4_241028	BB Analy	vsis Date: 10/2	8/2024 12:2	2:00 P	Prep Date:	10/25/2024	
Analyte	F	Result RL	SPK value	Ref Val	%REC	LowLimit	t HighLimit %	6RPD RPDLimi	it Qual
Boron		7.81 0.60	0.200	7.39	211	75	125	0.879 15	S

Qualifiers: В Analyte detected in the associated Method Blank DF Dilution Factor Page 2 of 3 Analyte detected between MDL and RL MDL Method Detection Limit J 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 Ν Parameter not NELAP certified

Work Order:	2410212	2			AN	ALYI	ICAL (	<b>2C SI</b>	JIVIIVIA	RY REPORT
Project:	OGSES-	-Ash Landfil	1-CCR				RunII	): I	CP-MS4	_241028B
Sample ID: ICV-2	41028	Batch ID:	R13588	5	TestNo:	SW	6020B		Units:	mg/L
SampType: <b>ICV</b>		Run ID:	ICP-MS	4_241028B	Analysis	s Date: 10/2	28/2024 9:39	9:00 AM	Prep Date	r:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPDLimit Qual
Boron			0.0951	0.0300	0.100	0	95.1	90	110	
Sample ID: LCVL	-241028	Batch ID:	R13588	5	TestNo:	SW	6020B		Units:	mg/L
SampType: <b>LCVL</b>		Run ID:	ICP-MS	4_241028B	Analysis	s Date: 10/2	28/2024 9:45	5:00 AM	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPDLimit Qual
Boron			0.0237	0.0300	0.0200	0	118	80	120	
Sample ID: CCV1	-241028	Batch ID:	R13588	5	TestNo:	sw	6020B		Units:	mg/L
SampType: <b>ССV</b>		Run ID:	ICP-MS	4_241028B	Analysis	s Date: 10/2	28/2024 10:2	25:00 A	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPDLimit Qual
Boron			0.198	0.0300	0.200	0	98.9	90	110	
Sample ID: CCV2	2-241028	Batch ID:	R13588	5	TestNo:	SW	6020B		Units:	mg/L
SampType: <b>ССV</b>		Run ID:	ICP-MS	4_241028B	Analysis	s Date: 10/2	28/2024 12:2	25:00 P	Prep Date	:
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLim	it HighLimit	%RPD RPDLimit Qual
Boron			0.200	0.0300	0.200	0	99.9	90	110	

**BBA** Engineering

**CLIENT:** 

Page 3 of 3

ANALYTICAL QC SUMMARY REPORT

Qualifiers:	В	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	Ν	Parameter not NELAP certified

CLIENT: Work Order: Project:	BA Engineering 110212 GSES-Ash Landfill-CCR	
TestNo: SW6020B	MDL	MQL
Analyte Boron	<b>mg/L</b>	<b>mg/L</b> 0.0300

APPENDIX B

ALTERNATE SOURCE DEMONSTRATION

FOR THE 2023 REPORTING PERIOD



Bullock, Bennett & Associates, LLC \* 165 N. Lampasas Street \* Bertram, Texas 78605 Telephone: 512.355.9198 \* Fax: 512.355.9197

> March 8, 2024 BBA Project No. 23643-05

Mr. Eric Chavers Luminant Generation Company LLC 6555 Sierra Drive Irving, Texas 75039

#### RE: ALTERNATE SOURCE DEMONSTRATION OAK GROVE STEAM ELECTRIC STATION – ASH LANDFILL 1 RUSK COUNTY, TEXAS

#### 1.0 INTRODUCTION

This Alternate Source Demonstration (ASD) was prepared to document that a source other than the Ash Landfill 1 (the Site) caused the statistically significant increases (SSIs) over background levels observed during the 2023 Coal Combustion Residual (CCR) Detection Monitoring Program sampling events as required by 40 C.F.R. § 257.94(e)(2) of the federal CCR Rule. The Texas Commission on Environmental Quality (TCEQ) has adopted portions of the federal CCR rule at 30 T.A.C. Chapter 352 (Texas CCR Rule). 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) and the Federal CCR Program requirements for detection and assessment monitoring at 40 C.F.R. §257.94 and § 257.95 (See 30 T.A.C. §352.941 and 30 T.A.C. § 352.951). Pursuant to 30 T.A.C. § 352.941(c)(1), a notification was submitted to the Executive Director pursuant to 30 T.A.C. § 352.941(c)(2).

#### 2.0 ASH LANDFILL 1 CCR MONITORING WELL NETWORK

A Site Plan of the Ash Landfill 1 and vicinity is shown on Figure 1. The CCR groundwater monitoring well system at the Ash Landfill 1 consists of six monitoring wells (MW-02, MW-05, MW-07, MW-08R, MW-09, and AL-10) that are each screened in the uppermost aquifer at the Site. The uppermost aquifer at the Site occurs under unconfined conditions within the shallow sand units at the Site (PBW 2017). Groundwater elevations have consistently been highest west of the Ash Landfill 1 and lowest east of the Ash Landfill 1 during the baseline and detection monitoring period, with a general groundwater flow direction from west to east (Attachment 1). Based on the observed groundwater gradient at the Site, the location of each CCR monitoring well relative to the Ash Landfill 1 is as follows

Upgradient/Background Wells	Downgradient Wells
MW-02	MW-05
AL-10	MW-07
	MW-08R
	MW-09

#### 3.0 2023 SEMI-ANNUAL DETECTION MONITORING RESULTS AND DISCUSSION

At the beginning and end of the 2023 reporting period, the Ash Landfill 1 was operating under a Detection Monitoring Program as described in 40 C.F.R. § 257.94. The Detection Monitoring Program for the Ash Landfill 1 was established in September 2017. Groundwater sample data collected from the CCR groundwater monitoring well network during the baseline and detection monitoring periods from 2015 through 2023 are summarized in Table 1.

During the 2023 reporting period, SSIs above background prediction limits were identified for boron and sulfate in downgradient wells MW-07 and MW-09 (maximum boron concentration of 0.228 mg/L and maximum sulfate concentration of 162 mg/L). Boron and sulfate SSIs above background prediction limits have historically been observed in the Ash Landfill 1 background wells AL-10 and MW-02 (maximum boron concentration of 0.166 mg/L and maximum sulfate concentration of 131 mg/L). Boron and sulfate SSIs have also been observed at the Site in the FGD Pond Area CCR background wells FGD-8 and FGD-11, which are located north and not directly downgradient of the Ash Landfill 1 (BBA, 2024). The maximum historical concentrations in the FGD Pond background wells are 0.242 mg/L for boron and 670 mg/L for sulfate, which are both higher than the maximum sample concentrations observed in the Ash Landfill 1 downgradient wells in 2023.

#### 4.0 CONCLUSION

SSIs were observed for boron and sulfate in Ash Landfill 1 downgradient wells MW-07 and MW-09 during the 2023 Detection Monitoring Program period; however, because SSIs have been identified for boron and sulfate in background wells at similar or higher concentrations than those observed in MW-07 and MW-09 in 2023, the 2023 Ash Landfill 1 SSIs are attributed to natural variation in groundwater quality due to the heterogeneity of the groundwater system and are not considered evidence of a release from the CCR unit. It is recommended that Luminant continue the Detection Monitoring Program in accordance with 40 C.F.R § 257.94(e)(2). Initiation of an Assessment Monitoring Program is not required at this time.

#### 5.0 REFERENCES

Pastor, Behling & Wheeler, LLC (PBW), 2017. Coal Combustion Residual Rule, Groundwater Monitoring System Certification, Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas. October 16, 2017.

Bullock, Bennett & Associates, LLC (BBA), 2023. CCR Background Groundwater Monitoring and Statistical Analysis Summary Report, Ash Landfill 1, Oak Grove Steam Electric Station, Robertson County, Texas. September 15.

Bullock, Bennett & Associates, LLC (BBA), 2024. 2023 Annual Groundwater Monitoring and Corrective Action Report, Oak Grove Steam Electric Station Ash Landfill 1, Robertson County, Texas. January 31.

#### 6.0 **CLOSING**

Thank you for the opportunity to assist on this project. Please contact me at wvienne@bbaengineering.com if you have any questions regarding this report.

Bullock, Bennett & Associates, LLC

Mia V.

William F. Vienne, P.G. (TX 10492) Senior Hydrogeologist

#### 7.0 **PROFESSIONAL CERTIFICATION**



03/08/2024

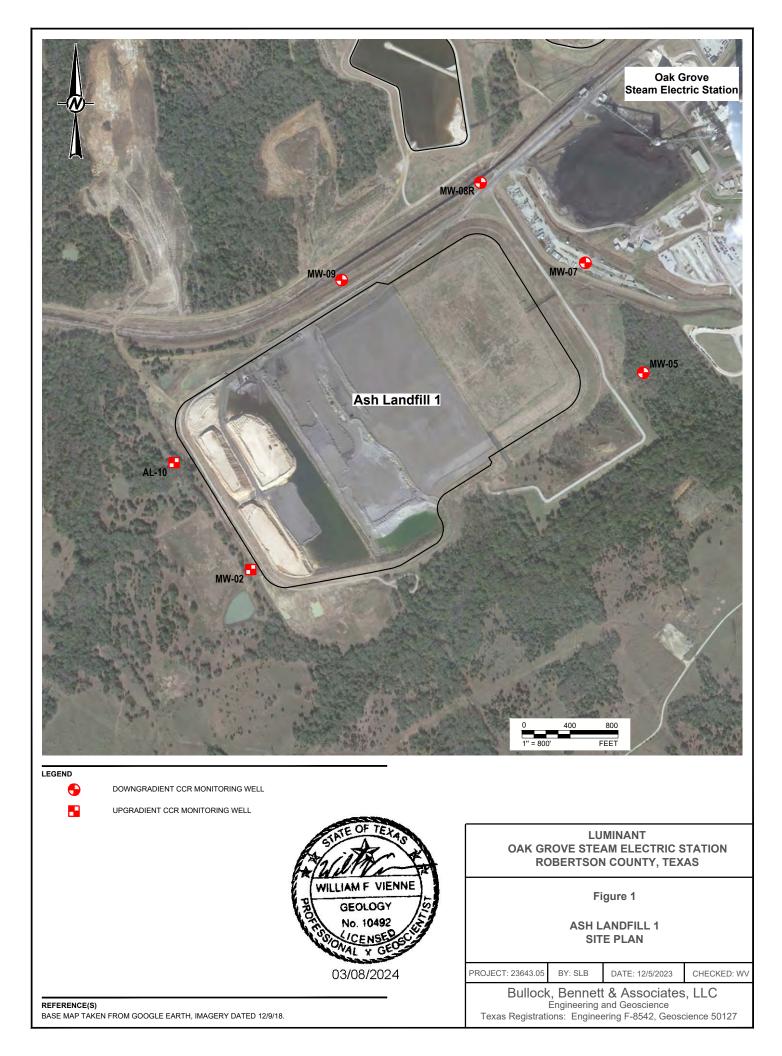
This document and all attachments were prepared by Bullock, Bennett & Associates, LLC under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that the alternative source demonstration at the referenced facility meets the detection monitoring requirements of the Federal CCR Program at 40 C.F.R. § 257.94 and the State CCR Program at 30 T.A.C. § 352.941.

amiel B. Sullack

Daniel B. Bullock, P.E. **Principal Engineer** Bullock, Bennett & Associates, LLC

3/08/2024

FIGURES



TABLES

# TABLE 1 APPENDIX III ANALYTICAL RESULTS OGSES ASH LANDFILL 1

Background Predic	Ction Limits*:           11/04/15           12/18/15           02/10/16           04/15/16           06/16/16           08/25/16           10/04/16           12/22/16           10/02/17           06/04/18           09/06/18           05/17/19           08/20/19           05/07/20           09/09/20           06/16/21           10/12/21           05/07/20           09/09/20           06/16/21           10/12/21           05/07/20           09/09/20           06/16/21           10/12/21           05/11/22           09/26/22           05/25/23           08/17/23           11/04/15           12/18/15           02/10/16           04/15/16           06/16/16           08/25/16           10/04/16           12/21/16	(mg/L) 0.124 0.0682 0.0539 0.0637 0.0573 0.0915 0.105 0.0756 0.0759 0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.107 0.0878 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492 0.113	74.9         34.5         37.5         48.6         44.8         34.7         87.5         35.1         32.5         27         21.9         16.8         18.8         16.8         15.2         15.1         11.8         10.5         8.70         9.13         32.5         29         25.4         39.6         26.5         12.9	353 149 81 108 86 66.7 444 57.3 57.2 50.6 62.1 56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5 68	0.4 0.149 J 0.15 J 0.197 J 0.133 0.155 J <0.1 0.278 J 0.195 J 0.195 J 0.195 J 0.120 J 0.120 J 0.260 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.135 J 0.135 J 0.29 J 0.29 J 0.29 J	$\begin{array}{c} 6.31 \\ 7.09 \\ \hline \\ 6.86 \\ 6.45 \\ 6.75 \\ 6.51 \\ 6.51 \\ 6.44 \\ 6.61 \\ 6.92 \\ 6.78 \\ 6.85 \\ 6.67 \\ 6.66 \\ 6.64 \\ 6.87 \\ 6.78 \\ 6.86 \\ 6.82 \\ 6.82 \\ 6.82 \\ 6.82 \\ 6.82 \\ 6.82 \\ 6.63 \\ 6.63 \\ 6.63 \\ 6.69 \\ 6.54 \\ 6.92 \\ 6.83 \\ 6.63 $	(mg/L) 97.4 97.4 72.6 20.6 34.9 23.6 23.5 96.3 20.1 21.5 12.2 11.6 11.8 12.4 11.8 12.4 11.8 12.4 11.8 12.4 11.8 12.4 11.8 12.4 11.8 12.4 11.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9 34	948 590 414 599 549 436 1,120 507 527 398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
AL-10	12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16 12/22/16 10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0539 0.0637 0.0573 0.0915 0.105 0.0756 0.0759 0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	$\begin{array}{r} 37.5\\ 48.6\\ 44.8\\ 34.7\\ 87.5\\ 35.1\\ 32.5\\ 27\\ 21.9\\ 21.9\\ 16.8\\ 18.8\\ 16.8\\ 15.2\\ 15.1\\ 11.8\\ 10.5\\ 8.70\\ 9.13\\ 32.5\\ 29\\ 25.4\\ 39.6\\ 26.5\\ \end{array}$	81 108 86 66.7 444 57.3 57.2 50.6 62.1 56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.15 J 0.197 J 0.133 0.155 J <0.1 0.278 J 0.195 J 0.120 J 0.120 J 0.120 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.86\\ 6.45\\ 6.75\\ 6.51\\ 6.51\\ 6.44\\ 6.61\\ 6.92\\ 6.78\\ 6.85\\ 6.67\\ 6.66\\ 6.64\\ 6.87\\ 6.66\\ 6.64\\ 6.87\\ 6.78\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.54\\ 6.92\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ 6.63\\ \end{array}$	20.6 34.9 23.6 23.5 96.3 20.1 21.5 12.2 11.6 11.8 12.4 11.8 12.4 11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	414 599 549 436 1,120 507 527 398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
AL-10	12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16 12/22/16 10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0539 0.0637 0.0573 0.0915 0.105 0.0756 0.0759 0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	$\begin{array}{r} 37.5\\ 48.6\\ 44.8\\ 34.7\\ 87.5\\ 35.1\\ 32.5\\ 27\\ 21.9\\ 21.9\\ 16.8\\ 18.8\\ 16.8\\ 15.2\\ 15.1\\ 11.8\\ 10.5\\ 8.70\\ 9.13\\ 32.5\\ 29\\ 25.4\\ 39.6\\ 26.5\\ \end{array}$	81 108 86 66.7 444 57.3 57.2 50.6 62.1 56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.15 J 0.197 J 0.133 0.155 J <0.1 0.278 J 0.195 J 0.120 J 0.120 J 0.120 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.45\\ 6.75\\ 6.51\\ 6.44\\ 6.61\\ 6.92\\ 6.78\\ 6.85\\ 6.67\\ 6.66\\ 6.64\\ 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.63\\ 6.63\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ 6.63\\ \end{array}$	20.6 34.9 23.6 23.5 96.3 20.1 21.5 12.2 11.6 11.8 12.4 11.8 12.4 11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	414 599 549 436 1,120 507 527 398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	02/10/16 04/15/16 06/16/16 10/04/16 12/22/16 10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0637 0.0573 0.0915 0.105 0.0756 0.0759 0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	48.6 44.8 34.7 87.5 35.1 32.5 27 21.9 16.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	108           86           66.7           444           57.3           57.2           50.6           62.1           56.7           67.9           66.2           52.2           49.2           41.9           51.4           39.9           34.7           24.0           23.3           138           61.7           83.5	0.197 J 0.133 0.155 J <0.1 0.278 J 0.195 J 0.120 J 0.120 J 0.120 J 0.260 J 0.262 J 0.262 J 0.262 J 0.263 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.75\\ 6.51\\ 6.44\\ 6.61\\ 6.92\\ 6.78\\ 6.85\\ 6.67\\ 6.66\\ 6.64\\ 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.63\\ 6.63\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ 6.63\\ \end{array}$	34.9 23.6 23.5 96.3 20.1 21.5 12.2 11.6 11.8 12.4 11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	599         549         436         1,120         507         527         398         362         371         340         333         317         301         267         269         251         234         225         232         539         308
MW-02	04/15/16 06/16/16 08/25/16 10/04/16 12/22/16 10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0573 0.0915 0.105 0.0756 0.0759 0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	44.8 34.7 87.5 35.1 32.5 27 21.9 16.8 18.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	86           66.7           444           57.3           57.2           50.6           62.1           56.7           67.9           66.2           52.2           49.2           41.9           51.4           39.9           34.7           24.0           23.3           138           61.7           83.5	0.133 0.155 J <0.1 0.278 J 0.195 J 0.120 J 0.120 J 0.120 J 0.260 J 0.262 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.51 \\ \hline 6.44 \\ \hline 6.61 \\ \hline 6.92 \\ \hline 6.78 \\ \hline 6.85 \\ \hline 6.67 \\ \hline 6.66 \\ \hline 6.64 \\ \hline 6.87 \\ \hline 6.78 \\ \hline 6.87 \\ \hline 6.78 \\ \hline 6.82 \\ \hline 6.82 \\ \hline 6.82 \\ \hline 6.82 \\ \hline 6.63 \\ \hline 6.65 \\ \hline 6.54 \\ \hline 6.92 \\ \hline 6.83 \\ \hline 6.63 \\ \hline 6.63 \end{array}$	23.6 23.5 96.3 20.1 21.5 12.2 11.6 11.8 12.4 11.8 12.4 11.8 12.4 11.8 12.4 11.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	549 436 1,120 507 527 398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	06/16/16 08/25/16 10/04/16 12/22/16 10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0915 0.105 0.0756 0.0759 0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	34.7 87.5 35.1 32.5 27 21.9 16.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	66.7           444           57.3           57.2           50.6           62.1           56.7           67.9           66.2           52.2           49.2           41.9           51.4           39.9           34.7           24.0           23.3           138           61.7           83.5	0.155 J <0.1 0.278 J 0.195 J 0.120 J 0.120 J 0.183 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.44\\ 6.61\\ 6.92\\ 6.78\\ 6.85\\ 6.67\\ 6.66\\ 6.64\\ 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.82\\ 6.82\\ 6.63\\ 6.63\\ 6.69\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ 6.63\\ \end{array}$	23.5 96.3 20.1 21.5 12.2 11.6 11.8 12.4 11.8 12.4 11.8 12.4 11.8 12.4 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	436 1,120 507 527 398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	08/25/16 10/04/16 12/22/16 10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.105 0.0756 0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	87.5 35.1 32.5 27 21.9 21.9 16.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	444 57.3 57.2 50.6 62.1 56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	<0.1 0.278 J 0.195 J 0.120 J 0.183 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.61 \\ 6.92 \\ 6.78 \\ 6.85 \\ 6.67 \\ 6.66 \\ 6.64 \\ 6.87 \\ 6.78 \\ 6.78 \\ 6.86 \\ 6.82 \\ 6.82 \\ 6.82 \\ 6.63 \\ 6.63 \\ 6.65 \\ 6.54 \\ 6.92 \\ 6.83 \\ 6.63 \end{array}$	96.3 20.1 21.5 12.2 11.6 11.8 12.4 11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	1,120 507 527 398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	10/04/16 12/22/16 10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0756 0.0759 0.0973 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	35.1 32.5 27 21.9 16.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	57.3 57.2 50.6 62.1 56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.278 J 0.195 J 0.120 J 0.183 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.92 \\ 6.78 \\ 6.85 \\ 6.67 \\ 6.66 \\ 6.64 \\ 6.87 \\ 6.78 \\ 6.78 \\ 6.86 \\ 6.82 \\ 6.82 \\ 6.82 \\ 6.63 \\ 6.63 \\ 6.65 \\ 6.54 \\ 6.92 \\ 6.83 \\ 6.63 \end{array}$	20.1 21.5 12.2 11.6 11.8 12.4 11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	507 527 398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	10/02/17 06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0973 0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0476 0.0853 0.0597 0.106 0.0492	27 21.9 16.8 18.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	50.6 62.1 56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.120 J 0.183 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.85\\ 6.67\\ 6.66\\ 6.64\\ 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.82\\ 6.63\\ 6.63\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ \end{array}$	12.2         11.6         11.8         12.4         11.8         11.1         10.6         9.92         9.84         8.47         9.47         8.29         8.25         71.4         15.9	398 362 371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	06/04/18 09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0875 0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	21.9 21.9 16.8 18.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	62.1 56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.183 J 0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.67\\ 6.66\\ 6.64\\ 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.82\\ 6.63\\ 6.69\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ 6.63\\ \end{array}$	11.6         11.8         12.4         11.8         11.1         10.6         9.92         9.84         8.47         9.47         8.29         8.25         71.4         15.9	362 371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	09/06/18 05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.113 0.114 0.115 0.128 0.139 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	21.9 16.8 18.8 16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	56.7 67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.260 J 0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{c} 6.66\\ 6.64\\ 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.82\\ 6.63\\ 6.63\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ \end{array}$	11.8 12.4 11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	371 340 333 317 301 267 269 251 234 225 232 539 308
MW-02	05/17/19 08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.114 0.115 0.128 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	16.8         18.8         16.8         15.2         15.1         11.8         10.5         8.70         9.13         32.5         29         25.4         39.6         26.5	67.9 66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.262 J 0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{r} 6.64\\ 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.63\\ 6.63\\ 6.69\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ \end{array}$	12.4 11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	340 333 317 301 267 269 251 234 225 232 539 308
MW-02	08/20/19 05/07/20 09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.115 0.128 0.139 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	18.8         16.8         15.2         15.1         11.8         10.5         8.70         9.13         32.5         29         25.4         39.6         26.5	66.2 52.2 49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.363 J <0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	$\begin{array}{r} 6.87\\ 6.78\\ 6.86\\ 6.82\\ 6.82\\ 6.63\\ 6.63\\ 6.69\\ 6.65\\ 6.54\\ 6.92\\ 6.83\\ 6.63\\ \end{array}$	11.8 11.1 10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	333 317 301 267 269 251 234 225 232 539 308
MW-02	09/09/20 06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.139 0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	16.8 15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	49.2 41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	<0.100 0.208 J 0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	6.86 6.82 6.63 6.69 6.65 6.54 6.92 6.83 6.63	10.6 9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	301 267 269 251 234 225 232 539 308
MW-02	06/16/21 10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.107 0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	15.2 15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	41.9 51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	0.27 J <0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	6.82           6.63           6.69           6.65           6.54           6.92           6.83           6.63	9.92 9.84 8.47 9.47 8.29 8.25 71.4 15.9	267 269 251 234 225 232 539 308
MW-02	10/12/21 05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0878 0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	15.1 11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	51.4 39.9 34.7 24.0 23.3 138 61.7 83.5	<0.1 0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	6.82 6.63 6.69 6.65 6.54 6.92 6.83 6.63	9.84 8.47 9.47 8.29 8.25 71.4 15.9	269 251 234 225 232 539 308
MW-02	05/11/22 09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0894 0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	11.8 10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	39.9 34.7 24.0 23.3 138 61.7 83.5	0.217 J 0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	6.63 6.69 6.65 6.54 6.92 6.83 6.63	8.47 9.47 8.29 8.25 71.4 15.9	251 234 225 232 539 308
MW-02	09/26/22 05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.107 0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	10.5 8.70 9.13 32.5 29 25.4 39.6 26.5	34.7 24.0 23.3 138 61.7 83.5	0.180 J 0.165 J 0.2 0.135 J 0.118 J 0.229 J	6.69 6.65 6.54 6.92 6.83 6.63	9.47 8.29 8.25 71.4 15.9	234 225 232 539 308
MW-02	05/25/23 08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0880 0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	8.70 9.13 32.5 29 25.4 39.6 26.5	24.0 23.3 138 61.7 83.5	0.165 J 0.2 0.135 J 0.118 J 0.229 J	6.65 6.54 6.92 6.83 6.63	8.29 8.25 71.4 15.9	225 232 539 308
MW-02	08/17/23 11/04/15 12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.122 0.064 0.0476 0.0853 0.0597 0.106 0.0492	9.13 32.5 29 25.4 39.6 26.5	23.3 138 61.7 83.5	0.2 0.135 J 0.118 J 0.229 J	6.54 6.92 6.83 6.63	8.25 71.4 15.9	539 308
MW-02	12/18/15 02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0476 0.0853 0.0597 0.106 0.0492	29 25.4 39.6 26.5	61.7 83.5	0.118 J 0.229 J	6.83 6.63	15.9	308
	02/10/16 04/15/16 06/16/16 08/25/16 10/04/16	0.0853 0.0597 0.106 0.0492	25.4 39.6 26.5	83.5	0.229 J	6.63		
	04/15/16 06/16/16 08/25/16 10/04/16	0.0597 0.106 0.0492	39.6 26.5				34	
	06/16/16 08/25/16 10/04/16	0.106 0.0492	26.5	00		6 5 1	18.1	320 440
	08/25/16 10/04/16	0.0492		87.8	0.102 0.161 J	6.51 6.89	34.8	343
	10/04/16		14.3	21.9	0.164 J	6.58	22.4	163
	12/21/16		61.4	222	0.185 J	6.69	97.4	667
		0.11	47.8	185	0.293 J	6.78	83.4	590
	10/02/17	0.0567	22.2	42.4	<0.100	6.68	9.67	310
	06/04/18 09/06/18	0.144 0.148	82.4 70.9	275 259	0.139 J 0.221 J	6.28 6.02	121 116	740 872
	05/17/19	0.0981	20	67.6	0.321 J	6.63	31.1	306
	08/20/19	0.0875	19.9	53.8	0.558	6.59	20.1	260
	05/07/20	0.0996	11.5	2.87	<0.100	6.63	6.14	106
	09/09/20	0.166	55.6	210	0.287 J	6.76	99.2	592
	06/16/21 10/12/21	0.0756	48 23.8	164 56.6	0.977 0.36	6.62 6.62	35.9 20.7	646 245
	05/11/22	0.0848	47.6	152	0.30	6.63	62.3	504
	09/26/22	0.126	66.4	298	0.128 J	6.52	131	755
	05/25/23	0.114	53.3	193	0.106	6.82	77.7	571
	08/17/23	0.0833	22.8	59.4	0.356	6.54	20.3	233
Downgradient Well			45.4				10.0	
MW-05	11/04/15 12/18/15	0.0628	15.4 13	64.8 60.2	0.272 J 0.476	7.11 6.52	13.6 10.5	285 232
	02/10/16	0.0621	13	<u> </u>	0.476 0.397 J	6.67	10.5	232
	04/15/16	0.0458	14.3	55.4	0.284	6.42	10.7	288
	06/15/16	0.058	14.2	60.4	0.306 J	6.61	11.8	269
	08/24/16	0.0877	13.1	63	0.262 J	6.75	11.8	287
	10/04/16	0.059	15.4	57.9	0.477	6.87	10.9	253
├	12/22/16 10/02/17	0.0759 0.0665	61.4 17.5	264 58.6	0.446 0.295 J	6.63 6.89	55.6 10.4	778 246
├	06/05/18	0.0739	16.8	60	0.295 J 0.391 J	6.43	10.4	253
	09/07/18	0.077	15.8	63.3	0.392 J	6.11	10.6	249
	05/17/19	0.0686	13.5	66.4	0.462	6.57	11.2	257
$\vdash$	08/20/19	0.079	16	66.7	0.514	6.78	10.8	263
$\vdash$	05/07/20 09/09/20	0.0985 0.201	18 20.5	71.8 79.8	0.344 J 0.372 J	6.68 6.81	10.6 66.5	264 407
	06/16/21	0.201	20.5	79.0	0.372 J 0.415	6.69	10	255
	10/12/21	0.0615	20.9	83.6	0.433	6.52	11.7	282
1	10/12/21	0.0703	20.9	85.5	0.425	6.52	12.1	272
	0/12/2021 DUP	0.0773	20	80.9	0.438	6.74	11.5	285
	0/12/2021 DUP 05/12/22	I 0 0760	19.8 19.8	87.8 93.3	0.383 J	6.73	12	290
$\vdash$	0/12/2021 DUP	0.0768 0.0642	IMA	93.3	0.353 J 0.390	6.73 6.61	11.9 12.1	310 300

# TABLE 1 APPENDIX III ANALYTICAL RESULTS OGSES ASH LANDFILL 1

Sample	Date	В	Ca	CI	F	рН	SO4	TDS	
Location	Sampled	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)	(mg/L)	
Background Prediction Limits <sup>*</sup> :		0.124	74.9	353	0.4	6.31 7.09	97.4	948	
MW-07	11/03/15	0.0483	8.57	20.2	0.289 J	6.42	11.5	276	
	12/17/15	0.0539	8.75	17.7	0.319 J	6.86	14.7	243	
	02/09/16	0.0547	13.3	28.9	0.276 J	7.18	25.3	283	
	04/15/16	0.0567	10	20.9	0.187	6.71	16	341	
	06/15/16	0.0639	10.5	22.9	0.226 J	6.75	23.2	294	
	08/24/16	0.0691	9.58	20.4	0.159 J	6.89	21.8	290	
	10/04/16	0.0549	10.3	15.6	0.277 J	6.82	17.1	256	
	12/22/16	0.054	12.5	22.9	0.229 J	6.29	34.7	262	
	10/02/17	0.0733	13.9	15.8	0.178 J	6.59	38.4	298	
	06/05/18	0.105	17.5	15.7	0.169 J	5.98	61.1	316	
	09/07/18	0.151	19.7	21.5	0.250 J	6.18	80.3	357	
	11/6/18 resample	0.154							
	05/17/19	0.132	17.1	20.2	0.244 J	6.83	84.1	355	
	08/19/19	0.215	22.8	19.7	0.367 J	6.77	100	385	
	05/07/20	0.302	29.7	22.4	0.234 J	6.84	123	432	
	09/09/20	0.297	26.9	24.7	0.302 J	6.58	121	413	
	06/16/21	0.186	25.8	26.2	0.378 J	6.84	108	404	
	6/16/21 DUP	0.177	25.5	26.6	0.378 J	6.84	110	399 422	
	10/13/21 05/12/22	0.181 0.297	31.6 34.6	29.6 31.4	<0.353 0.208 J	6.85	130 144		
	05/12/22 DUP	0.297	34.0	31.4	0.208 J 0.209 J	6.75 6.75	144	<u>484</u> 481	
	09/26/22	0.315	35.8	33.9	0.209 J	6.41	144	401	
	05/25/23	0.262	34.6	31.8	0.143 0.100 J	6.64	149	499	
	5/25/23 DUP	0.244	33.9	31.4	0.100 3	6.64	147	482	
	08/17/23	0.205	37.1	35.2	0.144	6.62	162	535	
	8/17/23 DUP	0.228	38.1	35.5	0.148 J	6.62	162	535	
MW-08	11/04/15	0.0631	120	599	0.17 J	6.81	138	2,070	
WW -00	12/18/15	0.0604	70.4	488	0.158 J	6.78	49.8	1,140	
	02/09/16	0.0695	140	612	0.175 J	6.42	170	1,530	
	04/15/16	0.0726	133	566	<0.1	6.61	139	1,680	
	06/16/16	0.0677	76.6	520	<0.1	6.76	83.6	1,090	
	8/2016	Well Damaged							
MW-08R	12/22/16	0.0702	32.4	166	0.355 J	6.93	39.7	617	
	03/21/17	0.0662	117	563	0.2 J	5.83	98.3	1,220	
	04/20/17	0.0696	115	560	0.149 J	5.91	94.9	1,190	
	10/02/17	0.061	13.1	14.4	<0.100	6.63	28.7	243	
	06/05/18	0.082	18.9	53.9	0.138 J	6.37	9.66	302	
	09/07/18	0.0921	106	504	0.242 J	5.84	96.9	1,550	
	11/6/2018 resample		15.7	19				268	
	05/17/19	0.102	16.7	69.8	0.269 J	6.54	12.4	326	
	08/20/19	0.096	24.9	48	0.501	6.84	30.7	255	
	05/07/20	0.122	19	51.8	0.117 J	6.83	11.1	320	
	09/09/20	0.0977	15.8	55.5	0.344 J	6.68	19.0	256	
	06/16/21	0.116	15.3	43.5	0.263 J	6.76	9.26	266	
	10/12/21	0.107	32.8	268	< 0.1	6.76	136	874	
	05/11/22	0.0648	43.8	111	0.979	6.89	27.3	563	
	09/26/22	0.104	10.6	30.1	0.154	6.52	7.24	193	
	05/25/23	0.0992	55.1	133	<0.100	6.82	102	494	
	08/17/23	0.0916	11.1	15.2	0.135	6.50	34.5	231	

### TABLE 1 APPENDIX III ANALYTICAL RESULTS OGSES ASH LANDFILL 1

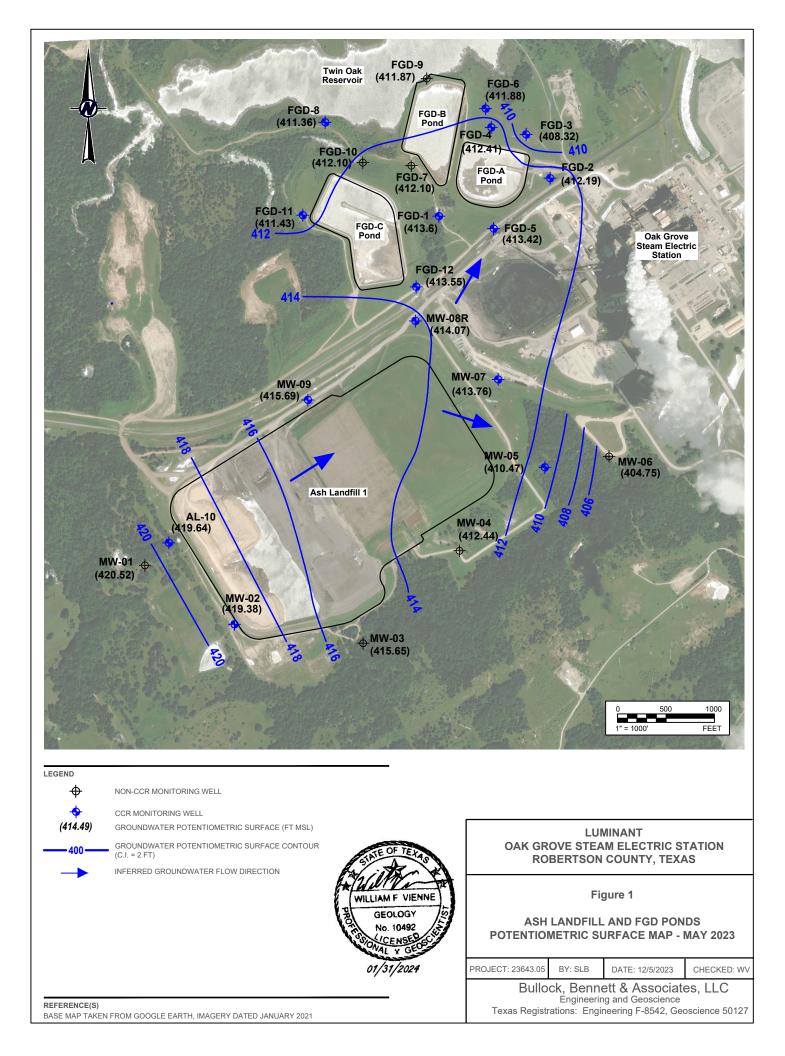
Sample	Date	В	Ca	CI	F	рΗ	SO <sub>4</sub>	TDS
Location	Sampled	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)	(mg/L)
Background Prediction Limits <sup>*</sup> :		0.124	74.9	353	0.4	6.31 7.09	97.4	948
MW-09	11/03/15	0.0722	36.4	155	0.149 J	6.45	74.9	583
	12/18/15	0.077	40.3	157	0.266 J	6.48	83.1	528
	02/09/16	0.072	38.4	158	0.152 J	6.16	80	445
	04/15/16	0.0734	42.2	151	<0.1	6.41	80.9	568
	06/15/16	0.0778	43.1	174	<0.1	6.52	98.7	574
	08/25/16	0.0829	45.6	195	<0.1	6.76	116	715
	10/04/16	0.0803	47.8	179	0.256 J	6.64	108	648
	12/22/16	0.0776	42.6	290	0.159 J	6.87	116	791
	10/02/17	0.106	58.2	140	<0.100	6.76	95.3	433
	06/04/18	0.091	21.7	6.48	0.162 J	6.28	6.08	135
	09/06/18	0.0999	49.8	186	0.134 J	5.61	104	704
	11/6/2018 resample						58.6	
	05/17/19	0.12	17.2	366	0.541	6.72	53.2	935
	08/20/19	0.117	26	61.2	0.359 J	6.96	22.3	331
	05/07/20	0.0988	20.2	45.1	0.234 J	6.68	17.3	212
	09/09/20	0.123	48.5	156	0.152 J	6.72	99.6	468
	06/16/21	0.0682	16.3	4.18	<0.100	6.84	8.19	127
	10/12/21	0.0821	20.7	29.9	<0.100	6.84	31.2	223
	05/12/22	0.111	67.9	195	0.124 J	6.57	119	582
	09/26/22	0.132	63.9	155	<0.100	6.79	108	482
	05/25/23	0.124	58.7	146	0.112 J	6.89	122	591
	08/17/23	0.136	59.8	195	0.177 J	6.58	122	633

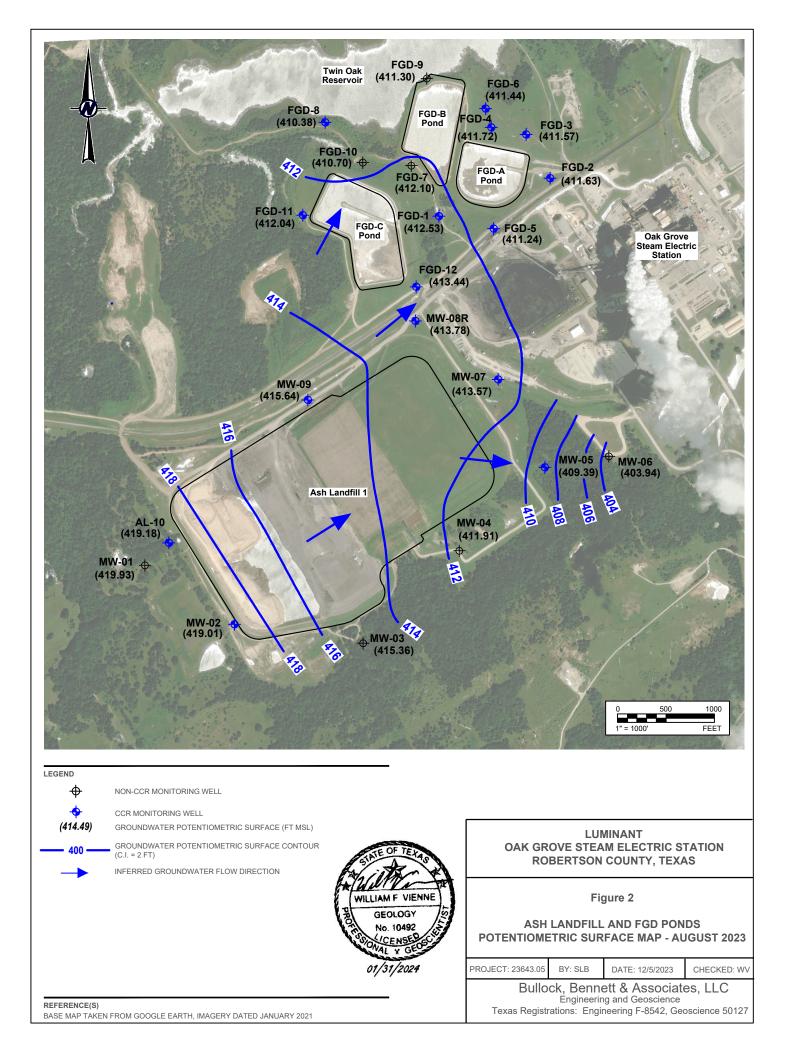
Notes:

 Abbreviations: mg/L - milligrams per liter; TDS - total dissolved solids; s.u. - standard units.
 J - concentration is below method quantitation limit; result is an estimate.
 \* - The background prediction limits are based on data collected during the baseline period (i.e., pre-detection monitoring period) in 2015 and 2016. Updated background prediction limits based on data collected through 2023 (BBA, 2023) are currently under review by the TCEQ.

ATTACHMENT 1

2023 GROUNDWATER POTENTIOMETRIC SURFACE MAPS





APPENDIX C

2024 GROUNDWATER POTENTIOMETRIC SURFACE MAPS

