

**COAL COMBUSTION RESIDUAL RULE
2017 ANNUAL GROUNDWATER MONITORING REPORT**

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

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1.0 INTRODUCTION

Oak Grove Management Company LLC (Luminant) operates the Oak Grove Steam Electric Station (OGSES) located approximately 10 miles north of Franklin, Robertson County, Texas (Figure 1). The OGSES consists of two 800-megawatt power generation units which burn lignite and coal. Coal Combustion Residuals (CCR) including fly ash, bottom ash, and gypsum are generated as part of OGSES unit operations. Currently, CCRs generated at the OGSES are managed by Luminant in surface impoundments located on the OGSES property or the Ash Landfill 1. Two CCR units have been identified within the OGSES operations, the FGD Pond Area and the Ash Landfill 1. This report discusses the Ash Landfill 1 (the Site), which is located approximately 3,500 feet southwest of the OGSES power plant.

The CCR Rule (40 CFR 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) has been promulgated by the EPA to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. The final CCR Rule was published in the Federal Register on April 17, 2015. The effective date of the CCR Rule was October 19, 2015. The Ash Landfill 1 meets the definition of a CCR landfill and is subject to groundwater monitoring system requirements of the CCR Rule.

1.1 CCR Unit Groundwater Monitoring Applicability

Section 257.90 of the CCR Rule requires that existing CCR landfills and surface impoundments be in compliance with the following groundwater monitoring requirements no later than October 17, 2017:

- Install a groundwater monitoring system as required under Section 257.91;
- Develop a groundwater sampling and analysis program to include selection of the statistical procedures to be used for evaluating groundwater monitoring data as required under Section 257.93;
- Initiate a detection monitoring program to include obtaining a minimum of eight independent samples for each background and downgradient monitoring well as required under Section 257.94; and
- Begin evaluating the groundwater monitoring data for statistically significant increases over background levels for the constituents listed in Appendix III of this part as required under Section 257.94.

Pastor, Behling & Wheeler, LLC (PBW) was retained by Luminant to evaluate the CCR groundwater monitoring system and develop and implement a CCR groundwater sampling and analysis program at the Site. To document these activities, PBW prepared the following reports, which were placed in the facility's operating record to comply with Section 257.105(h) of the CCR Rule:

- CCR Groundwater Monitoring System Certification (PBW, 2017a);
- CCR Monitoring Well Design, Installation, Development, and Decommissioning Report (PBW, 2017b); and
- CCR Statistical Analysis Plan (PBW, 2017c).

For existing CCR landfills and surface impoundments, the owner or operator must 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. The CCR Rule requires that the owner or operator of a CCR unit prepare the initial annual groundwater monitoring and corrective action report for the unit no later than January 31, 2018, and annually thereafter. Per Section 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.

1.2 Groundwater Sampling and Analysis Requirements

1.2.1 Background Monitoring Requirements

The CCR Rule requires that background groundwater quality be established in hydraulically upgradient or background well(s) for each of the groundwater constituents required in the detection monitoring or assessment monitoring program that applies to the CCR unit. Background groundwater quality may be established at wells that are not located hydraulically upgradient from the CCR unit if the samples accurately represent the quality of background groundwater that has not been affected by leakage from the CCR unit. Section 257.94(b) of the CCR Rule requires that a minimum of eight independent samples from each background and downgradient well associated with a CCR unit be collected and analyzed for the constituents listed in Appendix III and Appendix IV to Part 257 CCR Rule no later than October 17, 2017.

PBW was retained by Luminant to collect and analyze the required background well samples at the Site. Eight background groundwater monitoring events were performed using the Ash Landfill 1 CCR monitoring well system from October 2015 to December 2016. The background groundwater monitoring program is described in detail in Section 2 of this report.

1.2.2 Detection Monitoring Requirements

Groundwater detection monitoring must be performed at each CCR unit (CCR Rule Section 257.94). The following constituents must be included in the detection monitoring program (from Appendix III of the CCR Rule):

- Boron
- Calcium
- Chloride
- Fluoride
- pH
- Sulfate
- Total Dissolved Solids (TDS)

The monitoring frequency for these constituents must be at least semi-annual during the active life of the CCR unit and post-closure period. The reported concentrations of the detection monitoring constituents must be compared to the respective CCR unit background concentration developed for each constituent. If a statistically significant increase over background is determined for one or more of the constituents

listed above at any monitoring well at the CCR unit waste boundary, within 90 days the owner or operator must:

- Establish an assessment monitoring program as described in Section 257.95 of the Rule; or
- Demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with the detection monitoring program. If at the end of the 90-day period in 257.94(e)(2), the owner or operator is unable to successfully make an alternate source demonstration, the assessment monitoring program is triggered and the owner or operator has 90 days to complete the sampling required under 257.95(d).

Detection monitoring performed at the Site is discussed in Section 4.0 of this report.

1.2.3 Assessment Monitoring Requirements

Assessment monitoring is required under the CCR Rule whenever a statistically significant increase over background levels has been detected for one or more of the detection monitoring constituents listed above (CCR Rule Section 257.95). The following constituents must be included in the assessment monitoring program (from Appendix IV of the CCR Rule):

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chromium
- Cobalt
- Fluoride
- Lead
- Lithium
- Mercury
- Molybdenum
- Selenium
- Thallium
- Radium 226 and 228 combined

Assessment monitoring performed at the Site is discussed in Section 5.0 of this report.

2.0 GROUNDWATER MONITORING SYSTEM

2.1 Description of Ash Landfill 1

Ash Landfill 1 is located approximately 3,500 feet southwest of the OGSES power plant (Figure 2). CCRs generated at the OGSES, including fly ash and bottom ash, are transported and managed/disposed of by Luminant in the Ash Landfill 1. Cell 1 of the Ash Landfill 1 was constructed in 2009 and the landfill was expanded in 2011. The existing liner for the Ash Landfill 1 includes a 3-foot thick compacted clay liner (Golder, 2015).

2.2 Local Geology and Hydrogeology

Ash Landfill 1 is located in the outcrop area of the Eocene-aged Wilcox Group (Barnes, 1970). Based on soil borings completed in the area, the geology of the Site generally consists of relatively thick, interbedded sand and clay strata. The sand units in the Ash Landfill 1 Area are typically described as poorly sorted, silty to clayey sand with occasional zones of well sorted sand (PBW, 2017a). The uppermost aquifer occurs under unconfined conditions within the shallow sand units at the Site.

2.3 Ash Landfill 1 Groundwater Monitoring System

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 locations of the CCR monitoring wells are shown on Figure 2. Well construction information and survey data for the CCR wells are summarized in Table 1. The installation dates for the wells range from 1986 to 2016. No wells were added to or removed from the CCR groundwater monitoring network in 2017.

2.4 Groundwater Potentiometric Surface

Static water levels measured during the background monitoring period and 2017 detection monitoring event indicated water elevations ranging from 406.96 feet above mean sea level (amsl) to 419.20 feet amsl, and depths to water ranging from 26.79 feet bgs to 50.38 feet bgs (Table 2).

Groundwater elevations were generally highest southwest of the Ash Landfill 1 and lowest east of the Ash Landfill 1, with an inferred groundwater flow direction to the east (Figure 3). Based on the inferred groundwater flow direction, the location of each CCR monitoring well relative to Ash Landfill 1 is as

follows:

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

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3.0 BACKGROUND GROUNDWATER MONITORING PROGRAM

Eight background groundwater monitoring events were performed using the Ash Landfill 1 CCR monitoring well system from October 2015 to April 2017. The results of the background monitoring events are described in this section.

3.1 Background Groundwater Monitoring Results

The Ash Landfill 1 CCR groundwater monitoring wells were sampled approximately every two months from October 2015 to December 2016 (eight sampling events) to fulfill the background monitoring period sampling requirements of the CCR Rule. Well MW-08 was damaged by a haul truck in 2016 and replaced by well MW-08R and subsequently sampled in March and April of 2017 to fulfill the background monitoring requirements. Background sample data are summarized in Table 3 (Appendix III) and Table 4 (Appendix IV). Laboratory analytical reports for the data are presented in Appendix A.

3.2 Background Statistical Evaluation Procedures

Statistical analysis of groundwater monitoring data is required as part of detection monitoring and assessment monitoring under Section 257.93 of the CCR Rule. Section 257.93 of the CCR Rule provides several options for statistically evaluating the groundwater data. The owner or operator of the CCR unit must select one of the following statistical methods specified in paragraphs (f)(1) through (5) of Section 257.93 to be use in evaluating groundwater monitoring data for each specified constituent:

- (1) A parametric analysis of variance followed by multiple comparison procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.
- (2) An analysis of variance based on ranks followed by multiple comparison procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.
- (3) A tolerance or prediction interval procedure, in which an interval for each constituent is established from the distribution of the background data and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
- (4) A control chart approach that gives control limits for each constituent.
- (5) Another statistical test method that meets the performance standards of paragraph (g) of this

section.

The following statistical evaluation approaches were selected to demonstrate groundwater compliance for the Ash Landfill 1 under the CCR Rule:

- Use of interwell data evaluations, which compare new sample data to sample data from upgradient background well(s).
- Use of prediction limits for data comparisons. This approach is a common statistical method used to evaluate groundwater compliance for Subtitle D landfill facilities and is one of the approved options for groundwater quality data statistical evaluation under the CCR Rule.

The evaluation procedures used for the Ash Landfill 1 background groundwater data conforms with the Rule requirements shown above, as well as EPA's *Unified Guidance: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (EPA, 2009) and the American Society for Testing and Materials (ASTM) standard D6312-17, *Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs at waste Disposal Facilities* (ASTM, 2017). The statistical approach used for establishing prediction limits based on the background data are described in detail in the Statistical Analysis Plan for the Site (PBW, 2017c).

4.0 DETECTION GROUNDWATER MONITORING PROGRAM

In accordance with CCR Rule Section 257.94, detection monitoring groundwater samples are collected on a semi-annual basis from the Ash Landfill 1 CCR groundwater monitoring network.

4.1 Detection Monitoring Results

PBW collected the initial detection monitoring groundwater samples from the Ash Landfill 1 CCR monitoring wells in October 2017 and evaluation of the data commenced by October 17, 2017. The detection monitoring results are summarized in Table 5. Laboratory analytical reports for the detection monitoring samples are included in Appendix B. The evaluation of these data will be completed in 2018, and the evaluation will be summarized in the 2018 Annual Groundwater Monitoring Report.

4.2 CCR Detection Monitoring Activities Planned for 2018

In accordance with CCR Rule Section 257.94, detection monitoring groundwater samples will be collected on a semi-annual basis in 2018 and the analytical data from both sampling events will be included in the 2018 Annual Groundwater Monitoring Report. A statistical evaluation of the 2017 detection monitoring data and the first semi-annual 2018 detection monitoring data will be summarized in the 2018 Annual Groundwater Monitoring Report. If a statistically significant increase over background is determined for one or more of the detection monitoring constituents at any monitoring well at the CCR unit waste boundary, Luminant will comply with the applicable CCR Rule requirements in 257.94(e)(2).

5.0 ASSESSMENT GROUNDWATER MONITORING PROGRAM

Assessment groundwater monitoring was not performed at the Site during 2017. Assessment monitoring will be performed during 2018 if required based on the 2017/2018 detection monitoring results.

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6.0 REFERENCES

- ASTM, 2017. Standard Guide for Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs at Waste Disposal Facilities - D6312-17.
- Barnes, Virgil E., 1970. Geologic Atlas of Texas, Waco Sheet. Texas Bureau of Economic Geology.
- Environmental Protection Agency (EPA), 2009. Unified Guidance Document: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, EPA 530-R-09-007, March 2009.
- Golder Associates (Golder), 2015. Coal Combustion Residuals Regulations and Their Effect on Existing Landfills and Surface Impoundments, Oak Grove Steam Electric Station. May 26.
- Pastor, Behling & Wheeler, LLC, 2017a. Coal Combustion Residual Rule Groundwater Monitoring System Certification, Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas. October 16, 2017.
- Pastor, Behling & Wheeler, LLC, 2017b. Coal Combustion Residual Rule Monitoring Well Design, Installation, Development, and Decommissioning Report, Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas. October 13, 2017.
- Pastor, Behling & Wheeler, LLC, 2017c. Coal Combustion Residual Rule Statistical Analysis Plan, Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas. October 11, 2017.

Tables

TABLE 1
CCR WELL CONSTRUCTION SUMMARY
ASH LANDFILL 1
OAK GROVE STEAM ELECTRIC STATION

Well ID	Date Installed	Northing	Easting	Ground Elevation (ft amsl)	TOC Elevation (ft amsl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Screen Length (ft)	Total Design Depth (ft bgs)	Casing Diameter (in)
MW-04	11/17/86	568593	3200315	432.94	436.63	35	50	15	50	2
MW-05	09/05/08	569467	3201188	434.73	436.98	29	49	20	50	2
MW-07	09/06/08	570377	3200695	436.93	438.84	29	49	20	50	2
MW-08*	08/27/08	570980	3199824	440.64	443.38	31	51	20	52	2
MW-08R	11/09/16	570970	3199809	441.22	443.84	32.5	52.5	20	52.5	2
MW-09	12/29/11	570146	3198709	459.24	461.46	46	66	20	67	2
AL-10	9/22/15	568673	3197291	457.54	460.81	50.3	60.3	10	60.3	2

Notes:

1. Abbreviations: ft - feet; amsl - above mean sea level; bgs - below ground surface.
2. Coordinates in NAD 27 Texas State Plane Central 4208.
3. * - Well MW-08 was damaged by a haul truck in 2016 and was subsequently plugged and replaced by well MW-08R.

TABLE 2
GROUNDWATER ELEVATION SUMMARY
ASH LANDFILL 1
OAK GROVE STEAM ELECTRIC STATION

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Water Elevation (ft amsl)
MW-02	463.65	11/03/15	47.61	416.04
		12/17/15	47.49	416.16
		02/10/16	45.93	417.72
		04/15/16	46.69	416.96
		06/14/16	44.84	418.81
		08/24/16	44.61	419.04
		10/04/16	45.24	418.41
		12/19/16	46.96	416.69
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
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
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
		Destroyed		
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
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

TABLE 2
GROUNDWATER ELEVATION SUMMARY
ASH LANDFILL 1
OAK GROVE STEAM ELECTRIC STATION

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Water Elevation (ft amsl)
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
		10/04/16	41.92	418.89
		12/19/16	43.68	417.13

Notes:

1. Abbreviations: TOC - top of casing; ft - feet, amsl - above mean sea level.

TABLE 3
APPENDIX III BACKGROUND GROUNDWATER ANALYTICAL DATA
OAK GROVE STEAM ELECTRIC STATION
ASH LANDFILL 1

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	Fl (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
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
MW-05	12/21/16	0.11	47.8	185	0.293 J	6.78	83.4	590
	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	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
MW-07	10/04/16	0.059	15.4	57.9	0.477	6.87	10.9	253
	12/22/16	0.0759	61.4	264	0.446	6.63	55.6	778
	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
MW-08	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
	11/04/15	0.0631	120	599	0.17 J	6.81	138	2,070
	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
MW-08R	06/16/16	0.0677	76.6	520	<0.1	6.76	83.6	1,090
	8/2016	Destroyed						
	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
	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
MW-09	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
	11/04/15	0.0682	34.5	149	0.149 J	6.86	72.6	590
AL-10	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	1,120
	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

TABLE 3
APPENDIX III BACKGROUND GROUNDWATER ANALYTICAL DATA
OAK GROVE STEAM ELECTRIC STATION
ASH LANDFILL 1

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	Fl (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
Equipment Blank								
EB	04/15/16	0.0379	3.07	8.24	<0.1	6.24	1.92 J	47
	06/16/16	0.0274 J	1.03	4.47	<0.1	7.16	2.34 J	43
	08/24/16	0.113	5.55	11.6	<0.1	7.23	24.8	<10
	10/05/16	0.0577	1.83	7.19	<0.1	6.98	3.07	<10
	12/22/16	0.0182 J	3.02	8.39	<0.1	6.07	1.67 J	<10

Notes:

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

TABLE 4
APPENDIX IV BACKGROUND GROUNDWATER ANALYTICAL DATA
OAK GROVE STEAM ELECTRIC STATION
ASH LANDFILL 1

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	Fl (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Th (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Combined [^] (pCi/L)
MW-02	11/04/15	<0.0008	<0.002	0.0813	<0.0003	<0.0003	<0.002	<0.003	0.135 J	<0.0003	0.0471	<0.00008	<0.002	<0.002	<0.0005	1.07	3.49	4.56
	12/18/15	<0.0008	<0.002	0.175	<0.0003	<0.0003	<0.002	<0.003	0.118 J	<0.0003	0.00927 J	<0.00008	<0.002	<0.002	<0.0005	0.652	<1.49	2.14
	02/10/16	<0.0008	<0.002	0.0933	<0.0003	<0.0003	<0.002	<0.003	0.229 J	<0.0003	0.0681	<0.00008	<0.002	<0.002	<0.0005	<0.445	1.61	2.06
	04/15/16	<0.0008	<0.002	0.164	<0.0003	<0.0003	<0.002	<0.003	0.102 J	<0.0003	0.00868 J	<0.00008	<0.002	<0.002	<0.0005	<0.651	<1.74	2.39
	06/16/16	<0.0008	<0.002	0.117	<0.0003	<0.0003	<0.002	<0.003	0.161 J	0.00079 J	0.0684	<0.00008	<0.002	<0.002	<0.0005	1.11	3.28	4.39
	08/25/16	<0.0008	<0.002	0.0415	<0.0003	<0.0003	<0.002	<0.003	0.164 J	<0.0003	0.0113	<0.00008	<0.002	<0.002	<0.0005	0.182	0.922	1.10
	10/04/16	<0.0008	<0.002	0.119	<0.0003	<0.0003	0.0022 J	<0.003	0.185 J	0.00112	0.1	<0.00008	<0.002	<0.002	<0.0005	0.292	1.93	2.22
	12/21/16	<0.0008	<0.002	0.11	<0.0003	<0.0003	<0.002	<0.003	0.293 J	0.000403 J	0.0971	<0.00008	<0.002	0.00232 J	<0.0005	0.342	1.86	2.20
MW-05	11/04/15	<0.0008	0.00348 J	0.0395	<0.0003	<0.0003	<0.002	<0.003	0.272 J	<0.0003	0.0466	<0.00008	<0.002	<0.002	<0.0005	0.507	<1.48	1.99
	12/18/15	<0.0008	0.00803	0.0662	<0.0003	<0.0003	<0.002	<0.003	0.476	0.000743 J	0.0407	<0.00008	<0.002	<0.002	<0.0005	<0.651	<1.22	1.87
	02/10/16	<0.0008	<0.002	0.039	<0.0003	<0.0003	<0.002	<0.003	0.397 J	<0.0003	0.0459	<0.00008	<0.002	<0.002	<0.0005	0.883	<1.57	2.45
	04/15/16	<0.0008	0.0103	0.0686	<0.0003	<0.0003	<0.002	0.00419 J	0.284 J	0.00042 J	0.0421	<0.00008	<0.002	<0.002	<0.0005	1.10	2.73	3.83
	06/15/16	<0.0008	0.0207	0.127	<0.0003	<0.0003	<0.002	0.00373 J	0.306 J	0.00146	0.0433	<0.00008	<0.002	<0.002	<0.0005	0.679	1.08	1.76
	08/24/16	<0.0008	0.00799	0.0624	<0.0003	<0.0003	0.00233 J	0.00312 J	0.262 J	0.00111	0.0375	<0.00008	<0.002	<0.002	<0.0005	0.562	2.80	3.36
	10/04/16	<0.0008	0.0139 J	0.081	0.000342 J	<0.0003	0.00469 J	0.00333 J	0.477	0.00213 J	0.0416	<0.00008	<0.002	<0.002	<0.0005	0.677	<0.652	1.33
MW-07	12/22/16	<0.0008	<0.002	0.0415	<0.0003	<0.0003	0.0197	<0.003	0.446	0.000403 J	0.114	<0.00008	<0.002	0.00371 J	<0.0005	<0.27	<0.672	0.94
	11/03/15	<0.0008	<0.002	0.0425	<0.0003	<0.0003	<0.002	<0.003	0.289 J	<0.0003	0.0136	<0.00008	<0.002	<0.002	<0.0005	1.10	1.58	2.68
	12/17/15	<0.0008	<0.002	0.0441	<0.0003	<0.0003	<0.002	<0.003	0.319 J	0.000537 J	0.0128	<0.00008	<0.002	<0.002	<0.0005	1.40	<1.25	2.65
	02/09/16	<0.0008	<0.002	0.0397	<0.0003	<0.0003	<0.002	<0.003	0.276 J	<0.0003	0.0213	<0.00008	<0.002	<0.002	<0.0005	0.663	<2.14	2.80
	04/15/16	<0.0008	<0.002	0.0405	<0.0003	<0.0003	<0.002	<0.003	0.187 J	<0.0003	0.0152	<0.00008	<0.002	<0.002	<0.0005	<0.344	<1.43	1.77
	06/15/16	<0.0008	<0.002	0.0467	<0.0003	<0.0003	<0.002	<0.003	0.226 J	<0.0003	0.0151	<0.00008	<0.002	<0.002	<0.0005	0.245	<0.722	0.97
	08/24/16	<0.0008	<0.002	0.0438	<0.0003	<0.0003	<0.002	<0.003	0.159 J	<0.0003	0.0124	<0.00008	<0.002	<0.002	<0.0005	0.213	1.61	1.82
	10/04/16	<0.0008	<0.002	0.0424	<0.0003	<0.0003	<0.002	<0.003	0.277 J	<0.0003	0.0125	<0.00008	<0.002	<0.002	<0.0005	0.560	0.780	1.34
	12/22/16	<0.0008	<0.002	0.0476	<0.0003	<0.0003	<0.002	<0.003	0.229 J	0.000333 J	0.0178	<0.00008	<0.002	<0.002	<0.0005	<0.245	<0.489	0.73
MW-08	11/04/15	<0.0008	<0.002	0.114	<0.0003	0.000441 J	0.399	0.0116	0.17 J	0.000714 J	0.0955	0.00043	0.0277	0.0318	<0.0005	0.807	<1.60	2.41
	12/18/15	<0.0008	<0.002	0.257	<0.0003	0.000363 J	0.0511	<0.003	0.158 J	0.00117	0.0429	0.0000855 J	0.00438 J	0.0108	<0.0005	1.24	2.11	3.35
	02/09/16	<0.0008	<0.002	0.0885	<0.0003	0.00036 J	0.00715	<0.003	0.175 J	0.000437 J	0.113	<0.00008	<0.002	0.0337	<0.0005	1.01	<2.28	3.29
	04/15/16	<0.0008	<0.002	0.112	<0.0003	0.000403 J	0.328	0.00375 J	<0.1	0.00134	0.0932	0.000837	0.036	0.0318	<0.0005	0.537	3.03	3.57
	06/16/16	<0.0008	<0.002	0.229	<0.0003	0.000457 J	0.0105	<0.003	<0.1	0.00216	0.0492	0.000173 J	<0.002	0.0154	<0.0005	1.15	1.73	2.88
	8/2016																	
MW-08R	12/22/16	<0.0008	<0.002	0.0855	<0.0003	<0.0003	<0.002	<0.003	0.355 J	<0.0003	0.00656 J	<0.00008	<0.002	<0.002	<0.0005	0.604	1.61	2.21
	03/21/17	<0.0008	<0.002	0.249	<0.0003	0.000374 J	0.0116	<0.003	0.2 J	<0.0003	0.0927	<0.00008	<0.002	0.0243	<0.0005	2.06	2.44	4.50
	04/20/17	<0.0008	<0.002	0.262	<0.0003	0.000426 J	0.0207	<0.003	0.149 J	<0.0003	0.0811	<0.00008	<0.002	0.0257	<0.0005			
MW-09	11/03/15	<0.0008	<0.002	0.0983	<0.0003	<0.0003	<0.002	<0.003	0.149 J	<0.0003	0.0524	<0.00008	<0.002	<0.002	<0.0005	0.812	2.09	2.90
	12/18/15	<0.0008	0.0026 J	0.107	<0.0003	<0.0003	<0.002	<0.003	0.266 J	0.00118	0.0544	<0.00008	<0.002	<0.002	<0.0005	2.21	2.88	5.09
	02/09/16	<0.0008	<0.002	0.0991	<0.0003	<0.0003	<0.002	<0.003	0.152 J	<0.0003	0.0559	<0.00008	<0.002	<0.002	<0.0005	0.820	<1.46	2.28
	04/15/16	<0.0008	0.00201 J	0.104	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.0004 J	0.055	<0.00008	<0.002	<0.002	<0.0005	0.883	2.68	3.56
	06/15/16	<0.0008	0.00524	0.144	0.000435 J	<0.0003	0.00587	<0.003	<0.1	0.002	0.0634	<0.00008	<0.002	<0.002	<0.0005	0.794	2.38	3.17
	08/25/16	<0.0008	0.00411 J	0.133	<0.0003	<0.0003	0.00673	<0.003	<0.1	0.00178	0.0569	<0.00008	<0.002	<0.002	<0.0005	1.06	2.34	3.40
	10/04/16	<0.0008	<0.002	0.125	<0.0003	<0.0003	0.00302 J	<0.003	0.256 J	0.00104	0.0635	<0.00008	<0.002	<0.002	<0.0005	1.33	<1.04	2.37
	12/22/16	<0.0008	<0.002	0.123	<0.0003	<0.0003	<0.002	<0.003	0.159 J	0.000411 J	0.0636	<0.00008	<0.002	<0.002	<0.0005	0.935	1.68	2.62
AL-10	11/04/15	<0.0008	<0.002	0.0933	<0.0003	<0.0003	<0.002	<0.003	0.149 J	<0.0003	0.0515	<0.00008	<0.002	<0.002	<0.0005	0.615	2.04	2.66
	12/18/15	<0.0008	<0.002	0.23	<0.0003	<0.0003	<0.002	<0.003	0.15 J	0.00339	0.0115	<0.00008	<0.002	<0.002	<0.0005	1.80	<1.9	3.70
	02/10/16	<0.0008	0.00218 J	0.143	<0.0003	<0.0003	<0.002	<0.003	0.197 J	<0.0003	0.00719 J	<0.00008	<0.002	<0.002	<0.0005	0.979	<1.19	2.17
	04/15/16	<0.0008	<0.002	0.18	<0.0003	<0.0003	<0.002	<0.003	0.133 J	<0.0003	0.00971 J	<0.00008	<0.002	<0.002	<0.0005	0.586	<2.76	3.35
	06/16/16	<0.0008	<0.002	0.103	<0.0003	<0.0003	<0.002	<0.003	0.155 J	<0.0003	0.00591 J	<0.00008	<0.002	<0.002	<0.0005	0.527	<0.76	1.29
	08/25/16	<0.0008	0.00364 J	0.306	0.000436 J	<0.0003	0.00842	0.00314 J	<0.1	0.00285	0.0337	<0.00008	<0.002	<0.002	<0.0005	2.34	1.11	3.45
	10/04/16	<0.0008	<0.002	0.0815	<0.0003	<0.0003	<0.002	<0.003	0.278 J	<0.0003	0.00646 J	<0.00008	<0.002	<0.002	<0.0005	0.718	<0.459	1.18
	12/22/16	<0.0008	<0.002	0.0846	<0.0003	<0.0003	<0.002	<0.003	0.195 J	<0.0003	0.00647 J	<0.00008	<0.002	<0.002	<0.0005	0.467	1.59	2.06

TABLE 4
APPENDIX IV BACKGROUND GROUNDWATER ANALYTICAL DATA
OAK GROVE STEAM ELECTRIC STATION
ASH LANDFILL 1

Sample Location	Date Sampled	Sb (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Cd (mg/L)	Cr (mg/L)	Co (mg/L)	Fl (mg/L)	Pb (mg/L)	Li (mg/L)	Hg (mg/L)	Mo (mg/L)	Se (mg/L)	Th (mg/L)	Ra 226 (pCi/L)	Ra 228 (pCi/L)	Ra 226/228 Combined^ (pCi/L)
Equipment Blank																		
EB	04/15/16	<0.0008	<0.002	0.0694	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.412	<1.59	2.00
	06/16/16	<0.0008	<0.002	0.0191	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	<0.187	<0.983	1.17
	08/24/16	<0.0008	<0.002	<0.003	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	<0.156	<0.47	0.63
	10/05/16	<0.0008	<0.002	0.0279	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.523	0.604	1.13
	12/22/16	<0.0008	<0.002	0.0748	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	<0.005	<0.00008	<0.002	<0.002	<0.0005	0.402	0.774	1.18

Notes:

1. Abbreviations: mg/L - milligrams per liter; pCi/L - picocuries per liter.
2. ^ - Sum of Ra 226 and Ra 228 concentrations. Non-detect isotope results were assigned a value equal to the minimum detectable concentration.
3. J - concentration is below method quantitation limit; result is an estimate.

TABLE 5
APPENDIX III DETECTION MONITORING GROUNDWATER ANALYTICAL DATA
OAK GROVE STEAM ELECTRIC STATION
ASH LANDFILL 1

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	Fl (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
MW-02	10/02/17	0.0567	22.2	42.4	<0.100	6.68	9.67	310
MW-05	10/02/17	0.0665	17.5	58.6	0.295 J	6.89	10.4	246
MW-07	10/02/17	0.0733	13.9	15.8	0.178 J	6.59	38.4	298
MW-08R	10/02/17	0.061	13.1	14.4	<0.100	6.63	28.7	243
MW-09	10/02/17	0.106	58.2	140	<0.100	6.76	95.3	433
AL-10	10/02/17	0.0973	27	50.6	0.120 J	6.85	12.2	398

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.

Figures

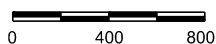


EXPLANATION

 CCR Monitoring Well



Scale in Feet



SOURCE:
Imagery from Google Earth dated 10/30/2014.

OAK GROVE STEAM ELECTRIC STATION ROBERTSON COUNTY, TEXAS

Figure 2

DETAILED SITE PLAN

PROJECT: 5164D

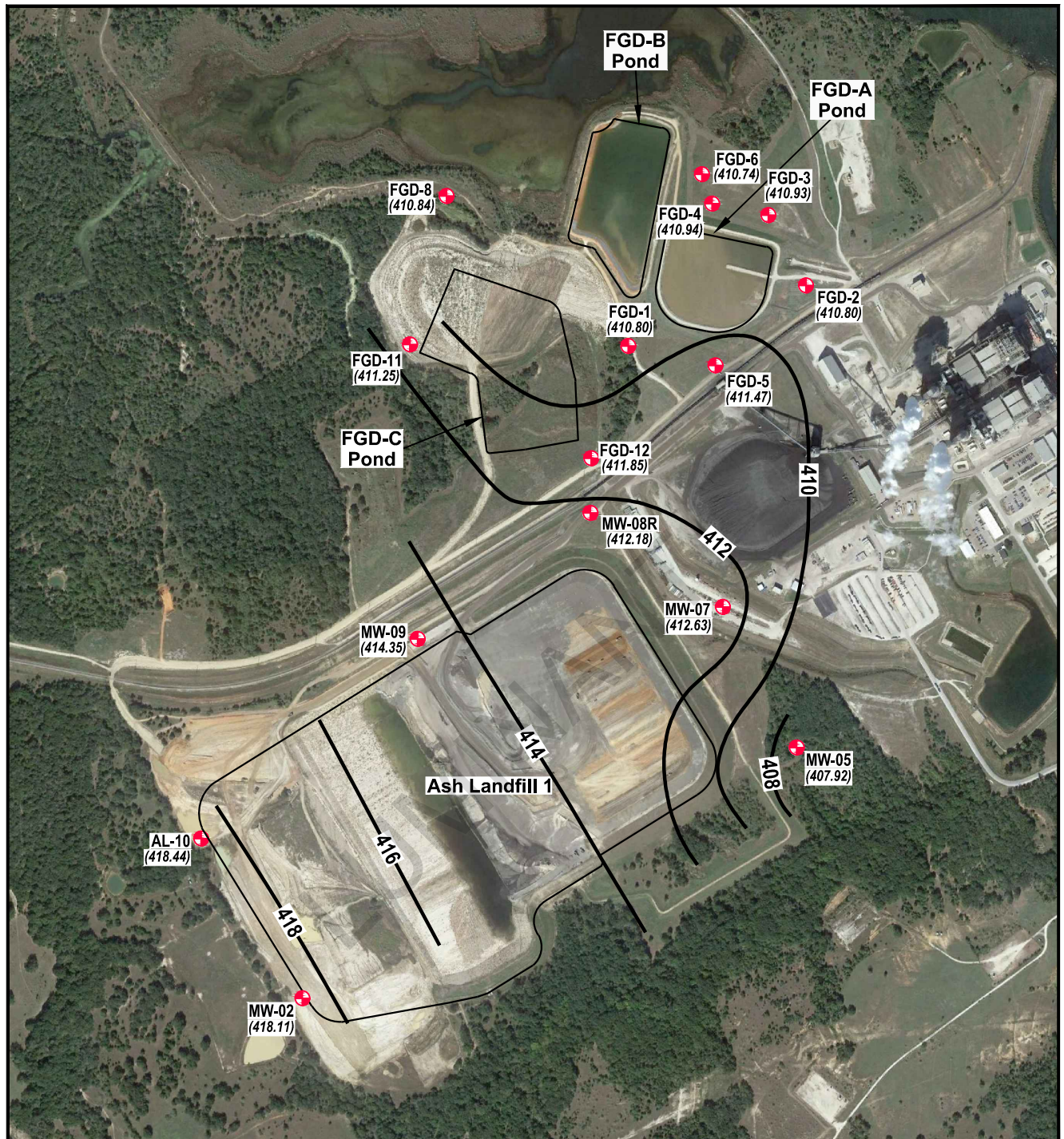
BY: AJD

REVISIONS

DATE: SEPT., 2017

CHECKED: PJB

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

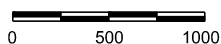


EXPLANATION

-  CCR Monitoring Well Location
-  (410.06) Groundwater Potentiometric Surface (ft. MSL)
-  — 400 — Groundwater Potentiometric Surface Contour (C.I. = 2 ft.)



Scale in Feet



SOURCE:
Imagery from Google Earth dated 10/30/2014.

OAK GROVE STEAM ELECTRIC STATION ROBERTSON COUNTY, TEXAS

Figure 3

GROUNDWATER POTENTIOMETRIC SURFACE MAP OCTOBER 3, 2017

PROJECT: 5347D

BY: AJD

REVISIONS

DATE: JAN., 2018

CHECKED: PJB

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Appendix A

Laboratory Analytical Reports – Background Data



December 14, 2015

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Luminant - Oak Grove

Order No.: 1511075

Dear Will Vienne:

DHL Analytical, Inc. received 15 sample(s) on 11/6/2015 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

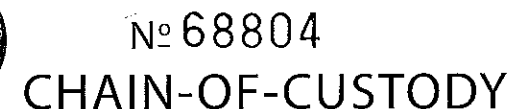
John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-15-15



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3

ORIGIN ID: NQIA (903) 794-0625
PASTOR, BEHLING & WHEELER, LLC
2201 DOUBLE CREEK DR STE 4004
ROUND ROCK, TX 786643843
UNITED STATES US

SHIP DATE: 05NOV15
ACTWGT: 51.30 LB
CAD: /OFFFC1621
DIMS: 23x14x13 IN
BILL SENDER

TO

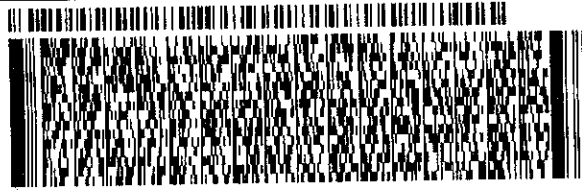
DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(612) 388-8222
INV:
PO:

REF:

DEPT:

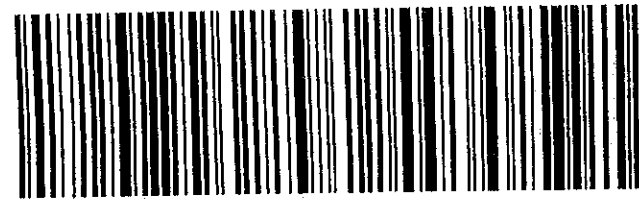


TRK# 8083 7896 0660
0200

FRI - 06 NOV 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS



ORIGIN ID: NQIA (903) 794-0625
PASTOR, BEHLING & WHEELER, LLC
2201 DOUBLE CREEK DR STE 4004
ROUND ROCK, TX 786643843
UNITED STATES US

SHIP DATE: 05NOV15
ACTWGT: 50.00 LB
CAD: /OFFFC1621
DIMS: 23x14x13 IN
BILL SENDER

TO

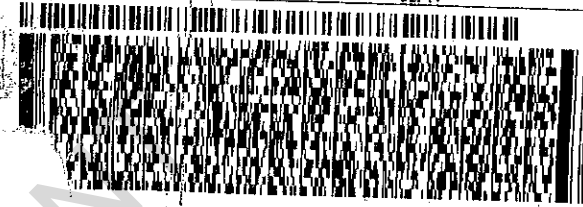
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2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(612) 388-8222
INV:
PO:

REF:

DEPT:



8083 7896 0650

FRI - 06 NOV 10:30A
PRIORITY OVERNIGHT

8 BSMA

78664
TX-US AUS



Part # 156297435 R112 07/15 30/11 26092426

FedEx **Express** **NEW Package**

FedEx Tracking Number **8083 7896 0649**

1 From

Date **11-5-19**

Sender's Name **J. L. BRYANT**

Phone **512 671-3451**

Company **PBW**

Address **2301 DOUBLE CIRCLE DR**

City **ROUND ROCK**

State **TX**

ZIP **78664**

2 Your Internal Billing Reference

5164-D

3 To

Recipient's Name

Phone **512 388-8822**

Company **DHL ANALYTICS**

Address **2300 DOUBLE CIRCLE DR**

We cannot deliver to PO boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City **ROUND ROCK**

State **TX**

ZIP **78664**



8083 7896 0649

Form ID No.

4 Express Service

NOTE: Service is subject to change. Please select carefully.

Packages up to 150 lbs.
For packages over 150 lbs., use the new
FedEx Express Freight US Airmail.

No Signature Required

☐ FedEx 1 Day
Earliest next business day delivery to select locations. Friday delivery guaranteed on Monday unless Saturday delivery is selected.

☒ FedEx Priority
Next business morning delivery to select locations. Saturday delivery NOT available.

☐ FedEx Standard Overnight
Next business afternoon delivery. Saturday delivery NOT available.

Business Days

☐ FedEx 2Day A.M.
Second business morning. Saturday delivery NOT available.

☐ FedEx 2Day
Second business afternoon. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver
Third business day. Saturday delivery NOT available.

5 Packaging

*Declared Value Limit \$500.

☐ FedEx Envelope*

☐ FedEx Pak*

☐ FedEx Box

☐ FedEx Tube

☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required
Package may be left without obtaining a signature for delivery.

☐ Direct Signature
Signature of recipient's address. Day sign for delivery. Fee applies.

☐ Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

☒ No ☐ Yes
One box must be checked. Yes: As per attached Shipper's Declaration.

☐ Shipper's Declaration required.

☐ Dry Ice
Dry Ice, 9 UN 1845 _____ kg

Dangerous goods (including dry ice) cannot be shipped in this packaging or placed in a FedEx Express Drop Box.

☐ Large Aircraft Only

7. Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below

Obtain recip. Acct. No. ☐

☒ Sender
Acct. No. in Section 1 will be billed.

☐ Recipient

☐ Third Party

☐ Credit Card

☐ Cash/Check

Total Packages

Total Weight

Grant Card Auth.

Our liability is limited to US\$100 unless you declare a higher value. See the current FedEx S&A for details.

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Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 11/6/2015

Work Order Number 1511075

Received by JB

Checklist completed by:

Bauka 11/6/2015
Signature Date

Reviewed by

JB 11/6/2015
Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	2.1 °C, 2.8, 2.7
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 8086
	Adjusted? <u>No</u>		Checked by <u>JB</u>
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____		Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1511075

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 11/6/15. A total of 15 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 11/11/15 Boron was detected below the reporting limit in the method blank (MB-72244). All samples may be biased high for this analyte. No further corrective actions were taken.

For Metals analysis performed on 11/11/15 the matrix spike recovery was slightly below control limits for Calcium. This is flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1511075

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1511075-01	FGD-1		11/03/15 10:50 AM	11/6/2015
1511075-02	MW-09		11/03/15 11:50 AM	11/6/2015
1511075-03	MW-07		11/03/15 12:40 PM	11/6/2015
1511075-04	FGD-2		11/03/15 02:15 PM	11/6/2015
1511075-05	FGD-3		11/03/15 03:05 PM	11/6/2015
1511075-06	FGD-4		11/03/15 04:00 PM	11/7/2015
1511075-07	FGD-5		11/03/15 04:50 PM	11/6/2015
1511075-08	AL-10		11/04/15 08:15 AM	11/7/2015
1511075-09	MW-02		11/04/15 09:05 AM	11/7/2015
1511075-10	MW-08		11/04/15 10:10 AM	11/7/2015
1511075-11	MW-05		11/04/15 11:05 AM	11/7/2015
1511075-12	FGD-12		11/04/15 11:55 AM	11/6/2015
1511075-13	FGD-11		11/04/15 01:00 PM	11/6/2015
1511075-14	FGD-6		11/04/15 01:55 PM	11/6/2015
1511075-15	FGD-8		11/04/15 02:50 PM	11/6/2015

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1511075-01A	FGD-1	11/03/15 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-1	11/03/15 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-1	11/03/15 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-1	11/03/15 10:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-01D	FGD-1	11/03/15 10:50 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-1	11/03/15 10:50 AM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-1	11/03/15 10:50 AM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-02A	MW-09	11/03/15 11:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-09	11/03/15 11:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-09	11/03/15 11:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-09	11/03/15 11:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-02D	MW-09	11/03/15 11:50 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	MW-09	11/03/15 11:50 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	MW-09	11/03/15 11:50 AM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	MW-09	11/03/15 11:50 AM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-03A	MW-07	11/03/15 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-07	11/03/15 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-07	11/03/15 12:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-03D	MW-07	11/03/15 12:40 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	MW-07	11/03/15 12:40 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	MW-07	11/03/15 12:40 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-04A	FGD-2	11/03/15 02:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-2	11/03/15 02:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-2	11/03/15 02:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-2	11/03/15 02:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-04D	FGD-2	11/03/15 02:15 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-2	11/03/15 02:15 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-2	11/03/15 02:15 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1511075-04D	FGD-2	11/03/15 02:15 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-05A	FGD-3	11/03/15 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-3	11/03/15 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-3	11/03/15 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-3	11/03/15 03:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-05D	FGD-3	11/03/15 03:05 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-3	11/03/15 03:05 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-3	11/03/15 03:05 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-3	11/03/15 03:05 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-06A	FGD-4	11/03/15 04:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-4	11/03/15 04:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-4	11/03/15 04:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-4	11/03/15 04:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-06D	FGD-4	11/03/15 04:00 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-4	11/03/15 04:00 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-4	11/03/15 04:00 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-4	11/03/15 04:00 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-07A	FGD-5	11/03/15 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-5	11/03/15 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-5	11/03/15 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-5	11/03/15 04:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-07D	FGD-5	11/03/15 04:50 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-5	11/03/15 04:50 PM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	FGD-5	11/03/15 04:50 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-5	11/03/15 04:50 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-08A	AL-10	11/04/15 08:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	AL-10	11/04/15 08:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	AL-10	11/04/15 08:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1511075-08A	AL-10	11/04/15 08:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-08D	AL-10	11/04/15 08:15 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	AL-10	11/04/15 08:15 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	AL-10	11/04/15 08:15 AM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	AL-10	11/04/15 08:15 AM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-09A	MW-02	11/04/15 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-02	11/04/15 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-02	11/04/15 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-02	11/04/15 09:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-09D	MW-02	11/04/15 09:05 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	MW-02	11/04/15 09:05 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	MW-02	11/04/15 09:05 AM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	MW-02	11/04/15 09:05 AM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-10A	MW-08	11/04/15 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-08	11/04/15 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-08	11/04/15 10:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-08	11/04/15 10:10 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-10D	MW-08	11/04/15 10:10 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	MW-08	11/04/15 10:10 AM	Aqueous	E300	Anion Preparation	11/09/15 10:40 AM	72226
	MW-08	11/04/15 10:10 AM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	MW-08	11/04/15 10:10 AM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-11A	MW-05	11/04/15 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-05	11/04/15 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	MW-05	11/04/15 11:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-11D	MW-05	11/04/15 11:05 AM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	MW-05	11/04/15 11:05 AM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	MW-05	11/04/15 11:05 AM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	MW-05	11/04/15 11:05 AM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1511075-12A	FGD-12	11/04/15 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-12	11/04/15 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-12	11/04/15 11:55 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-12D	FGD-12	11/04/15 11:55 AM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	FGD-12	11/04/15 11:55 AM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-12	11/04/15 11:55 AM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-13A	FGD-11	11/04/15 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-11	11/04/15 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-11	11/04/15 01:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-13D	FGD-11	11/04/15 01:00 PM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	FGD-11	11/04/15 01:00 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-11	11/04/15 01:00 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-14A	FGD-6	11/04/15 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-6	11/04/15 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-6	11/04/15 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-6	11/04/15 01:55 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-14D	FGD-6	11/04/15 01:55 PM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	FGD-6	11/04/15 01:55 PM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	FGD-6	11/04/15 01:55 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-6	11/04/15 01:55 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232
1511075-15A	FGD-8	11/04/15 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-8	11/04/15 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-8	11/04/15 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/10/15 09:11 AM	72244
	FGD-8	11/04/15 02:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/10/15 12:54 PM	72254
1511075-15D	FGD-8	11/04/15 02:50 PM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	FGD-8	11/04/15 02:50 PM	Aqueous	E300	Anion Preparation	11/10/15 09:47 AM	72247
	FGD-8	11/04/15 02:50 PM	Aqueous	M4500-H+ B	pH Preparation	11/11/15 08:27 AM	72258
	FGD-8	11/04/15 02:50 PM	Aqueous	M2540C	TDS Preparation	11/09/15 12:18 PM	72232

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1511075-01A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 03:46 PM	CETAC2_HG_151113 C
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 01:44 PM	ICP-MS3_151118A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 12:21 PM	ICP-MS4_151111C
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 01:57 PM	ICP-MS4_151111C
1511075-01D	FGD-1	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 11:55 AM	IC3_151109A
	FGD-1	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:27 AM	TITRATOR_151111A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-02A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 03:57 PM	CETAC2_HG_151113 C
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 01:57 PM	ICP-MS3_151118A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 12:34 PM	ICP-MS4_151111C
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:01 PM	ICP-MS4_151111C
1511075-02D	MW-09	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 12:19 PM	IC3_151109A
	MW-09	Aqueous	E300	Anions by IC method - Water	72226	10	11/09/15 04:42 PM	IC3_151109A
	MW-09	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:30 AM	TITRATOR_151111A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-03A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 03:59 PM	CETAC2_HG_151113 C
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:03 PM	ICP-MS3_151118A
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 12:36 PM	ICP-MS4_151111C
1511075-03D	MW-07	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 12:39 PM	IC3_151109A
	MW-07	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:31 AM	TITRATOR_151111A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-04A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:02 PM	CETAC2_HG_151113 C
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:09 PM	ICP-MS3_151118A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 12:38 PM	ICP-MS4_151111C
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:03 PM	ICP-MS4_151111C
1511075-04D	FGD-2	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 01:00 PM	IC3_151109A

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1511075-04D	FGD-2	Aqueous	E300	Anions by IC method - Water	72226	100	11/09/15 05:06 PM	IC3_151109A
	FGD-2	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:32 AM	TITRATOR_151111A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-05A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:04 PM	CETAC2_HG_151113 C
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:15 PM	ICP-MS3_151118A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 12:40 PM	ICP-MS4_151111C
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	50	11/11/15 02:05 PM	ICP-MS4_151111C
1511075-05D	FGD-3	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 01:21 PM	IC3_151109A
	FGD-3	Aqueous	E300	Anions by IC method - Water	72226	100	11/09/15 05:27 PM	IC3_151109A
	FGD-3	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:35 AM	TITRATOR_151111A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-06A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:06 PM	CETAC2_HG_151113 C
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:21 PM	ICP-MS3_151118A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:12 PM	ICP-MS4_151111C
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:07 PM	ICP-MS4_151111C
1511075-06D	FGD-4	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 01:41 PM	IC3_151109A
	FGD-4	Aqueous	E300	Anions by IC method - Water	72226	10	11/09/15 06:29 PM	IC3_151109A
	FGD-4	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:36 AM	TITRATOR_151111A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-07A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:08 PM	CETAC2_HG_151113 C
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:27 PM	ICP-MS3_151118A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:14 PM	ICP-MS4_151111C
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:09 PM	ICP-MS4_151111C
1511075-07D	FGD-5	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 02:02 PM	IC3_151109A
	FGD-5	Aqueous	E300	Anions by IC method - Water	72226	100	11/09/15 06:49 PM	IC3_151109A
	FGD-5	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:38 AM	TITRATOR_151111A

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1511075-07D	FGD-5	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-08A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:11 PM	CETAC2_HG_151113 C
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:16 PM	ICP-MS4_151111C
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:11 PM	ICP-MS4_151111C
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:33 PM	ICP-MS3_151118A
1511075-08D	AL-10	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 02:23 PM	IC3_151109A
	AL-10	Aqueous	E300	Anions by IC method - Water	72226	10	11/09/15 07:10 PM	IC3_151109A
	AL-10	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:41 AM	TITRATOR_151111A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-09A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:13 PM	CETAC2_HG_151113 C
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:39 PM	ICP-MS3_151118A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:18 PM	ICP-MS4_151111C
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:13 PM	ICP-MS4_151111C
1511075-09D	MW-02	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 02:43 PM	IC3_151109A
	MW-02	Aqueous	E300	Anions by IC method - Water	72226	10	11/09/15 07:30 PM	IC3_151109A
	MW-02	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:43 AM	TITRATOR_151111A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-10A	MW-08	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:15 PM	CETAC2_HG_151113 C
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	50	11/11/15 02:15 PM	ICP-MS4_151111C
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 02:45 PM	ICP-MS3_151118A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:20 PM	ICP-MS4_151111C
1511075-10D	MW-08	Aqueous	E300	Anions by IC method - Water	72226	1	11/09/15 03:04 PM	IC3_151109A
	MW-08	Aqueous	E300	Anions by IC method - Water	72226	100	11/09/15 07:51 PM	IC3_151109A
	MW-08	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:47 AM	TITRATOR_151111A
	MW-08	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-11A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:22 PM	CETAC2_HG_151113 C

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1511075-11A	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 03:45 PM	ICP-MS3_151118A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:22 PM	ICP-MS4_151111C
1511075-11D	MW-05	Aqueous	E300	Anions by IC method - Water	72247	1	11/10/15 11:47 AM	IC2_151110A
	MW-05	Aqueous	E300	Anions by IC method - Water	72247	10	11/10/15 01:07 PM	IC2_151110A
	MW-05	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:49 AM	TITRATOR_151111A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-12A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:24 PM	CETAC2_HG_151113C
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 03:51 PM	ICP-MS3_151118A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:24 PM	ICP-MS4_151111C
1511075-12D	FGD-12	Aqueous	E300	Anions by IC method - Water	72247	1	11/10/15 12:01 PM	IC2_151110A
	FGD-12	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:51 AM	TITRATOR_151111A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-13A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:27 PM	CETAC2_HG_151113C
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 03:57 PM	ICP-MS3_151118A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:26 PM	ICP-MS4_151111C
1511075-13D	FGD-11	Aqueous	E300	Anions by IC method - Water	72247	1	11/10/15 12:16 PM	IC2_151110A
	FGD-11	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:53 AM	TITRATOR_151111A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B
1511075-14A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:29 PM	CETAC2_HG_151113C
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 04:03 PM	ICP-MS3_151118A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:28 PM	ICP-MS4_151111C
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:17 PM	ICP-MS4_151111C
1511075-14D	FGD-6	Aqueous	E300	Anions by IC method - Water	72247	1	11/10/15 12:30 PM	IC2_151110A
	FGD-6	Aqueous	E300	Anions by IC method - Water	72247	10	11/10/15 01:21 PM	IC2_151110A
	FGD-6	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:56 AM	TITRATOR_151111A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B

Lab Order: 1511075
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1511075-15A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	72254	1	11/13/15 04:31 PM	CETAC2_HG_151113 C
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/18/15 04:10 PM	ICP-MS3_151118A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	1	11/11/15 01:30 PM	ICP-MS4_151111C
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72244	10	11/11/15 02:29 PM	ICP-MS4_151111C
1511075-15D	FGD-8	Aqueous	E300	Anions by IC method - Water	72247	1	11/10/15 12:45 PM	IC2_151110A
	FGD-8	Aqueous	E300	Anions by IC method - Water	72247	10	11/10/15 01:36 PM	IC2_151110A
	FGD-8	Aqueous	M4500-H+ B	pH	72258	1	11/11/15 09:59 AM	TITRATOR_151111A
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	72232	1	11/10/15 09:00 AM	WC_151109B

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-1
Lab ID: 1511075-01
Collection Date: 11/03/15 10:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 03:46 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 12:21 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:21 PM
Barium	0.0311	0.00300	0.0100		mg/L	1	11/11/15 12:21 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:21 PM
Boron	0.0650	0.0100	0.0300		mg/L	1	11/11/15 12:21 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:21 PM
Calcium	11.0	1.00	3.00		mg/L	10	11/11/15 01:57 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:21 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 01:44 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:21 PM
Lithium	0.0340	0.00500	0.0100		mg/L	1	11/18/15 01:44 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:21 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:21 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 12:21 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	36.4	0.300	1.00		mg/L	1	11/09/15 11:55 AM
Fluoride	0.363	0.100	0.400	J	mg/L	1	11/09/15 11:55 AM
Sulfate	32.0	1.00	3.00		mg/L	1	11/09/15 11:55 AM
PH		M4500-H+ B		Analyst: LM			
pH	6.80	0	0		pH Units@12.9°C	1	11/11/15 09:27 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	245	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: MW-09
Lab ID: 1511075-02
Collection Date: 11/03/15 11:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 03:57 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 12:34 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:34 PM
Barium	0.0983	0.00300	0.0100		mg/L	1	11/11/15 12:34 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:34 PM
Boron	0.0722	0.0100	0.0300		mg/L	1	11/11/15 12:34 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:34 PM
Calcium	36.4	1.00	3.00		mg/L	10	11/11/15 02:01 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:34 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 01:57 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:34 PM
Lithium	0.0524	0.00500	0.0100		mg/L	1	11/18/15 01:57 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:34 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:34 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 12:34 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	155	3.00	10.0		mg/L	10	11/09/15 04:42 PM
Fluoride	0.149	0.100	0.400	J	mg/L	1	11/09/15 12:19 PM
Sulfate	74.9	1.00	3.00		mg/L	1	11/09/15 12:19 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.44	0	0		pH Units@13.2°C	1	11/11/15 09:30 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	583	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: MW-07
Lab ID: 1511075-03
Collection Date: 11/03/15 12:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 03:59 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 12:36 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:36 PM
Barium	0.0425	0.00300	0.0100		mg/L	1	11/11/15 12:36 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:36 PM
Boron	0.0483	0.0100	0.0300		mg/L	1	11/11/15 12:36 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:36 PM
Calcium	8.57	0.100	0.300		mg/L	1	11/11/15 12:36 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:36 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 02:03 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:36 PM
Lithium	0.0136	0.00500	0.0100		mg/L	1	11/18/15 02:03 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:36 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:36 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 12:36 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	20.2	0.300	1.00		mg/L	1	11/09/15 12:39 PM
Fluoride	0.289	0.100	0.400	J	mg/L	1	11/09/15 12:39 PM
Sulfate	11.5	1.00	3.00		mg/L	1	11/09/15 12:39 PM
PH							
M4500-H+ B				Analyst: LM			
pH	7.02	0	0		pH Units@13.4°C	1	11/11/15 09:31 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	276	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-2
Lab ID: 1511075-04
Collection Date: 11/03/15 02:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:02 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 12:38 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:38 PM
Barium	0.146	0.00300	0.0100		mg/L	1	11/11/15 12:38 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:38 PM
Boron	0.100	0.0100	0.0300		mg/L	1	11/11/15 12:38 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:38 PM
Calcium	77.1	1.00	3.00		mg/L	10	11/11/15 02:03 PM
Chromium	0.00244	0.00200	0.00500	J	mg/L	1	11/11/15 12:38 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 02:09 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:38 PM
Lithium	0.0224	0.00500	0.0100		mg/L	1	11/18/15 02:09 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:38 PM
Selenium	0.0203	0.00200	0.00500		mg/L	1	11/11/15 12:38 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 12:38 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	460	30.0	100		mg/L	100	11/09/15 05:06 PM
Fluoride	0.224	0.100	0.400	J	mg/L	1	11/09/15 01:00 PM
Sulfate	147	1.00	3.00		mg/L	1	11/09/15 01:00 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.86	0	0		pH Units@13.7°C	1	11/11/15 09:32 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	1370	50.0	50.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-3
Lab ID: 1511075-05
Collection Date: 11/03/15 03:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:04 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 12:40 PM
Arsenic	0.00226	0.00200	0.00500	J	mg/L	1	11/11/15 12:40 PM
Barium	0.0417	0.00300	0.0100		mg/L	1	11/11/15 12:40 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:40 PM
Boron	0.343	0.0100	0.0300		mg/L	1	11/11/15 12:40 PM
Cadmium	0.00492	0.000300	0.00100		mg/L	1	11/11/15 12:40 PM
Calcium	108	5.00	15.0		mg/L	50	11/11/15 02:05 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:40 PM
Cobalt	0.0436	0.00300	0.00500		mg/L	1	11/18/15 02:15 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 12:40 PM
Lithium	0.176	0.00500	0.0100		mg/L	1	11/18/15 02:15 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 12:40 PM
Selenium	0.0881	0.00200	0.00500		mg/L	1	11/11/15 12:40 PM
Thallium	0.00170	0.000500	0.00150		mg/L	1	11/11/15 12:40 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	439	30.0	100		mg/L	100	11/09/15 05:27 PM
Fluoride	0.505	0.100	0.400		mg/L	1	11/09/15 01:21 PM
Sulfate	479	100	300		mg/L	100	11/09/15 05:27 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.52	0	0		pH Units@14°C	1	11/11/15 09:35 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	1950	50.0	50.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-4
Lab ID: 1511075-06
Collection Date: 11/03/15 04:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:06 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:12 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:12 PM
Barium	0.126	0.00300	0.0100		mg/L	1	11/11/15 01:12 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:12 PM
Boron	0.0694	0.0100	0.0300		mg/L	1	11/11/15 01:12 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:12 PM
Calcium	46.1	1.00	3.00		mg/L	10	11/11/15 02:07 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:12 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 02:21 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:12 PM
Lithium	0.0433	0.00500	0.0100		mg/L	1	11/18/15 02:21 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:12 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:12 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:12 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	200	3.00	10.0		mg/L	10	11/09/15 06:29 PM
Fluoride	0.294	0.100	0.400	J	mg/L	1	11/09/15 01:41 PM
Sulfate	37.8	1.00	3.00		mg/L	1	11/09/15 01:41 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.91	0	0		pH Units@14.4°C	1	11/11/15 09:36 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	679	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-5
Lab ID: 1511075-07
Collection Date: 11/03/15 04:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:08 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:14 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:14 PM
Barium	0.124	0.00300	0.0100		mg/L	1	11/11/15 01:14 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:14 PM
Boron	0.0719	0.0100	0.0300		mg/L	1	11/11/15 01:14 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:14 PM
Calcium	30.2	1.00	3.00		mg/L	10	11/11/15 02:09 PM
Chromium	0.00253	0.00200	0.00500	J	mg/L	1	11/11/15 01:14 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 02:27 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:14 PM
Lithium	0.0112	0.00500	0.0100		mg/L	1	11/18/15 02:27 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:14 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:14 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:14 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	230	30.0	100		mg/L	100	11/09/15 06:49 PM
Fluoride	0.334	0.100	0.400	J	mg/L	1	11/09/15 02:02 PM
Sulfate	54.7	1.00	3.00		mg/L	1	11/09/15 02:02 PM
PH		M4500-H+ B		Analyst: LM			
pH	7.01	0	0		pH Units@14.6°C	1	11/11/15 09:38 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	1040	50.0	50.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: AL-10
Lab ID: 1511075-08
Collection Date: 11/04/15 08:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:11 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:16 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:16 PM
Barium	0.0933	0.00300	0.0100		mg/L	1	11/11/15 01:16 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:16 PM
Boron	0.0682	0.0100	0.0300		mg/L	1	11/11/15 01:16 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:16 PM
Calcium	34.5	1.00	3.00		mg/L	10	11/11/15 02:11 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:16 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 02:33 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:16 PM
Lithium	0.0515	0.00500	0.0100		mg/L	1	11/18/15 02:33 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:16 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:16 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:16 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	149	3.00	10.0		mg/L	10	11/09/15 07:10 PM
Fluoride	0.149	0.100	0.400	J	mg/L	1	11/09/15 02:23 PM
Sulfate	72.6	1.00	3.00		mg/L	1	11/09/15 02:23 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.49	0	0		pH Units@15.2°C	1	11/11/15 09:41 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	590	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: MW-02
Lab ID: 1511075-09
Collection Date: 11/04/15 09:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:13 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:18 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:18 PM
Barium	0.0813	0.00300	0.0100		mg/L	1	11/11/15 01:18 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:18 PM
Boron	0.0640	0.0100	0.0300		mg/L	1	11/11/15 01:18 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:18 PM
Calcium	32.5	1.00	3.00		mg/L	10	11/11/15 02:13 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:18 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 02:39 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:18 PM
Lithium	0.0471	0.00500	0.0100		mg/L	1	11/18/15 02:39 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:18 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:18 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:18 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	138	3.00	10.0		mg/L	10	11/09/15 07:30 PM
Fluoride	0.135	0.100	0.400	J	mg/L	1	11/09/15 02:43 PM
Sulfate	71.4	1.00	3.00		mg/L	1	11/09/15 02:43 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.52	0	0		pH Units@15.6°C	1	11/11/15 09:43 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	539	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: MW-08
Lab ID: 1511075-10
Collection Date: 11/04/15 10:10 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
		SW7470A					Analyst: ABO
Mercury	0.000430	0.0000800	0.000200		mg/L	1	11/13/15 04:15 PM
TRACE METALS: ICP-MS - WATER							
		SW6020A					Analyst: RO
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:20 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:20 PM
Barium	0.114	0.00300	0.0100		mg/L	1	11/11/15 01:20 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:20 PM
Boron	0.0631	0.0100	0.0300		mg/L	1	11/11/15 01:20 PM
Cadmium	0.000441	0.000300	0.00100	J	mg/L	1	11/11/15 01:20 PM
Calcium	120	5.00	15.0		mg/L	50	11/11/15 02:15 PM
Chromium	0.399	0.00200	0.00500		mg/L	1	11/11/15 01:20 PM
Cobalt	0.0116	0.00300	0.00500		mg/L	1	11/18/15 02:45 PM
Lead	0.000714	0.000300	0.00100	J	mg/L	1	11/11/15 01:20 PM
Lithium	0.0955	0.00500	0.0100		mg/L	1	11/18/15 02:45 PM
Molybdenum	0.0277	0.00200	0.00500		mg/L	1	11/11/15 01:20 PM
Selenium	0.0318	0.00200	0.00500		mg/L	1	11/11/15 01:20 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:20 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: AV
Chloride	599	30.0	100		mg/L	100	11/09/15 07:51 PM
Fluoride	0.170	0.100	0.400	J	mg/L	1	11/09/15 03:04 PM
Sulfate	138	1.00	3.00		mg/L	1	11/09/15 03:04 PM
PH							
		M4500-H+ B					Analyst: LM
pH	6.47	0	0		pH Units@15.9°C	1	11/11/15 09:47 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: BJT
Total Dissolved Solids (Residue, Filterable)	2070	50.0	50.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: MW-05
Lab ID: 1511075-11
Collection Date: 11/04/15 11:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:22 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:22 PM
Arsenic	0.00348	0.00200	0.00500	J	mg/L	1	11/11/15 01:22 PM
Barium	0.0395	0.00300	0.0100		mg/L	1	11/11/15 01:22 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:22 PM
Boron	0.0628	0.0100	0.0300		mg/L	1	11/11/15 01:22 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:22 PM
Calcium	15.4	0.100	0.300		mg/L	1	11/18/15 03:45 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:22 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 03:45 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:22 PM
Lithium	0.0466	0.00500	0.0100		mg/L	1	11/18/15 03:45 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:22 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:22 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:22 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	64.8	3.00	10.0		mg/L	10	11/10/15 01:07 PM
Fluoride	0.272	0.100	0.400	J	mg/L	1	11/10/15 11:47 AM
Sulfate	13.6	1.00	3.00		mg/L	1	11/10/15 11:47 AM
PH							
M4500-H+ B				Analyst: LM			
pH	7.10	0	0		pH Units@16.1°C	1	11/11/15 09:49 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	285	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-12
Lab ID: 1511075-12
Collection Date: 11/04/15 11:55 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:24 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:24 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:24 PM
Barium	0.0884	0.00300	0.0100		mg/L	1	11/11/15 01:24 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:24 PM
Boron	0.0651	0.0100	0.0300		mg/L	1	11/11/15 01:24 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:24 PM
Calcium	16.6	0.100	0.300		mg/L	1	11/18/15 03:51 PM
Chromium	0.0124	0.00200	0.00500		mg/L	1	11/11/15 01:24 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 03:51 PM
Lead	0.000678	0.000300	0.00100	J	mg/L	1	11/11/15 01:24 PM
Lithium	0.0234	0.00500	0.0100		mg/L	1	11/18/15 03:51 PM
Molybdenum	0.00221	0.00200	0.00500	J	mg/L	1	11/11/15 01:24 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:24 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:24 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	19.4	0.300	1.00		mg/L	1	11/10/15 12:01 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	11/10/15 12:01 PM
Sulfate	20.0	1.00	3.00		mg/L	1	11/10/15 12:01 PM
PH		M4500-H+ B		Analyst: LM			
pH	7.10	0	0		pH Units@15.7°C	1	11/11/15 09:51 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	217	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-11
Lab ID: 1511075-13
Collection Date: 11/04/15 01:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:27 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:26 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:26 PM
Barium	0.0527	0.00300	0.0100		mg/L	1	11/11/15 01:26 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:26 PM
Boron	0.0480	0.0100	0.0300		mg/L	1	11/11/15 01:26 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:26 PM
Calcium	9.57	0.100	0.300		mg/L	1	11/11/15 01:26 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:26 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 03:57 PM
Lead	0.000727	0.000300	0.00100	J	mg/L	1	11/11/15 01:26 PM
Lithium	0.0144	0.00500	0.0100		mg/L	1	11/18/15 03:57 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:26 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:26 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:26 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	15.0	0.300	1.00		mg/L	1	11/10/15 12:16 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	11/10/15 12:16 PM
Sulfate	9.96	1.00	3.00		mg/L	1	11/10/15 12:16 PM
PH		M4500-H+ B		Analyst: LM			
pH	7.06	0	0		pH Units@15.6°C	1	11/11/15 09:53 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	145	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-6
Lab ID: 1511075-14
Collection Date: 11/04/15 01:55 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:29 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:28 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:28 PM
Barium	0.130	0.00300	0.0100		mg/L	1	11/11/15 01:28 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:28 PM
Boron	0.0968	0.0100	0.0300		mg/L	1	11/11/15 01:28 PM
Cadmium	0.000557	0.000300	0.00100	J	mg/L	1	11/11/15 01:28 PM
Calcium	79.3	1.00	3.00		mg/L	10	11/11/15 02:17 PM
Chromium	0.0121	0.00200	0.00500		mg/L	1	11/11/15 01:28 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 04:03 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:28 PM
Lithium	0.170	0.00500	0.0100		mg/L	1	11/18/15 04:03 PM
Molybdenum	0.0445	0.00200	0.00500		mg/L	1	11/11/15 01:28 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:28 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:28 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	355	3.00	10.0		mg/L	10	11/10/15 01:21 PM
Fluoride	0.227	0.100	0.400	J	mg/L	1	11/10/15 12:30 PM
Sulfate	33.8	1.00	3.00		mg/L	1	11/10/15 12:30 PM
PH							
M4500-H+ B				Analyst: LM			
pH	7.29	0	0		pH Units@16.1°C	1	11/11/15 09:56 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	1070	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 14-Dec-15

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1511075

Client Sample ID: FGD-8
Lab ID: 1511075-15
Collection Date: 11/04/15 02:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
		SW7470A				Analyst: ABO	
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/13/15 04:31 PM
TRACE METALS: ICP-MS - WATER							
		SW6020A				Analyst: RO	
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/11/15 01:30 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:30 PM
Barium	0.119	0.00300	0.0100		mg/L	1	11/11/15 01:30 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:30 PM
Boron	0.0843	0.0100	0.0300		mg/L	1	11/11/15 01:30 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:30 PM
Calcium	69.2	1.00	3.00		mg/L	10	11/11/15 02:29 PM
Chromium	0.00542	0.00200	0.00500		mg/L	1	11/11/15 01:30 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/18/15 04:10 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/11/15 01:30 PM
Lithium	0.149	0.00500	0.0100		mg/L	1	11/18/15 04:10 PM
Molybdenum	0.0261	0.00200	0.00500		mg/L	1	11/11/15 01:30 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/11/15 01:30 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/11/15 01:30 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: AV	
Chloride	271	3.00	10.0		mg/L	10	11/10/15 01:36 PM
Fluoride	0.173	0.100	0.400	J	mg/L	1	11/10/15 12:45 PM
Sulfate	24.4	1.00	3.00		mg/L	1	11/10/15 12:45 PM
PH							
		M4500-H+ B				Analyst: LM	
pH	7.38	0	0		pH Units@16.8°C	1	11/11/15 09:59 AM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: BJT	
Total Dissolved Solids (Residue, Filterable)	803	10.0	10.0		mg/L	1	11/10/15 09:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1511075

Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151113C

The QC data in batch 72254 applies to the following samples: 1511075-01A, 1511075-02A, 1511075-03A, 1511075-04A, 1511075-05A, 1511075-06A, 1511075-07A, 1511075-08A, 1511075-09A, 1511075-10A, 1511075-11A, 1511075-12A, 1511075-13A, 1511075-14A, 1511075-15A

Sample ID	MB-72254	Batch ID:	72254	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 3:39:21 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-72254	Batch ID:	72254	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 3:41:37 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00204 0.000200 0.00200 0 102 85 115

Sample ID	LCSD-72254	Batch ID:	72254	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 3:43:52 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00206 0.000200 0.00200 0 103 85 115 0.976 15

Sample ID	1511075-01A SD	Batch ID:	72254	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 3:48:25 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1511075-01A PDS	Batch ID:	72254	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 3:50:40 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00247 0.000200 0.00250 0 98.8 85 115

Sample ID	1511075-01A MS	Batch ID:	72254	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 3:52:56 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00208 0.000200 0.00200 0 104 80 120

Sample ID	1511075-01A MSD	Batch ID:	72254	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 3:55:12 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00208 0.000200 0.00200 0 104 80 120 0 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151113C

Sample ID	ICV-151113	Batch ID:	R82670	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 1:38:46 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00386	0.000200	0.00400	0	96.5	90	110			

Sample ID	CCV3-151113			Batch ID:	R82670		TestNo:	SW7470A		Units:	mg/L	
SampType:	CCV			Run ID:	CETAC2_HG_151113C		Analysis Date:	11/13/2015 3:34:48 PM		Prep Date:		
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00196	0.000200	0.00200	0	98.0	90	110			

Sample ID	CCV4-151113	Batch ID:	R82670	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_151113C	Analysis Date:	11/13/2015 4:17:55 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00197	0.000200	0.00200	0	98.5	90	110			

Sample ID	CCV5-151113			Batch ID:	R82670		TestNo:	SW7470A		Units:	mg/L	
SampType:	CCV			Run ID:	CETAC2_HG_151113C		Analysis Date:	11/13/2015 4:33:53 PM		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Mercury	0.00196	0.000200	0.00200	0	98.0	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank
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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_151118A

The QC data in batch 72244 applies to the following samples: 1511075-01A, 1511075-02A, 1511075-03A, 1511075-04A, 1511075-05A, 1511075-06A, 1511075-07A, 1511075-08A, 1511075-09A, 1511075-10A, 1511075-11A, 1511075-12A, 1511075-13A, 1511075-14A, 1511075-15A

Sample ID	MB-72244		Batch ID:	72244		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS3_151118A		Analysis Date:	11/18/2015 1:20:00 PM		Prep Date:	11/10/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cobalt	<0.00300	0.00500
Lithium	<0.00500	0.0100

Sample ID	LCS-72244			Batch ID:	72244		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS3_151118A		Analysis Date:	11/18/2015 1:26:00 PM		Prep Date:	11/10/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Cobalt	0.194	0.00500	0.200	0	96.8	80	120
Lithium	0.197	0.0100	0.200	0	98.4	80	120

Sample ID	LCSD-72244			Batch ID:	72244		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD			Run ID:	ICP-MS3_151118A		Analysis Date:	11/18/2015 1:32:00 PM		Prep Date:	11/10/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Cobalt	0.197	0.00500	0.200	0	98.7	80	120	1.89	15
Lithium	0.200	0.0100	0.200	0	100	80	120	1.76	15

Sample ID	1511075-01A SD	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 1:51:00 PM	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cobalt	<0.0150	0.0250	0	0				0	10
Lithium	0.0338	0.0500	0	0.0340				0.605	10

Sample ID	1511075-01A PDS			Batch ID:	72244		TestNo:	SW6020A		Units:	mg/L	
SampType:	PDS			Run ID:	ICP-MS3_151118A		Analysis Date:	11/18/2015 2:51:00 PM		Prep Date:	11/10/2015	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cobalt	0.216	0.00500	0.200	0	108	80	120
Lithium	0.240	0.0100	0.200	0.0340	103	80	120

Sample ID	1511075-01A MS	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L				
SampType:	MS	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 2:57:00 PM	Prep Date:	11/10/2015				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cobalt	0.198	0.00500	0.200	0	99.0	80	120
Lithium	0.235	0.0100	0.200	0.0340	101	80	120

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_151118A

Sample ID	1511075-01A MSD	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 3:03:00 PM	Prep Date:	11/10/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Cobalt		0.202	0.00500	0.200	0	101	80	120	2.15	15
Lithium		0.239	0.0100	0.200	0.0340	103	80	120	1.77	15

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_151118A

Sample ID	ICV1-151118	Batch ID:	R82720	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 12:50:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	2.44	0.300	2.50	0	97.6	90	110			
Cobalt	0.105	0.00500	0.100	0	105	90	110			
Lithium	0.102	0.0100	0.100	0	102	90	110			

Sample ID	ILCVL-151118	Batch ID:	R82720	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 1:08:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0968	0.300	0.100	0	96.8	70	130			
Cobalt	0.00521	0.00500	0.00500	0	104	70	130			
Lithium	0.0106	0.0100	0.0100	0	106	70	130			

Sample ID	CCV1-151118	Batch ID:	R82720	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 3:27:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.80	0.300	5.00	0	95.9	90	110			
Cobalt	0.200	0.00500	0.200	0	99.8	90	110			
Lithium	0.200	0.0100	0.200	0	100	90	110			

Sample ID	LCVL1-151118		Batch ID:	R82720		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCVL		Run ID:	ICP-MS3_151118A		Analysis Date:	11/18/2015 3:39:00 PM		Prep Date:		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Calcium	0.104	0.300	0.100	0	104	70	130			
Cobalt	0.00549	0.00500	0.00500	0	110	70	130			
Lithium	0.0110	0.0100	0.0100	0	110	70	130			

Sample ID	CCV2-151118	Batch ID:	R82720	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 4:16:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.59	0.300	5.00	0	91.9	90	110			
Cobalt	0.197	0.00500	0.200	0	98.6	90	110			
Lithium	0.197	0.0100	0.200	0	98.4	90	110			

Sample ID	LCVL2-151118	Batch ID:	R82720	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 4:28:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.103	0.300	0.100	0	103	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_151118A

Sample ID	LCVL2-151118	Batch ID:	R82720	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_151118A	Analysis Date:	11/18/2015 4:28:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.00539	0.00500	0.00500	0	108	70	130			
Lithium	0.0105	0.0100	0.0100	0	105	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151111C

The QC data in batch 72244 applies to the following samples: 1511075-01A, 1511075-02A, 1511075-03A, 1511075-04A, 1511075-05A, 1511075-06A, 1511075-07A, 1511075-08A, 1511075-09A, 1511075-10A, 1511075-11A, 1511075-12A, 1511075-13A, 1511075-14A, 1511075-15A

Sample ID MB-72244	Batch ID: 72244	TestNo: SW6020A	Units: mg/L
SampType: MBLK	Run ID: ICP-MS4_151111C	Analysis Date: 11/11/2015 12:11:00 P	Prep Date: 11/10/2015

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Boron	0.0218	0.0300								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Lead	<0.000300	0.00100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID LCS-72244	Batch ID: 72244	TestNo: SW6020A	Units: mg/L
SampType: LCS	Run ID: ICP-MS4_151111C	Analysis Date: 11/11/2015 12:15:00 P	Prep Date: 11/10/2015

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	98.8	80	120			
Arsenic	0.195	0.00500	0.200	0	97.7	80	120			
Barium	0.191	0.0100	0.200	0	95.6	80	120			
Beryllium	0.190	0.00100	0.200	0	94.9	80	120			
Boron	0.211	0.0300	0.200	0	106	80	120			
Cadmium	0.192	0.00100	0.200	0	96.2	80	120			
Calcium	4.83	0.300	5.00	0	96.6	80	120			
Chromium	0.200	0.00500	0.200	0	99.8	80	120			
Lead	0.192	0.00100	0.200	0	95.9	80	120			
Molybdenum	0.188	0.00500	0.200	0	93.8	80	120			
Selenium	0.194	0.00500	0.200	0	97.2	80	120			
Thallium	0.191	0.00150	0.200	0	95.4	80	120			

Sample ID LCSD-72244	Batch ID: 72244	TestNo: SW6020A	Units: mg/L
SampType: LCSD	Run ID: ICP-MS4_151111C	Analysis Date: 11/11/2015 12:17:00 P	Prep Date: 11/10/2015

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.196	0.00250	0.200	0	98.1	80	120	0.658	15	
Arsenic	0.196	0.00500	0.200	0	97.8	80	120	0.169	15	
Barium	0.192	0.0100	0.200	0	95.8	80	120	0.189	15	
Beryllium	0.192	0.00100	0.200	0	95.9	80	120	1.04	15	
Boron	0.210	0.0300	0.200	0	105	80	120	0.587	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151111C

Sample ID	LCSD-72244	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 12:17:00 P	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.196	0.00100	0.200	0	97.9	80	120	1.74	15	
Calcium	4.74	0.300	5.00	0	94.8	80	120	1.91	15	
Chromium	0.202	0.00500	0.200	0	101	80	120	1.30	15	
Lead	0.194	0.00100	0.200	0	96.9	80	120	1.10	15	
Molybdenum	0.191	0.00500	0.200	0	95.4	80	120	1.69	15	
Selenium	0.193	0.00500	0.200	0	96.3	80	120	0.871	15	
Thallium	0.196	0.00150	0.200	0	97.9	80	120	2.57	15	

Sample ID	1511075-01A SD	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 12:23:00 P	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0308	0.0500	0	0.0311				0.982	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Boron	0.0663	0.150	0	0.0650				2.01	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1511075-01A PDS	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 12:42:00 P	Prep Date:	11/10/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.185	0.00250	0.200	0	92.7	80	120			
Arsenic	0.201	0.00500	0.200	0	100	80	120			
Barium	0.229	0.0100	0.200	0.0311	98.8	80	120			
Beryllium	0.197	0.00100	0.200	0	98.7	80	120			
Boron	0.250	0.0300	0.200	0.0650	92.7	80	120			
Cadmium	0.200	0.00100	0.200	0	100	80	120			
Chromium	0.209	0.00500	0.200	0	105	80	120			
Lead	0.197	0.00100	0.200	0	98.4	80	120			
Molybdenum	0.192	0.00500	0.200	0	96.1	80	120			
Selenium	0.198	0.00500	0.200	0	98.8	80	120			
Thallium	0.193	0.00150	0.200	0	96.4	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151111C

Sample ID	1511075-01A MS	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L				
SampType:	MS	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 12:44:00 P	Prep Date:	11/10/2015				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	98.8	80	120			
Arsenic	0.191	0.00500	0.200	0	95.3	80	120			
Barium	0.220	0.0100	0.200	0.0311	94.3	80	120			
Beryllium	0.186	0.00100	0.200	0	93.0	80	120			
Boron	0.253	0.0300	0.200	0.0650	93.8	80	120			
Cadmium	0.189	0.00100	0.200	0	94.6	80	120			
Calcium	15.0	0.300	5.00	11.2	77.0	80	120			S
Chromium	0.192	0.00500	0.200	0	96.0	80	120			
Lead	0.181	0.00100	0.200	0	90.7	80	120			
Molybdenum	0.186	0.00500	0.200	0	92.9	80	120			
Selenium	0.187	0.00500	0.200	0	93.3	80	120			
Thallium	0.181	0.00150	0.200	0	90.6	80	120			

Sample ID	1511075-01A MSD	Batch ID:	72244	TestNo:	SW6020A	Units:	mg/L				
SampType:	MSD	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 12:46:00 P	Prep Date:	11/10/2015				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.202	0.00250	0.200	0	101	80	120	2.06	15	
Arsenic	0.196	0.00500	0.200	0	97.9	80	120	2.69	15	
Barium	0.222	0.0100	0.200	0.0311	95.3	80	120	0.903	15	
Beryllium	0.188	0.00100	0.200	0	94.0	80	120	1.06	15	
Boron	0.249	0.0300	0.200	0.0650	92.0	80	120	1.47	15	
Cadmium	0.194	0.00100	0.200	0	97.0	80	120	2.41	15	
Calcium	15.7	0.300	5.00	11.2	90.9	80	120	4.50	15	
Chromium	0.198	0.00500	0.200	0	98.9	80	120	3.04	15	
Lead	0.189	0.00100	0.200	0	94.4	80	120	3.99	15	
Molybdenum	0.188	0.00500	0.200	0	93.9	80	120	1.14	15	
Selenium	0.190	0.00500	0.200	0	95.2	80	120	1.98	15	
Thallium	0.190	0.00150	0.200	0	95.1	80	120	4.89	15	

Sample ID	1511075-01A SD			Batch ID:	72244		TestNo:	SW6020A		Units:	mg/L		
SampType:	SD			Run ID:	ICP-MS4_151111C		Analysis Date:	11/11/2015 1:59:00 PM		Prep Date:	11/10/2015		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	10.8	15.0	0	11.0				1.27	10	

Sample ID	1511075-01A PDS		Batch ID:	72244		TestNo:	SW6020A		Units:	mg/L		
SampType:	PDS		Run ID:	ICP-MS4_151111C		Analysis Date:	11/11/2015 2:19:00 PM		Prep Date:	11/10/2015		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	55.3	3.00	50.0	11.0	88.7	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151111C

Sample ID	ICV-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 10:50:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.102	0.00250	0.100	0	102	90	110			
Arsenic	0.103	0.00500	0.100	0	103	90	110			
Barium	0.103	0.0100	0.100	0	103	90	110			
Beryllium	0.0984	0.00100	0.100	0	98.4	90	110			
Boron	0.100	0.0300	0.100	0	100	90	110			
Cadmium	0.102	0.00100	0.100	0	102	90	110			
Calcium	2.36	0.300	2.50	0	94.5	90	110			
Chromium	0.110	0.00500	0.100	0	110	90	110			
Lead	0.103	0.00100	0.100	0	103	90	110			
Molybdenum	0.0989	0.00500	0.100	0	98.9	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.102	0.00150	0.100	0	102	90	110			

Sample ID	LCVL-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 10:58:00 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00208	0.00250	0.00200	0	104	70	130			
Arsenic	0.00513	0.00500	0.00500	0	103	70	130			
Barium	0.00530	0.0100	0.00500	0	106	70	130			
Beryllium	0.00108	0.00100	0.00100	0	108	70	130			
Boron	0.0208	0.0300	0.0200	0	104	70	130			
Cadmium	0.00106	0.00100	0.00100	0	106	70	130			
Calcium	0.0993	0.300	0.100	0	99.3	70	130			
Chromium	0.00538	0.00500	0.00500	0	108	70	130			
Lead	0.00106	0.00100	0.00100	0	106	70	130			
Molybdenum	0.00532	0.00500	0.00500	0	106	70	130			
Selenium	0.00583	0.00500	0.00500	0	117	70	130			
Thallium	0.00103	0.00150	0.00100	0	103	70	130			

Sample ID	CCV1-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 11:34:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	99.0	90	110			
Arsenic	0.195	0.00500	0.200	0	97.6	90	110			
Barium	0.194	0.0100	0.200	0	97.0	90	110			
Beryllium	0.191	0.00100	0.200	0	95.4	90	110			
Cadmium	0.193	0.00100	0.200	0	96.7	90	110			
Calcium	4.84	0.300	5.00	0	96.8	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151111C

Sample ID	CCV1-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 11:34:00 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.194	0.00100	0.200	0	96.9	90	110			
Molybdenum		0.189	0.00500	0.200	0	94.5	90	110			
Selenium		0.195	0.00500	0.200	0	97.7	90	110			
Thallium		0.194	0.00150	0.200	0	96.8	90	110			

Sample ID	CCV1-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 11:47:00 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.206	0.0300	0.200	0	103	90	110			

Sample ID	LCVL1-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 12:07:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00197	0.00250	0.00200	0	98.6	70	130			
Arsenic	0.00518	0.00500	0.00500	0	104	70	130			
Barium	0.00510	0.0100	0.00500	0	102	70	130			
Beryllium	0.000969	0.00100	0.00100	0	96.9	70	130			
Boron	0.0189	0.0300	0.0200	0	94.7	70	130			
Cadmium	0.00100	0.00100	0.00100	0	100	70	130			
Calcium	0.100	0.300	0.100	0	100	70	130			
Chromium	0.00555	0.00500	0.00500	0	111	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Molybdenum	0.00494	0.00500	0.00500	0	98.7	70	130			
Selenium	0.00525	0.00500	0.00500	0	105	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV2-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date: 11/11/2015 12:56:00 P		Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony		0.203	0.00250	0.200	0	101	90	110			
Arsenic		0.201	0.00500	0.200	0	100	90	110			
Barium		0.195	0.0100	0.200	0	97.7	90	110			
Beryllium		0.189	0.00100	0.200	0	94.6	90	110			
Boron		0.194	0.0300	0.200	0	97.1	90	110			
Cadmium		0.198	0.00100	0.200	0	98.9	90	110			
Calcium		4.72	0.300	5.00	0	94.3	90	110			
Chromium		0.208	0.00500	0.200	0	104	90	110			
Lead		0.193	0.00100	0.200	0	96.3	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151111C

Sample ID	CCV2-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 12:56:00 P	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.193	0.00500	0.200	0	96.3	90	110			
Selenium		0.197	0.00500	0.200	0	98.7	90	110			
Thallium		0.193	0.00150	0.200	0	96.5	90	110			

Sample ID	LCVL2-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 1:08:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00203	0.00250	0.00200	0	102	70	130			
Arsenic	0.00520	0.00500	0.00500	0	104	70	130			
Barium	0.00518	0.0100	0.00500	0	104	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Boron	0.0182	0.0300	0.0200	0	90.8	70	130			
Cadmium	0.00103	0.00100	0.00100	0	103	70	130			
Calcium	0.0970	0.300	0.100	0	97.0	70	130			
Chromium	0.00561	0.00500	0.00500	0	112	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Molybdenum	0.00487	0.00500	0.00500	0	97.3	70	130			
Selenium	0.00571	0.00500	0.00500	0	114	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV3-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 1:44:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.5	90	110			
Arsenic	0.195	0.00500	0.200	0	97.6	90	110			
Barium	0.191	0.0100	0.200	0	95.7	90	110			
Beryllium	0.190	0.00100	0.200	0	95.1	90	110			
Boron	0.180	0.0300	0.200	0	90.1	90	110			
Cadmium	0.195	0.00100	0.200	0	97.5	90	110			
Calcium	4.61	0.300	5.00	0	92.2	90	110			
Chromium	0.206	0.00500	0.200	0	103	90	110			
Lead	0.189	0.00100	0.200	0	94.7	90	110			
Molybdenum	0.194	0.00500	0.200	0	97.0	90	110			
Selenium	0.189	0.00500	0.200	0	94.4	90	110			
Thallium	0.190	0.00150	0.200	0	95.0	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151111C

Sample ID	LCVL3-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 1:50:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00223	0.00250	0.00200	0	112	70	130			
Arsenic	0.00522	0.00500	0.00500	0	104	70	130			
Barium	0.00520	0.0100	0.00500	0	104	70	130			
Beryllium	0.000953	0.00100	0.00100	0	95.3	70	130			
Boron	0.0235	0.0300	0.0200	0	118	70	130			
Cadmium	0.00106	0.00100	0.00100	0	106	70	130			
Calcium	0.103	0.300	0.100	0	103	70	130			
Chromium	0.00564	0.00500	0.00500	0	113	70	130			
Lead	0.00103	0.00100	0.00100	0	103	70	130			
Molybdenum	0.00545	0.00500	0.00500	0	109	70	130			
Selenium	0.00526	0.00500	0.00500	0	105	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV4-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 2:21:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.91	0.300	5.00	0	98.1	90	110			

Sample ID	LCVL4-151111			Batch ID:	R82614		TestNo:	SW6020A		Units:	mg/L			
SampType:	LCVL			Run ID:	ICP-MS4_151111C		Analysis Date:	11/11/2015 2:25:00 PM		Prep Date:				
Analyte	Result			RL	SPK value		Ref Val	%REC		LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0962	0.300	0.100	0	96.2	70	130			

Sample ID	CCV5-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 2:31:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.91	0.300	5.00	0	98.2	90	110			

Sample ID	LCVL5-151111	Batch ID:	R82614	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_151111C	Analysis Date:	11/11/2015 2:35:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0986	0.300	0.100	0	98.6	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151110A

The QC data in batch 72247 applies to the following samples: 1511075-11D, 1511075-12D, 1511075-13D, 1511075-14D, 1511075-15D

Sample ID	MB-72247	Batch ID:	72247	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC2_151110A	Analysis Date:	11/10/2015 10:18:43 A	Prep Date:	11/10/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-72247	Batch ID:	72247	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC2_151110A	Analysis Date:	11/10/2015 10:33:17 A	Prep Date:	11/10/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	10.1	1.00	10.00	0	101	90	110			
Fluoride	3.68	0.400	4.000	0	92.1	90	110			
Sulfate	30.0	3.00	30.00	0	99.9	90	110			

Sample ID	LCSD-72247	Batch ID:	72247	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC2_151110A	Analysis Date:	11/10/2015 10:47:51 A	Prep Date:	11/10/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	10.2	1.00	10.00	0	102	90	110	0.838	20	
Fluoride	3.81	0.400	4.000	0	95.3	90	110	3.42	20	
Sulfate	30.3	3.00	30.00	0	101	90	110	1.12	20	

Sample ID	1511075-11DMS	Batch ID:	72247	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_151110A	Analysis Date:	11/10/2015 1:56:20 PM	Prep Date:	11/10/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	263	10.0	200.0	64.79	99.2	90	110			
Fluoride	195	4.00	200.0	0	97.3	90	110			
Sulfate	214	30.0	200.0	12.78	100	90	110			

Sample ID	1511075-11DMSD	Batch ID:	72247	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_151110A	Analysis Date:	11/10/2015 2:10:54 PM	Prep Date:	11/10/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	264	10.0	200.0	64.79	99.7	90	110	0.383	20	
Fluoride	198	4.00	200.0	0	99.2	90	110	1.93	20	
Sulfate	216	30.0	200.0	12.78	102	90	110	1.03	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151110A

Sample ID	ICV-151110	Batch ID:	R82597	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_151110A	Analysis Date:	11/10/2015 9:33:38 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.5	1.00	25.00	0	98.0	90	110			
Fluoride	9.67	0.400	10.00	0	96.7	90	110			
Sulfate	75.6	3.00	75.00	0	101	90	110			

Sample ID	CCV1-151110	Batch ID:	R82597	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_151110A	Analysis Date:	11/10/2015 2:35:54 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			
Fluoride	3.89	0.400	4.000	0	97.2	90	110			
Sulfate	29.9	3.00	30.00	0	99.8	90	110			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151109A

The QC data in batch 72226 applies to the following samples: 1511075-01D, 1511075-02D, 1511075-03D, 1511075-04D, 1511075-05D, 1511075-06D, 1511075-07D, 1511075-08D, 1511075-09D, 1511075-10D

Sample ID	MB-72226	Batch ID:	72226	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC3_151109A	Analysis Date:	11/9/2015 10:46:30 AM	Prep Date:	11/9/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-72226		Batch ID:	72226		TestNo:	E300		Units:	mg/L	
SampType:	LCS		Run ID:	IC3_151109A		Analysis Date:	11/9/2015 11:10:00 AM		Prep Date:	11/9/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.71	1.00	10.00	0	97.1	90	110			
Fluoride	3.98	0.400	4.000	0	99.6	90	110			
Sulfate	30.2	3.00	30.00	0	101	90	110			

Sample ID	LCSD-72226	Batch ID:	72226	TestNo:	E300	Units:	mg/L				
SampType:	LCSD	Run ID:	IC3_151109A	Analysis Date:	11/9/2015 11:30:38 AM	Prep Date:	11/9/2015				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.67	1.00	10.00	0	96.7	90	110	0.454	20	
Fluoride	3.97	0.400	4.000	0	99.2	90	110	0.453	20	
Sulfate	30.2	3.00	30.00	0	101	90	110	0.069	20	

Sample ID	1511075-05DMS			Batch ID:	72226		TestNo:	E300		Units:	mg/L	
SampType:	MS			Run ID:	IC3_151109A		Analysis Date:	11/9/2015 5:47:49 PM		Prep Date:	11/9/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	2390	100	2000	439.3	97.7	90	110			
Fluoride	1930	40.0	2000	0	96.7	90	110			
Sulfate	2500	300	2000	479.1	101	90	110			

Sample ID: 1511075-05DMSD	Batch ID: 72226	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC3_151109A	Analysis Date: 11/9/2015 6:08:27 PM	Prep Date: 11/9/2015							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2380	100	2000	439.3	97.0	90	110	0.604	20	
Fluoride	1930	40.0	2000	0	96.5	90	110	0.192	20	
Sulfate	2510	300	2000	479.1	102	90	110	0.558	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151109A

Sample ID	ICV-151109	Batch ID:	R82592	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC3_151109A	Analysis Date:	11/9/2015 9:57:34 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.7	90	110			
Fluoride	9.75	0.400	10.00	0	97.5	90	110			
Sulfate	74.4	3.00	75.00	0	99.2	90	110			

Sample ID	CCV1-151109	Batch ID:	R82592	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_151109A	Analysis Date:	11/9/2015 3:51:30 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.66	1.00	10.00	0	96.6	90	110			
Fluoride	3.94	0.400	4.000	0	98.4	90	110			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Sample ID	CCV2-151109	Batch ID:	R82592	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_151109A	Analysis Date:	11/9/2015 8:32:48 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.70	1.00	10.00	0	97.0	90	110			
Fluoride	3.97	0.400	4.000	0	99.3	90	110			
Sulfate	30.2	3.00	30.00	0	101	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151111A

The QC data in batch 72258 applies to the following samples: 1511075-01D, 1511075-02D, 1511075-03D, 1511075-04D, 1511075-05D, 1511075-06D, 1511075-07D, 1511075-08D, 1511075-09D, 1511075-10D, 1511075-11D, 1511075-12D, 1511075-13D, 1511075-14D, 1511075-15D

Sample ID	1511075-09D DUP	Batch ID:	72258	TestNo:	M4500-H+ B	Units:	pH Units@16.2°C
SampType:	DUP	Run ID:	TITRATOR_151111A	Analysis Date:	11/11/2015 9:46:00 AM	Prep Date:	11/11/2015
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.37	0	0	6.520		2.33 5

Sample ID	1511093-11B DUP	Batch ID:	72258	TestNo:	M4500-H+ B	Units:	pH Units@19.4°C
SampType:	DUP	Run ID:	TITRATOR_151111A	Analysis Date:	11/11/2015 10:06:00 A	Prep Date:	11/11/2015
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		7.65	0	0	7.650		0 5

LUMINANT

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151111A

Sample ID	ICV-151111	Batch ID:	R82615	TestNo:	M4500-H+ B	Units:	pH Units@21.8°C			
SampType:	ICV	Run ID:	TITRATOR_151111A	Analysis Date:	11/11/2015 9:13:00 AM	Prep Date:	11/11/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	9.97	0	10.00	0	99.7	99	101			

Sample ID	CCV1-151111	Batch ID:	R82615	TestNo:	M4500-H+ B	Units:	pH Units@21.3°C			
SampType:	CCV	Run ID:	TITRATOR_151111A	Analysis Date:	11/11/2015 9:45:00 AM	Prep Date:	11/11/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.97	0	7.000	0	99.6	97.1	102.9			

Sample ID	CCV2-151111	Batch ID:	R82615	TestNo:	M4500-H+ B	Units:	pH Units@21.5°C			
SampType:	CCV	Run ID:	TITRATOR_151111A	Analysis Date:	11/11/2015 10:21:00 A	Prep Date:	11/11/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.98	0	7.000	0	99.7	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1511075
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_151109B

The QC data in batch 72232 applies to the following samples: 1511075-01D, 1511075-02D, 1511075-03D, 1511075-04D, 1511075-05D, 1511075-06D, 1511075-07D, 1511075-08D, 1511075-09D, 1511075-10D, 1511075-11D, 1511075-12D, 1511075-13D, 1511075-14D, 1511075-15D

Sample ID	MB-72232		Batch ID:	72232		TestNo:	M2540C		Units:	mg/L	
SampType:	MBLK		Run ID:	WC_151109B		Analysis Date:	11/10/2015 9:00:00 AM		Prep Date:	11/9/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-72232			Batch ID:	72232		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS			Run ID:	WC_151109B		Analysis Date:	11/10/2015 9:00:00 AM		Prep Date:	11/9/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 760 10.0 745.6 0 102 90 113

Sample ID	1511069-01B-DUP		Batch ID:	72232		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_151109B		Analysis Date:	11/10/2015 9:00:00 AM		Prep Date:	11/9/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 591 10.0 0 581.0 1.71 5

Sample ID	1511069-02B-DUP		Batch ID:	72232		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_151109B		Analysis Date:	11/10/2015 9:00:00 AM		Prep Date:	11/9/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 594 10.0 0 590.0 0.676 5

Qualifiers:

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



December 09, 2015

Mr. John DuPont
DHL Analytical
2300 Double Creek Drive
Round Rock, Texas 78664

Re: Routine Analysis
Work Order: 385405
SDG: 1511075

Dear Mr. DuPont:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 12, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4707.

Sincerely,

Anna Day
Project Manager

Purchase Order: 14003
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

DHLA002 DHL Analytical

Client SDG: 1511075 GEL Work Order: 385405

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Anna Day.

Reviewed by

Anna C Day

There are no "Data Exception Reports" associated with this analytical report.

LUMINANT

DHL Analytical, Inc.

2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1511075

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

385405

Subcontractor:

GEL Laboratories
PO Box 30712
Charleston, SC 29417

TEL: (843) 556-8171

FAX:

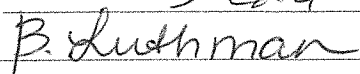
Acct #:

09-Nov-15

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E903.1	E904.0				
FGD-1	Aqueous	-01B	11/03/15 10:50 AM	500HDPEHNO3		1				
FGD-1	Aqueous	-01C	11/03/15 10:50 AM	500HDPEHNO3	1					
MW-09	Aqueous	-02B	11/03/15 11:50 AM	500HDPEHNO3		1				
MW-09	Aqueous	-02C	11/03/15 11:50 AM	500HDPEHNO3	1					
MW-07	Aqueous	-03B	11/03/15 12:40 PM	500HDPEHNO3		1				
MW-07	Aqueous	-03C	11/03/15 12:40 PM	500HDPEHNO3	1					
FGD-2	Aqueous	-04B	11/03/15 02:15 PM	500HDPEHNO3		1				
FGD-2	Aqueous	-04C	11/03/15 02:15 PM	500HDPEHNO3	1					
FGD-3	Aqueous	-05B	11/03/15 03:05 PM	500HDPEHNO3		1				
FGD-3	Aqueous	-05C	11/03/15 03:05 PM	500HDPEHNO3	1					
FGD-4	Aqueous	-06B	11/03/15 04:00 PM	500HDPEHNO3		1				
FGD-4	Aqueous	-06C	11/03/15 04:00 PM	500HDPEHNO3	1					
FGD-5	Aqueous	-07B	11/03/15 04:50 PM	500HDPEHNO3		1				
FGD-5	Aqueous	-07C	11/03/15 04:50 PM	500HDPEHNO3	1					
AL-10	Aqueous	-08B	11/04/15 08:15 AM	500HDPEHNO3		1				
AL-10	Aqueous	-08C	11/04/15 08:15 AM	500HDPEHNO3	1					
MW-02	Aqueous	-09B	11/04/15 09:05 AM	500HDPEHNO3		1				
MW-02	Aqueous	-09C	11/04/15 09:05 AM	500HDPEHNO3	1					

General Comments:

Please analyze these samples with a Standard Turnaround Time.
 Call John DuPont if you have questions.
 Quality Control Package Needed: Standard / _____
 EMAIL report to both cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: 	Date/Time: 11/9/15 1730	Received by: 	Date/Time: 11/9/15 1730
Relinquished by: _____	Date/Time: _____	Received by: 	Date/Time: 11/12/15 0840

DHL Analytical, Inc.

2300 Double Creek Drive

Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1511075

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Subcontractor:

GEL Laboratories

PO Box 30712

Charleston, SC 29417

TEL: (843) 556-8171

FAX:

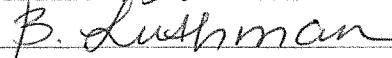
Acct #:

09-Nov-15

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E903.1	E904.0				
MW-08	Aqueous	-10B	11/04/15 10:10 AM	500HDPEHNO3		1				
MW-08	Aqueous	-10C	11/04/15 10:10 AM	500HDPEHNO3	1					
MW-05	Aqueous	-11B	11/04/15 11:05 AM	500HDPEHNO3		1				
MW-05	Aqueous	-11C	11/04/15 11:05 AM	500HDPEHNO3	1					
FGD-12	Aqueous	-12B	11/04/15 11:55 AM	500HDPEHNO3		1				
FGD-12	Aqueous	-12C	11/04/15 11:55 AM	500HDPEHNO3	1					
FGD-11	Aqueous	-13B	11/04/15 01:00 PM	500HDPEHNO3		1				
FGD-11	Aqueous	-13C	11/04/15 01:00 PM	500HDPEHNO3	1					
FGD-6	Aqueous	-14B	11/04/15 01:55 PM	500HDPEHNO3		1				
FGD-6	Aqueous	-14C	11/04/15 01:55 PM	500HDPEHNO3	1					
FGD-8	Aqueous	-15B	11/04/15 02:50 PM	500HDPEHNO3		1				
FGD-8	Aqueous	-15C	11/04/15 02:50 PM	500HDPEHNO3	1					

General Comments:

Please analyze these samples with a Standard Turnaround Time.
 Call John DuPont if you have questions.
 Quality Control Package Needed: Standard / _____
 EMAIL report to both cac@dhlanalytical.com & dupont@dhlanalytical.com

		Date/Time			Date/Time
Relinquished by:		11/11/15	Received by:		11/11/15 1730
Relinquished by:			Received by:		11/12/15 0840



SAMPLE RECEIPT & REVIEW FORM

Client: <u>DHUA</u>		SDG/AR/COC/Work Order: <u>385404</u>	
Received By: <u>Brielle Luthmar</u>		Date Received: <u>11/12/15 0840</u>	
Suspected Hazard Information	Yes ☐ No ☐	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	☐	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u>	
Classified Radioactive II or III by RSO?	☐	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	☐		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	☐	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	☐	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	☐		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	☒	☐	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	☐	☐	☒	Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius <u>20°</u>
2a Daily check performed and passed on IR temperature gun?	☒	☐	☐	Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>150340071</u>
3 Chain of custody documents included with shipment?	☒	☐	☐	
4 Sample containers intact and sealed?	☒	☐	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	☒	☐	☐	Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples have headspace as required?	☒	☐	☐	Sample ID's and containers affected:
7 VOA vials contain acid preservation?	☐	☐	☒	(If unknown, select No)
8 VOA vials free of headspace (defined as < 6mm bubble)?	☐	☐	☒	Sample ID's and containers affected:
9 Are Encore containers present?	☐	☐	☒	(If yes, immediately deliver to Volatiles laboratory)
10 Samples received within holding time?	☒	☐	☐	ID's and tests affected:
11 Sample ID's on COC match ID's on bottles?	☒	☐	☐	Sample ID's and containers affected:
12 Date & time on COC match date & time on bottles?	☒	☐	☐	Sample ID's affected:
13 Number of containers received match number indicated on COC?	☒	☐	☐	Sample ID's affected:
14 Are sample containers identifiable as GEL provided?	☐	☐	☒	
15 COC form is properly signed in relinquished/received sections?	☒	☐	☐	
16 Carrier and tracking number.	☐	☐	☐	Circle Applicable: FedEx Air <u>FedEx Ground</u> UPS Field Services Courier Other <u>7749 3118 2946</u>

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials

AM

Date

11/13/15

Page

1 of 1

GL-CHL-SR-001 Rev 2

List of current GEL Certifications as of 09 December 2015

State	Certification
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122016-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-19
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-1
Sample ID: 385405001
Matrix: Water
Collect Date: 03-NOV-15 10:50
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.874	+/-0.854	1.40	3.00	pCi/L		AXM6	12/08/15	1054	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.718	+/-0.360	0.464	1.00	pCi/L		CXP3	12/09/15	0535	1523137	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92.1	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-09
Sample ID: 385405002
Matrix: Water
Collect Date: 03-NOV-15 11:50
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		2.09	+/-1.09	1.61	3.00	pCi/L		AXM6	12/08/15	1054 1525795	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		0.812	+/-0.368	0.453	1.00	pCi/L		CXP3	12/09/15	0605 1523137	2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						100	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-07
Sample ID: 385405003
Matrix: Water
Collect Date: 03-NOV-15 12:40
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.58	+/-0.876	1.26	3.00	pCi/L		AXM6	12/08/15	1054	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.10	+/-0.458	0.540	1.00	pCi/L		CXP3	12/09/15	0605	1523137	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						97.4	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-2
Sample ID: 385405004
Matrix: Water
Collect Date: 03-NOV-15 14:15
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.97	+/-1.19	1.85	3.00	pCi/L		AXM6	12/08/15	1054	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	0.234	+/-0.184	0.249	1.00	pCi/L		CXP3	12/09/15	0605	1523137	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						106	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-3
Sample ID: 385405005
Matrix: Water
Collect Date: 03-NOV-15 15:05
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.18	+/-1.03	1.24	3.00	pCi/L		AXM6	12/08/15	1054	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.930	+/-0.379	0.442	1.00	pCi/L		CXP3	12/09/15	0605	1523137	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						102	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-4
Sample ID: 385405006
Matrix: Water
Collect Date: 03-NOV-15 16:00
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.00	+/-0.867	1.39	3.00	pCi/L		AXM6	12/08/15	1054	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.01	+/-0.398	0.455	1.00	pCi/L		CXP3	12/09/15	0605	1523137	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	FDG-5	Project:	DHLA00112
Sample ID:	385405007	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	03-NOV-15 16:50		
Receive Date:	12-NOV-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.57	+/-1.08	1.70	3.00	pCi/L		AXM6	12/08/15	1054	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.470	+/-0.299	0.422	1.00	pCi/L		CXP3	12/09/15	0635	1523137	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			99.1	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	AL-10	Project:	DHLA00112
Sample ID:	385405008	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	04-NOV-15 08:15		
Receive Date:	12-NOV-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		2.04	+/-1.11	1.61	3.00	pCi/L		AXM6	12/08/15	1054 1525795	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		0.615	+/-0.349	0.473	1.00	pCi/L		CXP3	12/09/15	0635 1523137	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			101	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-02
Sample ID: 385405009
Matrix: Water
Collect Date: 04-NOV-15 09:05
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.49	+/-1.45	2.13	3.00	pCi/L		AXM6	12/08/15	1055	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.07	+/-0.392	0.376	1.00	pCi/L		CXP3	12/09/15	0635	1523137	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						97	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-08
Sample ID: 385405010
Matrix: Water
Collect Date: 04-NOV-15 10:10
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.11	+/-0.985	1.60	3.00	pCi/L		AXM6	12/08/15	1055	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.801	+/-0.363	0.446	1.00	pCi/L		CXP3	12/09/15	0635	1523137	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.3	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-05
Sample ID: 385405011
Matrix: Water
Collect Date: 04-NOV-15 11:05
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	-0.0318	+/-0.777	1.48	3.00	pCi/L		AXM6	12/08/15	1055	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.507	+/-0.309	0.431	1.00	pCi/L		CXP3	12/09/15	0720	1523137	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			96	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-12
Sample ID: 385405012
Matrix: Water
Collect Date: 04-NOV-15 11:55
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.51	+/-0.998	1.55	3.00	pCi/L		AXM6	12/08/15	1055	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.07	+/-0.453	0.539	1.00	pCi/L		CXP3	12/09/15	0720	1523137	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			98	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-11
Sample ID: 385405013
Matrix: Water
Collect Date: 04-NOV-15 13:00
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.35	+/-0.917	1.41	3.00	pCi/L		AXM6	12/08/15	1055	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.928	+/-0.431	0.536	1.00	pCi/L		CXP3	12/09/15	0720	1523137	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery	Test					Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"							92.4	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-6
Sample ID: 385405014
Matrix: Water
Collect Date: 04-NOV-15 13:55
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.52	+/-0.954	1.44	3.00	pCi/L		AXM6	12/08/15	1055	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.449	+/-0.297	0.427	1.00	pCi/L		CXP3	12/09/15	0720	1523137	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						94.6	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 9, 2015

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FDG-8
Sample ID: 385405015
Matrix: Water
Collect Date: 04-NOV-15 14:50
Receive Date: 12-NOV-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.38	+/-0.743	1.04	3.00	pCi/L		AXM6	12/08/15	1055	1525795	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.671	+/-0.394	0.542	1.00	pCi/L		CXP3	12/09/15	0810	1523137	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						104	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: December 9, 2015

Page 1 of 2

DHL Analytical
2300 Double Creek Drive
Round Rock, Texas

Contact: Mr. John DuPont

Workorder: 385405

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1525795										
QC1203439747	385405008	DUP									
Radium-228		2.04	U	0.270	pCi/L	153*		(0% - 100%)	AXM6	12/08/15	10:58
		Uncertainty	+/-1.11	+/-0.927							
QC1203439748	LCS										
Radium-228		29.1		30.3	pCi/L		104	(75%-125%)		12/08/15	10:58
		Uncertainty		+/-2.59							
QC1203439746	MB										
Radium-228			U	0.916	pCi/L					12/08/15	10:55
		Uncertainty		+/-0.823							
Rad Ra-226											
Batch	1523137										
QC1203432999	385400001	DUP									
Radium-226		3.00		1.69	pCi/L	55.7		(0% - 100%)	CXP3	12/09/15	08:10
		Uncertainty	+/-1.22	+/-0.961							
QC1203433001	LCS										
Radium-226		24.4		23.6	pCi/L		96.7	(75%-125%)		12/09/15	09:10
		Uncertainty		+/-1.65							
QC1203432998	MB										
Radium-226			U	0.0978	pCi/L					12/09/15	08:10
		Uncertainty		+/-0.214							
QC1203433000	385400001	MS									
Radium-226		61.0	3.00	77.3	pCi/L		122	(75%-125%)		12/09/15	08:10
		Uncertainty	+/-1.22	+/-4.58							

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 385405

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.										
UI	Gamma Spectroscopy--Uncertain identification										
UJ	Gamma Spectroscopy--Uncertain identification										
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



January 25, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Luminant - Oak Grove

Order No.: 1512286

Dear Will Vienne:

DHL Analytical, Inc. received 15 sample(s) on 12/19/2015 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

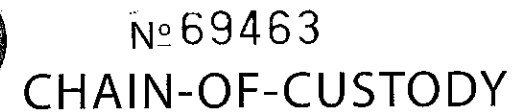
John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-15-15



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DATE: 12-18-15 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1512286
PROJECT LOCATION OR NAME: LUMINANT- DAK GROVE
CLIENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE/TIME 12-18-15 1745	RECEIVED BY: (Signature) <i>[Signature]</i>	TURN AROUND TIME RUSH ☐ CALL FIRST 1 DAY ☐ CALL FIRST 2 DAY ☐ NORMAL ☒ OTHER ☐	LABORATORY USE ONLY: RECEIVING TEMP <u>36.4°C</u> THERM #: <u>78</u> CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER ☐ COURIER DELIVERY ☐ HAND DELIVERED
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE/TIME 12/18/15 1030	RECEIVED BY: (Signature) <i>[Signature]</i>		
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)		

☐ DHL DISPOSAL @ \$5.00 each ☐ Return 3

John Dupont

From: Sara Taube [Sara.Taube@pbwllc.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

ORIGIN ID:FWHA (903) 794-0625
PASTOR, BEHLING & WHEELER, LLC
2201 DOUBLE CREEK DR STE 4004
ROUND ROCK, TX 786643843
UNITED STATES US

SHIP DATE: 18DEC15
ACTWGT: 53.10 LB
CAD: 7OFFC1621
DIMS: 24x15x13 IN
BILL SENDER

TO **DHL ANALYTICAL**

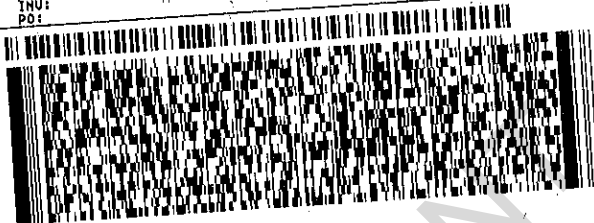
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222
INU:
PO:

REF:

DEPT:



FedEx
Express



1 of 3

TRK# 8093 9528 1588
0200

MASTER

AO BSMA

SATURDAY 12:00
PRIORITY OVERNIGHT

7866

TX-US AU



ORIGIN ID:FWHA (903) 794-0625
PASTOR, BEHLING & WHEELER, LLC

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 786643843
UNITED STATES US

SHIP DATE: 18DEC15
ACTWGT: 54.00 LB
CAD: /OFFC1621
DIMS: 24x14x13 IN

BILL SENDER

Print # 156297-435 RIT2 09/16
USPS/UNITED STATES OF AMERICA

TO **DHL ANALYTICAL**

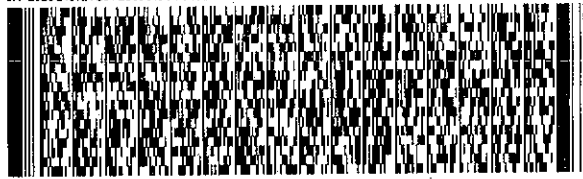
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222

REF:

DEPT:



FedEx
Express



3 of 3

MPS# **7819 9840 6830**

0681

Mstr# 8093 9528 1588

0200

SATURDAY 12:00P
PRIORITY OVERNIGHT

AO BSMA

78664
TX-US AUS



ORIGIN ID:FWHA (903) 794-0625
PASTOR, BEHLING & WHEELER, LLC
2201 DOUBLE CREEK DR STE 4004
ROUND ROCK, TX 786643843
UNITED STATES US

SHIP DATE: 18DEC15
ACTWGT: 50.90 LB
CAD: 7OFFC1621
DIMS: 24x14x13 IN
BILL SENDER

Part # 156297-435 RHTZ 05/15
DATE: 2015/11/18 11:52:23 81721 81604

TO **DHL ANALYTICAL**

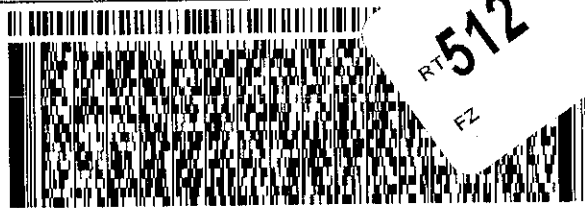
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222
INU:
PC:

REF:

DE:



edEx
Express



2 of 3

MPS# 7819 9840 6820
0681

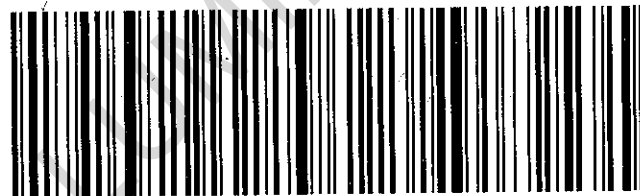
Mstr# 8093 9528 1588

0200

SATURDAY 12:00P
PRIORITY OVERNIGHT

A0 BSMA

78664
TX-US AUS



Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 12/19/2015

Work Order Number 1512286

Received by JB

Checklist completed by:

[Signature]
Signature

12/21/2015

Date

Reviewed by

[Initials]
Initials

12/21/2015

Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	3.6 °C 4.6.4.1
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 8086
	Adjusted? <i>NO</i>		Checked by <i>[Signature]</i>
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____		Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1512286

CASE NARRATIVE

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

Method SW6020A - Metals Analysis

Method SW7470A - Mercury Analysis

Method E300 - Anions Analysis

Method M4500-H+ B - pH of a Water Analysis

Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904.0/SW8469320 Modified and E903.1 Modified. Analyzed at GEL Laboratory.

LOG IN

The samples were received and log-in performed on 12/19/15. A total of 15 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 1/4/16 the matrix spike duplicate recovery was slightly above control limits for Calcium. This is flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1512286**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1512286-01	FGD-3		12/17/15 09:35 AM	12/21/2015
1512286-02	FGD-4		12/17/15 10:25 AM	12/21/2015
1512286-03	FGD-5		12/17/15 11:15 AM	12/21/2015
1512286-04	FGD-2		12/17/15 12:00 PM	12/21/2015
1512286-05	FGD-1		12/17/15 12:50 PM	12/21/2015
1512286-06	FGD-6		12/17/15 01:45 PM	12/21/2015
1512286-07	FGD-8		12/17/15 02:50 PM	12/21/2015
1512286-08	FGD-12		12/17/15 03:40 PM	12/21/2015
1512286-09	FGD-11		12/17/15 04:30 PM	12/21/2015
1512286-10	MW-07		12/17/15 06:15 PM	12/21/2015
1512286-11	MW-05		12/18/15 07:40 AM	12/21/2015
1512286-12	MW-02		12/18/15 08:25 AM	12/21/2015
1512286-13	AL-10		12/18/15 09:20 AM	12/21/2015
1512286-14	MW-09		12/18/15 10:20 AM	12/21/2015
1512286-15	MW-08		12/18/15 11:15 AM	12/21/2015

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512286-01A	FGD-3	12/17/15 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-3	12/17/15 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-3	12/17/15 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-3	12/17/15 09:35 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-01D	FGD-3	12/17/15 09:35 AM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-3	12/17/15 09:35 AM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-3	12/17/15 09:35 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-3	12/17/15 09:35 AM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-02A	FGD-4	12/17/15 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-4	12/17/15 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-4	12/17/15 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-4	12/17/15 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-02D	FGD-4	12/17/15 10:25 AM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-4	12/17/15 10:25 AM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-4	12/17/15 10:25 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-4	12/17/15 10:25 AM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-03A	FGD-5	12/17/15 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-5	12/17/15 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-5	12/17/15 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-5	12/17/15 11:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-03D	FGD-5	12/17/15 11:15 AM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-5	12/17/15 11:15 AM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-5	12/17/15 11:15 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-5	12/17/15 11:15 AM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-04A	FGD-2	12/17/15 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-2	12/17/15 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-2	12/17/15 12:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-04D	FGD-2	12/17/15 12:00 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512286-04D	FGD-2	12/17/15 12:00 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-2	12/17/15 12:00 PM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-2	12/17/15 12:00 PM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-05A	FGD-1	12/17/15 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-1	12/17/15 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-1	12/17/15 12:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-05D	FGD-1	12/17/15 12:50 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-1	12/17/15 12:50 PM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-1	12/17/15 12:50 PM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-06A	FGD-6	12/17/15 01:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-6	12/17/15 01:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-6	12/17/15 01:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-6	12/17/15 01:45 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-06D	FGD-6	12/17/15 01:45 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-6	12/17/15 01:45 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-6	12/17/15 01:45 PM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-6	12/17/15 01:45 PM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-07A	FGD-8	12/17/15 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-8	12/17/15 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-8	12/17/15 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-8	12/17/15 02:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-07D	FGD-8	12/17/15 02:50 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-8	12/17/15 02:50 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-8	12/17/15 02:50 PM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-8	12/17/15 02:50 PM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-08A	FGD-12	12/17/15 03:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-12	12/17/15 03:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-12	12/17/15 03:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512286-08D	FGD-12	12/17/15 03:40 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-12	12/17/15 03:40 PM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-12	12/17/15 03:40 PM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-09A	FGD-11	12/17/15 04:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-11	12/17/15 04:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	FGD-11	12/17/15 04:30 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-09D	FGD-11	12/17/15 04:30 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	FGD-11	12/17/15 04:30 PM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	FGD-11	12/17/15 04:30 PM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-10A	MW-07	12/17/15 06:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-07	12/17/15 06:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-07	12/17/15 06:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-10D	MW-07	12/17/15 06:15 PM	Aqueous	E300	Anion Preparation	12/29/15 10:57 AM	72974
	MW-07	12/17/15 06:15 PM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	MW-07	12/17/15 06:15 PM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-11A	MW-05	12/18/15 07:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-05	12/18/15 07:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-05	12/18/15 07:40 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-11D	MW-05	12/18/15 07:40 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	MW-05	12/18/15 07:40 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	MW-05	12/18/15 07:40 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	MW-05	12/18/15 07:40 AM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-12A	MW-02	12/18/15 08:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-02	12/18/15 08:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-02	12/18/15 08:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-02	12/18/15 08:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-12D	MW-02	12/18/15 08:25 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	MW-02	12/18/15 08:25 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512286-12D	MW-02	12/18/15 08:25 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	MW-02	12/18/15 08:25 AM	Aqueous	M2540C	TDS Preparation	12/22/15 02:43 PM	72907
1512286-13A	AL-10	12/18/15 09:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	AL-10	12/18/15 09:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	AL-10	12/18/15 09:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	AL-10	12/18/15 09:20 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-13D	AL-10	12/18/15 09:20 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	AL-10	12/18/15 09:20 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	AL-10	12/18/15 09:20 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	AL-10	12/18/15 09:20 AM	Aqueous	M2540C	TDS Preparation	12/23/15 02:05 PM	72925
1512286-14A	MW-09	12/18/15 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-09	12/18/15 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-09	12/18/15 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-09	12/18/15 10:20 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-14D	MW-09	12/18/15 10:20 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	MW-09	12/18/15 10:20 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	MW-09	12/18/15 10:20 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	MW-09	12/18/15 10:20 AM	Aqueous	M2540C	TDS Preparation	12/23/15 02:05 PM	72925
1512286-15A	MW-08	12/18/15 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-08	12/18/15 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-08	12/18/15 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/29/15 10:15 AM	72973
	MW-08	12/18/15 11:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/21/15 12:22 PM	72872
1512286-15D	MW-08	12/18/15 11:15 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	MW-08	12/18/15 11:15 AM	Aqueous	E300	Anion Preparation	12/29/15 11:48 AM	72978
	MW-08	12/18/15 11:15 AM	Aqueous	M4500-H+ B	pH Preparation	12/22/15 09:46 AM	72889
	MW-08	12/18/15 11:15 AM	Aqueous	M2540C	TDS Preparation	12/23/15 02:05 PM	72925

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512286-01A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 03:42 PM	CETAC2_HG_151222A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 10:20 AM	ICP-MS4_160104A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:04 PM	ICP-MS4_160104A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:27 PM	ICP-MS4_160106B
1512286-01D	FGD-3	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 12:18 PM	IC3_151229A
	FGD-3	Aqueous	E300	Anions by IC method - Water	72974	100	12/29/15 05:51 PM	IC3_151229A
	FGD-3	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:31 AM	TITRATOR_151222A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-02A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 03:53 PM	CETAC2_HG_151222A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 10:32 AM	ICP-MS4_160104A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:08 PM	ICP-MS4_160104A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:31 PM	ICP-MS4_160106B
1512286-02D	FGD-4	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 12:41 PM	IC3_151229A
	FGD-4	Aqueous	E300	Anions by IC method - Water	72974	10	12/29/15 06:11 PM	IC3_151229A
	FGD-4	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:33 AM	TITRATOR_151222A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-03A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 03:56 PM	CETAC2_HG_151222A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 10:34 AM	ICP-MS4_160104A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:10 PM	ICP-MS4_160104A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:33 PM	ICP-MS4_160106B
1512286-03D	FGD-5	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 01:02 PM	IC3_151229A
	FGD-5	Aqueous	E300	Anions by IC method - Water	72974	10	12/29/15 06:32 PM	IC3_151229A
	FGD-5	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:34 AM	TITRATOR_151222A
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-04A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 03:58 PM	CETAC2_HG_151222A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:35 PM	ICP-MS4_160106B

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512286-04A	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 10:36 AM	ICP-MS4_160104A
1512286-04D	FGD-2	Aqueous	E300	Anions by IC method - Water	72974	10	12/29/15 06:52 PM	IC3_151229A
	FGD-2	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 01:23 PM	IC3_151229A
	FGD-2	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:35 AM	TITRATOR_151222A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-05A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:00 PM	CETAC2_HG_151222A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 10:38 AM	ICP-MS4_160104A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:37 PM	ICP-MS4_160106B
1512286-05D	FGD-1	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 01:43 PM	IC3_151229A
	FGD-1	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:38 AM	TITRATOR_151222A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-06A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:03 PM	CETAC2_HG_151222A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:39 PM	ICP-MS4_160106B
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 10:40 AM	ICP-MS4_160104A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:12 PM	ICP-MS4_160104A
1512286-06D	FGD-6	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 02:04 PM	IC3_151229A
	FGD-6	Aqueous	E300	Anions by IC method - Water	72974	100	12/29/15 07:13 PM	IC3_151229A
	FGD-6	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:41 AM	TITRATOR_151222A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-07A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:05 PM	CETAC2_HG_151222A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:32 AM	ICP-MS4_160104A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:14 PM	ICP-MS4_160104A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:41 PM	ICP-MS4_160106B
1512286-07D	FGD-8	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 02:25 PM	IC3_151229A
	FGD-8	Aqueous	E300	Anions by IC method - Water	72974	100	12/29/15 07:34 PM	IC3_151229A
	FGD-8	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:42 AM	TITRATOR_151222A

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512286-07D	FGD-8	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-08A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:07 PM	CETAC2_HG_151222A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:43 PM	ICP-MS4_160106B
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:33 AM	ICP-MS4_160104A
1512286-08D	FGD-12	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 02:45 PM	IC3_151229A
	FGD-12	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:45 AM	TITRATOR_151222A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-09A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:09 PM	CETAC2_HG_151222A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:36 AM	ICP-MS4_160104A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:45 PM	ICP-MS4_160106B
1512286-09D	FGD-11	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 03:06 PM	IC3_151229A
	FGD-11	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:47 AM	TITRATOR_151222A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-10A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:12 PM	CETAC2_HG_151222A
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 09:47 PM	ICP-MS4_160106B
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:38 AM	ICP-MS4_160104A
1512286-10D	MW-07	Aqueous	E300	Anions by IC method - Water	72974	1	12/29/15 03:26 PM	IC3_151229A
	MW-07	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:49 AM	TITRATOR_151222A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-11A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:18 PM	CETAC2_HG_151222A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:40 AM	ICP-MS4_160104A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 10:03 PM	ICP-MS4_160106B
1512286-11D	MW-05	Aqueous	E300	Anions by IC method - Water	72978	1	12/29/15 12:58 PM	IC2_151229B
	MW-05	Aqueous	E300	Anions by IC method - Water	72978	10	12/29/15 02:15 PM	IC2_151229B
	MW-05	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:55 AM	TITRATOR_151222A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512286-12A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:21 PM	CETAC2_HG_151222A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 10:05 PM	ICP-MS4_160106B
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:42 AM	ICP-MS4_160104A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:16 PM	ICP-MS4_160104A
1512286-12D	MW-02	Aqueous	E300	Anions by IC method - Water	72978	10	12/29/15 02:59 PM	IC2_151229B
	MW-02	Aqueous	E300	Anions by IC method - Water	72978	1	12/29/15 01:12 PM	IC2_151229B
	MW-02	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 11:58 AM	TITRATOR_151222A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	72907	1	12/23/15 08:05 AM	WC_151222B
1512286-13A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:23 PM	CETAC2_HG_151222A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:44 AM	ICP-MS4_160104A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:19 PM	ICP-MS4_160104A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 10:07 PM	ICP-MS4_160106B
1512286-13D	AL-10	Aqueous	E300	Anions by IC method - Water	72978	1	12/29/15 01:27 PM	IC2_151229B
	AL-10	Aqueous	E300	Anions by IC method - Water	72978	10	12/29/15 03:13 PM	IC2_151229B
	AL-10	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 12:01 PM	TITRATOR_151222A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	72925	1	12/24/15 08:00 AM	WC_151223B
1512286-14A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:25 PM	CETAC2_HG_151222A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:46 AM	ICP-MS4_160104A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:21 PM	ICP-MS4_160104A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 10:09 PM	ICP-MS4_160106B
1512286-14D	MW-09	Aqueous	E300	Anions by IC method - Water	72978	1	12/29/15 01:41 PM	IC2_151229B
	MW-09	Aqueous	E300	Anions by IC method - Water	72978	10	12/29/15 03:28 PM	IC2_151229B
	MW-09	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 12:04 PM	TITRATOR_151222A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	72925	1	12/24/15 08:00 AM	WC_151223B
1512286-15A	MW-08	Aqueous	SW7470A	Mercury Total: Aqueous	72872	1	12/22/15 04:28 PM	CETAC2_HG_151222A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/04/16 11:48 AM	ICP-MS4_160104A

Lab Order: 1512286
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512286-15A	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	10	01/04/16 02:23 PM	ICP-MS4_160104A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	72973	1	01/06/16 10:11 PM	ICP-MS4_160106B
1512286-15D	MW-08	Aqueous	E300	Anions by IC method - Water	72978	1	12/29/15 01:56 PM	IC2_151229B
	MW-08	Aqueous	E300	Anions by IC method - Water	72978	100	12/29/15 03:43 PM	IC2_151229B
	MW-08	Aqueous	M4500-H+ B	pH	72889	1	12/22/15 12:05 PM	TITRATOR_151222A
	MW-08	Aqueous	M2540C	Total Dissolved Solids	72925	1	12/24/15 08:00 AM	WC_151223B

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-3
Lab ID: 1512286-01
Collection Date: 12/17/15 09:35 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 03:42 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 10:20 AM
Arsenic	0.00215	0.00200	0.00500	J	mg/L	1	01/04/16 10:20 AM
Barium	0.0371	0.00300	0.0100		mg/L	1	01/04/16 10:20 AM
Beryllium	0.000475	0.000300	0.00100	J	mg/L	1	01/04/16 10:20 AM
Boron	0.255	0.0100	0.0300		mg/L	1	01/04/16 10:20 AM
Cadmium	0.00372	0.000300	0.00100		mg/L	1	01/04/16 10:20 AM
Calcium	109	1.00	3.00		mg/L	10	01/04/16 02:04 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:20 AM
Cobalt	0.0399	0.00300	0.00500		mg/L	1	01/04/16 10:20 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:20 AM
Lithium	0.140	0.00500	0.0100		mg/L	1	01/04/16 10:20 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:20 AM
Selenium	0.0798	0.00200	0.00500		mg/L	1	01/04/16 10:20 AM
Thallium	0.00160	0.000500	0.00150		mg/L	1	01/06/16 09:27 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	399	30.0	100		mg/L	100	12/29/15 05:51 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	12/29/15 12:18 PM
Sulfate	478	100	300		mg/L	100	12/29/15 05:51 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.34	0	0		pH Units@15.3°C	1	12/22/15 11:31 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	1640	50.0	50.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-4
Lab ID: 1512286-02
Collection Date: 12/17/15 10:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	0.000229	0.0000800	0.000200		mg/L	1	12/22/15 03:53 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 10:32 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:32 AM
Barium	0.105	0.00300	0.0100		mg/L	1	01/04/16 10:32 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:32 AM
Boron	0.0777	0.0100	0.0300		mg/L	1	01/04/16 10:32 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:32 AM
Calcium	47.8	1.00	3.00		mg/L	10	01/04/16 02:08 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:32 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 10:32 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:32 AM
Lithium	0.0436	0.00500	0.0100		mg/L	1	01/04/16 10:32 AM
Molybdenum	0.00211	0.00200	0.00500	J	mg/L	1	01/04/16 10:32 AM
Selenium	0.00214	0.00200	0.00500	J	mg/L	1	01/04/16 10:32 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:31 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	211	3.00	10.0		mg/L	10	12/29/15 06:11 PM
Fluoride	0.295	0.100	0.400	J	mg/L	1	12/29/15 12:41 PM
Sulfate	38.2	1.00	3.00		mg/L	1	12/29/15 12:41 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.61	0	0		pH Units@14.5°C	1	12/22/15 11:33 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	647	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-5
Lab ID: 1512286-03
Collection Date: 12/17/15 11:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 03:56 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 10:34 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:34 AM
Barium	0.135	0.00300	0.0100		mg/L	1	01/04/16 10:34 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:34 AM
Boron	0.0798	0.0100	0.0300		mg/L	1	01/04/16 10:34 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:34 AM
Calcium	32.5	1.00	3.00		mg/L	10	01/04/16 02:10 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:34 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 10:34 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:34 AM
Lithium	0.00964	0.00500	0.0100	J	mg/L	1	01/04/16 10:34 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:34 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:34 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:33 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	254	3.00	10.0		mg/L	10	12/29/15 06:32 PM
Fluoride	0.333	0.100	0.400	J	mg/L	1	12/29/15 01:02 PM
Sulfate	56.1	1.00	3.00		mg/L	1	12/29/15 01:02 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.78	0	0		pH Units@14.4°C	1	12/22/15 11:34 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	845	50.0	50.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-2
Lab ID: 1512286-04
Collection Date: 12/17/15 12:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 03:58 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 10:36 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:36 AM
Barium	0.103	0.00300	0.0100		mg/L	1	01/04/16 10:36 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:36 AM
Boron	0.0636	0.0100	0.0300		mg/L	1	01/04/16 10:36 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:36 AM
Calcium	24.8	0.100	0.300		mg/L	1	01/04/16 10:36 AM
Chromium	0.00386	0.00200	0.00500	J	mg/L	1	01/04/16 10:36 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 10:36 AM
Lead	0.00145	0.000300	0.00100		mg/L	1	01/04/16 10:36 AM
Lithium	0.0183	0.00500	0.0100		mg/L	1	01/04/16 10:36 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:36 AM
Selenium	0.0127	0.00200	0.00500		mg/L	1	01/04/16 10:36 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:35 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	133	3.00	10.0		mg/L	10	12/29/15 06:52 PM
Fluoride	0.347	0.100	0.400	J	mg/L	1	12/29/15 01:23 PM
Sulfate	53.2	1.00	3.00		mg/L	1	12/29/15 01:23 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.89	0	0		pH Units@14°C	1	12/22/15 11:35 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	515	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-1
Lab ID: 1512286-05
Collection Date: 12/17/15 12:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:00 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 10:38 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:38 AM
Barium	0.0263	0.00300	0.0100		mg/L	1	01/04/16 10:38 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:38 AM
Boron	0.0706	0.0100	0.0300		mg/L	1	01/04/16 10:38 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:38 AM
Calcium	10.6	0.100	0.300		mg/L	1	01/04/16 10:38 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:38 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 10:38 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:38 AM
Lithium	0.0306	0.00500	0.0100		mg/L	1	01/04/16 10:38 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:38 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:38 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:37 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	37.7	0.300	1.00		mg/L	1	12/29/15 01:43 PM
Fluoride	0.384	0.100	0.400	J	mg/L	1	12/29/15 01:43 PM
Sulfate	33.3	1.00	3.00		mg/L	1	12/29/15 01:43 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.47	0	0		pH Units@15.1°C	1	12/22/15 11:38 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	224	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-6
Lab ID: 1512286-06
Collection Date: 12/17/15 01:45 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:03 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 10:40 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:40 AM
Barium	0.237	0.00300	0.0100		mg/L	1	01/04/16 10:40 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 10:40 AM
Boron	0.103	0.0100	0.0300		mg/L	1	01/04/16 10:40 AM
Cadmium	0.000593	0.000300	0.00100	J	mg/L	1	01/04/16 10:40 AM
Calcium	89.9	1.00	3.00		mg/L	10	01/04/16 02:12 PM
Chromium	0.0391	0.00200	0.00500		mg/L	1	01/04/16 10:40 AM
Cobalt	0.0164	0.00300	0.00500		mg/L	1	01/04/16 10:40 AM
Lead	0.000369	0.000300	0.00100	J	mg/L	1	01/04/16 10:40 AM
Lithium	0.156	0.00500	0.0100		mg/L	1	01/04/16 10:40 AM
Molybdenum	0.0203	0.00200	0.00500		mg/L	1	01/04/16 10:40 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 10:40 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:39 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	342	30.0	100		mg/L	100	12/29/15 07:13 PM
Fluoride	0.469	0.100	0.400		mg/L	1	12/29/15 02:04 PM
Sulfate	65.9	1.00	3.00		mg/L	1	12/29/15 02:04 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.56	0	0		pH Units@15.6°C	1	12/22/15 11:41 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	940	50.0	50.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-8
Lab ID: 1512286-07
Collection Date: 12/17/15 02:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:05 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:32 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:32 AM
Barium	0.179	0.00300	0.0100		mg/L	1	01/04/16 11:32 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:32 AM
Boron	0.0791	0.0100	0.0300		mg/L	1	01/04/16 11:32 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:32 AM
Calcium	65.2	1.00	3.00		mg/L	10	01/04/16 02:14 PM
Chromium	0.00373	0.00200	0.00500	J	mg/L	1	01/04/16 11:32 AM
Cobalt	0.00646	0.00300	0.00500		mg/L	1	01/04/16 11:32 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:32 AM
Lithium	0.116	0.00500	0.0100		mg/L	1	01/04/16 11:32 AM
Molybdenum	0.00404	0.00200	0.00500	J	mg/L	1	01/04/16 11:32 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:32 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:41 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	248	30.0	100		mg/L	100	12/29/15 07:34 PM
Fluoride	0.361	0.100	0.400	J	mg/L	1	12/29/15 02:25 PM
Sulfate	50.1	1.00	3.00		mg/L	1	12/29/15 02:25 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.52	0	0		pH Units@15.2°C	1	12/22/15 11:42 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	721	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-12
Lab ID: 1512286-08
Collection Date: 12/17/15 03:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:07 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:33 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:33 AM
Barium	0.0781	0.00300	0.0100		mg/L	1	01/04/16 11:33 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:33 AM
Boron	0.0671	0.0100	0.0300		mg/L	1	01/04/16 11:33 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:33 AM
Calcium	13.2	0.100	0.300		mg/L	1	01/04/16 11:33 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:33 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:33 AM
Lead	0.000775	0.000300	0.00100	J	mg/L	1	01/04/16 11:33 AM
Lithium	0.0220	0.00500	0.0100		mg/L	1	01/04/16 11:33 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:33 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:33 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:43 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	15.5	0.300	1.00		mg/L	1	12/29/15 02:45 PM
Fluoride	0.159	0.100	0.400	J	mg/L	1	12/29/15 02:45 PM
Sulfate	16.6	1.00	3.00		mg/L	1	12/29/15 02:45 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.64	0	0		pH Units@15.5°C	1	12/22/15 11:45 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	161	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: FGD-11
Lab ID: 1512286-09
Collection Date: 12/17/15 04:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:09 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:36 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:36 AM
Barium	0.0676	0.00300	0.0100		mg/L	1	01/04/16 11:36 AM
Beryllium	0.000303	0.000300	0.00100	J	mg/L	1	01/04/16 11:36 AM
Boron	0.0544	0.0100	0.0300		mg/L	1	01/04/16 11:36 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:36 AM
Calcium	10.7	0.100	0.300		mg/L	1	01/04/16 11:36 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:36 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:36 AM
Lead	0.000987	0.000300	0.00100	J	mg/L	1	01/04/16 11:36 AM
Lithium	0.0160	0.00500	0.0100		mg/L	1	01/04/16 11:36 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:36 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:36 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:45 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	9.85	0.300	1.00		mg/L	1	12/29/15 03:06 PM
Fluoride	0.130	0.100	0.400	J	mg/L	1	12/29/15 03:06 PM
Sulfate	11.0	1.00	3.00		mg/L	1	12/29/15 03:06 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.70	0	0		pH Units@16.1°C	1	12/22/15 11:47 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	115	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: MW-07
Lab ID: 1512286-10
Collection Date: 12/17/15 06:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:12 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:38 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:38 AM
Barium	0.0441	0.00300	0.0100		mg/L	1	01/04/16 11:38 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:38 AM
Boron	0.0539	0.0100	0.0300		mg/L	1	01/04/16 11:38 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:38 AM
Calcium	8.75	0.100	0.300		mg/L	1	01/04/16 11:38 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:38 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:38 AM
Lead	0.000537	0.000300	0.00100	J	mg/L	1	01/04/16 11:38 AM
Lithium	0.0128	0.00500	0.0100		mg/L	1	01/04/16 11:38 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:38 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:38 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 09:47 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	17.7	0.300	1.00		mg/L	1	12/29/15 03:26 PM
Fluoride	0.319	0.100	0.400	J	mg/L	1	12/29/15 03:26 PM
Sulfate	14.7	1.00	3.00		mg/L	1	12/29/15 03:26 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.76	0	0		pH Units@16.7°C	1	12/22/15 11:49 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	243	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: MW-05
Lab ID: 1512286-11
Collection Date: 12/18/15 07:40 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:18 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:40 AM
Arsenic	0.00803	0.00200	0.00500		mg/L	1	01/04/16 11:40 AM
Barium	0.0662	0.00300	0.0100		mg/L	1	01/04/16 11:40 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:40 AM
Boron	0.0621	0.0100	0.0300		mg/L	1	01/04/16 11:40 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:40 AM
Calcium	13.0	0.100	0.300		mg/L	1	01/04/16 11:40 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:40 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:40 AM
Lead	0.000743	0.000300	0.00100	J	mg/L	1	01/04/16 11:40 AM
Lithium	0.0407	0.00500	0.0100		mg/L	1	01/04/16 11:40 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:40 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:40 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 10:03 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	60.2	3.00	10.0		mg/L	10	12/29/15 02:15 PM
Fluoride	0.476	0.100	0.400		mg/L	1	12/29/15 12:58 PM
Sulfate	10.5	1.00	3.00		mg/L	1	12/29/15 12:58 PM
PH		M4500-H+ B		Analyst: LM			
pH	6.54	0	0		pH Units@17.7°C	1	12/22/15 11:55 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	232	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: MW-02
Lab ID: 1512286-12
Collection Date: 12/18/15 08:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:21 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:42 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:42 AM
Barium	0.175	0.00300	0.0100		mg/L	1	01/04/16 11:42 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:42 AM
Boron	0.0476	0.0100	0.0300		mg/L	1	01/04/16 11:42 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:42 AM
Calcium	29.0	1.00	3.00		mg/L	10	01/04/16 02:16 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:42 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:42 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:42 AM
Lithium	0.00927	0.00500	0.0100	J	mg/L	1	01/04/16 11:42 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:42 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:42 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 10:05 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	61.7	3.00	10.0		mg/L	10	12/29/15 02:59 PM
Fluoride	0.118	0.100	0.400	J	mg/L	1	12/29/15 01:12 PM
Sulfate	15.9	1.00	3.00		mg/L	1	12/29/15 01:12 PM
PH							
M4500-H+ B				Analyst: LM			
pH	7.06	0	0		pH Units@17.3°C	1	12/22/15 11:58 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	308	10.0	10.0		mg/L	1	12/23/15 08:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: AL-10
Lab ID: 1512286-13
Collection Date: 12/18/15 09:20 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:23 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:44 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:44 AM
Barium	0.230	0.00300	0.0100		mg/L	1	01/04/16 11:44 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:44 AM
Boron	0.0539	0.0100	0.0300		mg/L	1	01/04/16 11:44 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:44 AM
Calcium	37.5	1.00	3.00		mg/L	10	01/04/16 02:19 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:44 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:44 AM
Lead	0.00339	0.000300	0.00100		mg/L	1	01/04/16 11:44 AM
Lithium	0.0115	0.00500	0.0100		mg/L	1	01/04/16 11:44 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:44 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:44 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 10:07 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	81.0	3.00	10.0		mg/L	10	12/29/15 03:13 PM
Fluoride	0.150	0.100	0.400	J	mg/L	1	12/29/15 01:27 PM
Sulfate	20.6	1.00	3.00		mg/L	1	12/29/15 01:27 PM
PH							
M4500-H+ B				Analyst: LM			
pH	7.08	0	0		pH Units@17.3°C	1	12/22/15 12:01 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	414	10.0	10.0		mg/L	1	12/24/15 08:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: MW-09
Lab ID: 1512286-14
Collection Date: 12/18/15 10:20 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: ABO			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/22/15 04:25 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:46 AM
Arsenic	0.00260	0.00200	0.00500	J	mg/L	1	01/04/16 11:46 AM
Barium	0.107	0.00300	0.0100		mg/L	1	01/04/16 11:46 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:46 AM
Boron	0.0770	0.0100	0.0300		mg/L	1	01/04/16 11:46 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:46 AM
Calcium	40.3	1.00	3.00		mg/L	10	01/04/16 02:21 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:46 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:46 AM
Lead	0.00118	0.000300	0.00100		mg/L	1	01/04/16 11:46 AM
Lithium	0.0544	0.00500	0.0100		mg/L	1	01/04/16 11:46 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:46 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:46 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 10:09 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	157	3.00	10.0		mg/L	10	12/29/15 03:28 PM
Fluoride	0.266	0.100	0.400	J	mg/L	1	12/29/15 01:41 PM
Sulfate	83.1	1.00	3.00		mg/L	1	12/29/15 01:41 PM
PH							
M4500-H+ B				Analyst: LM			
pH	6.06	0	0		pH Units@18.2°C	1	12/22/15 12:04 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: BJT			
Total Dissolved Solids (Residue, Filterable)	528	10.0	10.0		mg/L	1	12/24/15 08:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 25-Jan-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1512286

Client Sample ID: MW-08
Lab ID: 1512286-15
Collection Date: 12/18/15 11:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
		SW7470A					Analyst: ABO
Mercury	0.0000855	0.0000800	0.000200	J	mg/L	1	12/22/15 04:28 PM
TRACE METALS: ICP-MS - WATER							
		SW6020A					Analyst: RO
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/04/16 11:48 AM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/04/16 11:48 AM
Barium	0.257	0.00300	0.0100		mg/L	1	01/04/16 11:48 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/04/16 11:48 AM
Boron	0.0604	0.0100	0.0300		mg/L	1	01/04/16 11:48 AM
Cadmium	0.000363	0.000300	0.00100	J	mg/L	1	01/04/16 11:48 AM
Calcium	70.4	1.00	3.00		mg/L	10	01/04/16 02:23 PM
Chromium	0.0511	0.00200	0.00500		mg/L	1	01/04/16 11:48 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/04/16 11:48 AM
Lead	0.00117	0.000300	0.00100		mg/L	1	01/04/16 11:48 AM
Lithium	0.0429	0.00500	0.0100		mg/L	1	01/04/16 11:48 AM
Molybdenum	0.00438	0.00200	0.00500	J	mg/L	1	01/04/16 11:48 AM
Selenium	0.0108	0.00200	0.00500		mg/L	1	01/04/16 11:48 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/06/16 10:11 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: AV
Chloride	488	30.0	100		mg/L	100	12/29/15 03:43 PM
Fluoride	0.158	0.100	0.400	J	mg/L	1	12/29/15 01:56 PM
Sulfate	49.8	1.00	3.00		mg/L	1	12/29/15 01:56 PM
PH							
		M4500-H+ B					Analyst: LM
pH	6.40	0	0		pH Units@19.2°C	1	12/22/15 12:05 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: BJT
Total Dissolved Solids (Residue, Filterable)	1140	50.0	50.0		mg/L	1	12/24/15 08:00 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1512286

Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151222A

The QC data in batch 72872 applies to the following samples: 1512286-01A, 1512286-02A, 1512286-03A, 1512286-04A, 1512286-05A, 1512286-06A, 1512286-07A, 1512286-08A, 1512286-09A, 1512286-10A, 1512286-11A, 1512286-12A, 1512286-13A, 1512286-14A, 1512286-15A

Sample ID	MB-72872	Batch ID:	72872	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:35:51 PM	Prep Date:	12/21/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-72872	Batch ID:	72872	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:38:06 PM	Prep Date:	12/21/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00200 0.000200 0.00200 0 100 85 115

Sample ID	LCSD-72872	Batch ID:	72872	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:40:22 PM	Prep Date:	12/21/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00186 0.000200 0.00200 0 93.0 85 115 7.25 15

Sample ID	1512286-01A SD	Batch ID:	72872	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:44:55 PM	Prep Date:	12/21/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1512286-01A PDS	Batch ID:	72872	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:47:11 PM	Prep Date:	12/21/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00234 0.000200 0.00250 0 93.6 85 115

Sample ID	1512286-01A MS	Batch ID:	72872	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:49:26 PM	Prep Date:	12/21/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00172 0.000200 0.00200 0 86.0 80 120

Sample ID	1512286-01A MSD	Batch ID:	72872	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:51:42 PM	Prep Date:	12/21/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00179 0.000200 0.00200 0 89.5 80 120 3.99 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151222A

Sample ID	ICV-151222	Batch ID:	R83299	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 10:31:35 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00397	0.000200	0.00400	0	99.2	90	110			

Sample ID	CCV8-151222	Batch ID:	R83299	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 3:31:17 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00189	0.000200	0.00200	0	94.5	90	110			

Sample ID	CCV9-151222	Batch ID:	R83299	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 4:14:23 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00190	0.000200	0.00200	0	95.0	90	110			

Sample ID	CCV10-151222	Batch ID:	R83299	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_151222A	Analysis Date:	12/22/2015 4:53:05 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00190	0.000200	0.00200	0	95.0	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

The QC data in batch 72973 applies to the following samples: 1512286-01A, 1512286-02A, 1512286-03A, 1512286-04A, 1512286-05A, 1512286-06A, 1512286-07A, 1512286-08A, 1512286-09A, 1512286-10A, 1512286-11A, 1512286-12A, 1512286-13A, 1512286-14A, 1512286-15A

Sample ID MB-72973	Batch ID: 72973	TestNo: SW6020A	Units: mg/L
SampType: MBLK	Run ID: ICP-MS4_160104A	Analysis Date: 1/4/2016 10:12:00 AM	Prep Date: 12/29/2015

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

Sample ID LCS-72973	Batch ID: 72973	TestNo: SW6020A	Units: mg/L
SampType: LCS	Run ID: ICP-MS4_160104A	Analysis Date: 1/4/2016 10:14:00 AM	Prep Date: 12/29/2015

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.7	80	120			
Arsenic	0.198	0.00500	0.200	0	99.1	80	120			
Barium	0.195	0.0100	0.200	0	97.5	80	120			
Beryllium	0.204	0.00100	0.200	0	102	80	120			
Boron	0.205	0.0300	0.200	0	103	80	120			
Cadmium	0.195	0.00100	0.200	0	97.6	80	120			
Calcium	4.56	0.300	5.00	0	91.3	80	120			
Chromium	0.201	0.00500	0.200	0	100	80	120			
Cobalt	0.198	0.00500	0.200	0	99.0	80	120			
Lead	0.194	0.00100	0.200	0	96.9	80	120			
Lithium	0.196	0.0100	0.200	0	98.0	80	120			
Molybdenum	0.188	0.00500	0.200	0	94.2	80	120			
Selenium	0.197	0.00500	0.200	0	98.6	80	120			

Sample ID LCSD-72973	Batch ID: 72973	TestNo: SW6020A	Units: mg/L
SampType: LCSD	Run ID: ICP-MS4_160104A	Analysis Date: 1/4/2016 10:16:00 AM	Prep Date: 12/29/2015

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.7	80	120	1.01	15	
Arsenic	0.200	0.00500	0.200	0	99.8	80	120	0.707	15	
Barium	0.197	0.0100	0.200	0	98.6	80	120	1.10	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

Sample ID	LCSD-72973			Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD			Run ID:	ICP-MS4_160104A		Analysis Date:	1/4/2016 10:16:00 AM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Beryllium	0.200	0.00100	0.200	0	100	80	120	1.76	15	
Boron	0.190	0.0300	0.200	0	95.2	80	120	7.48	15	
Cadmium	0.197	0.00100	0.200	0	98.5	80	120	0.880	15	
Calcium	4.60	0.300	5.00	0	92.1	80	120	0.869	15	
Chromium	0.200	0.00500	0.200	0	100	80	120	0.283	15	
Cobalt	0.201	0.00500	0.200	0	100	80	120	1.33	15	
Lead	0.193	0.00100	0.200	0	96.4	80	120	0.511	15	
Lithium	0.195	0.0100	0.200	0	97.7	80	120	0.229	15	
Molybdenum	0.191	0.00500	0.200	0	95.7	80	120	1.58	15	
Selenium	0.197	0.00500	0.200	0	98.4	80	120	0.244	15	

Sample ID	1512286-01A SD		Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD		Run ID:	ICP-MS4_160104A		Analysis Date:	1/4/2016 10:22:00 AM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0.00215				0	10	
Barium	0.0361	0.0500	0	0.0371				2.70	10	
Beryllium	<0.00150	0.00500	0	0.000475				0	10	
Boron	0.263	0.150	0	0.255				3.30	10	
Cadmium	0.00358	0.00500	0	0.00372				3.78	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	0.0408	0.0250	0	0.0399				2.32	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	0.142	0.0500	0	0.140				1.68	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	0.0798	0.0250	0	0.0798				0.021	10	

Sample ID: 1512286-01A PDS	Batch ID: 72973	TestNo: SW6020A	Units: mg/L							
SampType: PDS	Run ID: ICP-MS4_160104A	Analysis Date: 1/4/2016 10:42:00 AM	Prep Date: 12/29/2015							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.183	0.00250	0.200	0	91.7	80	120			
Arsenic	0.205	0.00500	0.200	0.00215	101	80	120			
Barium	0.231	0.0100	0.200	0.0371	97.1	80	120			
Beryllium	0.201	0.00100	0.200	0.000475	100	80	120			
Boron	0.441	0.0300	0.200	0.255	93.3	80	120			
Cadmium	0.197	0.00100	0.200	0.00372	96.6	80	120			
Chromium	0.203	0.00500	0.200	0	101	80	120			
Cobalt	0.235	0.00500	0.200	0.0399	97.7	80	120			
Lead	0.198	0.00100	0.200	0	99.1	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

Sample ID	1512286-01A PDS	Batch ID:	72973	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 10:42:00 AM	Prep Date:	12/29/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.326	0.0100	0.200	0.140	93.2	80	120			
Molybdenum	0.192	0.00500	0.200	0	96.1	80	120			
Selenium	0.271	0.00500	0.200	0.0798	95.8	80	120			

Sample ID	1512286-01A MS	Batch ID:	72973	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 10:44:00 AM	Prep Date:	12/29/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.206	0.00250	0.200	0	103	80	120			
Arsenic	0.206	0.00500	0.200	0.00215	102	80	120			
Barium	0.234	0.0100	0.200	0.0371	98.7	80	120			
Beryllium	0.202	0.00100	0.200	0.000475	101	80	120			
Boron	0.469	0.0300	0.200	0.255	107	80	120			
Cadmium	0.195	0.00100	0.200	0.00372	95.8	80	120			
Calcium	111	0.300	5.00	105	110	80	120			
Chromium	0.198	0.00500	0.200	0	98.8	80	120			
Cobalt	0.234	0.00500	0.200	0.0399	97.1	80	120			
Lead	0.194	0.00100	0.200	0	97.0	80	120			
Lithium	0.334	0.0100	0.200	0.140	97.3	80	120			
Molybdenum	0.197	0.00500	0.200	0	98.3	80	120			
Selenium	0.277	0.00500	0.200	0.0798	98.4	80	120			

Sample ID	1512286-01A MSD	Batch ID:	72973	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 10:46:00 AM	Prep Date:	12/29/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.205	0.00250	0.200	0	103	80	120	0.175	15	
Arsenic	0.209	0.00500	0.200	0.00215	104	80	120	1.62	15	
Barium	0.235	0.0100	0.200	0.0371	98.9	80	120	0.146	15	
Beryllium	0.203	0.00100	0.200	0.000475	101	80	120	0.443	15	
Boron	0.459	0.0300	0.200	0.255	102	80	120	2.05	15	
Cadmium	0.199	0.00100	0.200	0.00372	97.5	80	120	1.67	15	
Calcium	111	0.300	5.00	105	127	80	120	0.735	15	S
Chromium	0.200	0.00500	0.200	0	100	80	120	1.42	15	
Cobalt	0.235	0.00500	0.200	0.0399	97.5	80	120	0.384	15	
Lead	0.198	0.00100	0.200	0	99.1	80	120	2.08	15	
Lithium	0.341	0.0100	0.200	0.140	101	80	120	2.05	15	
Molybdenum	0.198	0.00500	0.200	0	98.9	80	120	0.593	15	
Selenium	0.281	0.00500	0.200	0.0798	101	80	120	1.53	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

Sample ID	1512286-01A SD			Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_160104A		Analysis Date:	1/4/2016 2:06:00 PM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Calcium	106	15.0	0	109				2.49	10	

Sample ID	1512286-01A PDS	Batch ID:	72973	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 2:25:00 PM	Prep Date:	12/29/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	153	3.00	50.0	109	87.6	80	120			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

Sample ID	ICV-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 10:01:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.102	0.00250	0.100	0	102	90	110			
Arsenic	0.104	0.00500	0.100	0	104	90	110			
Barium	0.102	0.0100	0.100	0	102	90	110			
Beryllium	0.101	0.00100	0.100	0	101	90	110			
Boron	0.102	0.0300	0.100	0	102	90	110			
Cadmium	0.102	0.00100	0.100	0	102	90	110			
Calcium	2.37	0.300	2.50	0	94.7	90	110			
Chromium	0.107	0.00500	0.100	0	107	90	110			
Cobalt	0.106	0.00500	0.100	0	106	90	110			
Lead	0.102	0.00100	0.100	0	102	90	110			
Lithium	0.0985	0.0100	0.100	0	98.5	90	110			
Molybdenum	0.0980	0.00500	0.100	0	98.0	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			

Sample ID	LCVL-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 10:05:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00211	0.00250	0.00200	0	105	70	130			
Arsenic	0.00520	0.00500	0.00500	0	104	70	130			
Barium	0.00501	0.0100	0.00500	0	100	70	130			
Beryllium	0.00114	0.00100	0.00100	0	114	70	130			
Boron	0.0248	0.0300	0.0200	0	124	70	130			
Cadmium	0.00100	0.00100	0.00100	0	100	70	130			
Calcium	0.0945	0.300	0.100	0	94.5	70	130			
Chromium	0.00518	0.00500	0.00500	0	104	70	130			
Cobalt	0.00517	0.00500	0.00500	0	103	70	130			
Lead	0.00109	0.00100	0.00100	0	109	70	130			
Lithium	0.0100	0.0100	0.0100	0	100	70	130			
Molybdenum	0.00515	0.00500	0.00500	0	103	70	130			
Selenium	0.00530	0.00500	0.00500	0	106	70	130			

Sample ID	CCV1-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 10:57:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.205	0.00250	0.200	0	102	90	110			
Arsenic	0.205	0.00500	0.200	0	102	90	110			
Barium	0.198	0.0100	0.200	0	99.2	90	110			
Beryllium	0.212	0.00100	0.200	0	106	90	110			
Boron	0.201	0.0300	0.200	0	101	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

Sample ID	CCV1-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 10:57:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.201	0.00100	0.200	0	100	90	110			
Calcium	4.88	0.300	5.00	0	97.6	90	110			
Chromium	0.204	0.00500	0.200	0	102	90	110			
Cobalt	0.204	0.00500	0.200	0	102	90	110			
Lead	0.195	0.00100	0.200	0	97.6	90	110			
Lithium	0.197	0.0100	0.200	0	98.3	90	110			
Molybdenum	0.193	0.00500	0.200	0	96.3	90	110			
Selenium	0.201	0.00500	0.200	0	100	90	110			

Sample ID	LCVL1-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 11:26:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00203	0.00250	0.00200	0	102	70	130			
Arsenic	0.00508	0.00500	0.00500	0	102	70	130			
Barium	0.00495	0.0100	0.00500	0	99.0	70	130			
Beryllium	0.00114	0.00100	0.00100	0	114	70	130			
Boron	0.0203	0.0300	0.0200	0	101	70	130			
Cadmium	0.000957	0.00100	0.00100	0	95.7	70	130			
Calcium	0.0909	0.300	0.100	0	90.9	70	130			
Chromium	0.00510	0.00500	0.00500	0	102	70	130			
Cobalt	0.00506	0.00500	0.00500	0	101	70	130			
Lead	0.000925	0.00100	0.00100	0	92.5	70	130			
Lithium	0.0104	0.0100	0.0100	0	104	70	130			
Molybdenum	0.00462	0.00500	0.00500	0	92.5	70	130			
Selenium	0.00495	0.00500	0.00500	0	98.9	70	130			

Sample ID	CCV2-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 11:50:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.199	0.00250	0.200	0	99.7	90	110			
Arsenic	0.203	0.00500	0.200	0	102	90	110			
Barium	0.197	0.0100	0.200	0	98.6	90	110			
Beryllium	0.204	0.00100	0.200	0	102	90	110			
Boron	0.196	0.0300	0.200	0	97.8	90	110			
Cadmium	0.195	0.00100	0.200	0	97.4	90	110			
Calcium	4.85	0.300	5.00	0	96.9	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.200	0.00500	0.200	0	100	90	110			
Lead	0.192	0.00100	0.200	0	95.8	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

Sample ID	CCV2-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 11:50:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium		0.201	0.0100	0.200	0	101	90	110			
Molybdenum		0.189	0.00500	0.200	0	94.3	90	110			
Selenium		0.202	0.00500	0.200	0	101	90	110			

Sample ID	LCVL2-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 11:56:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00205	0.00250	0.00200	0	102	70	130			
Arsenic	0.00513	0.00500	0.00500	0	103	70	130			
Barium	0.00501	0.0100	0.00500	0	100	70	130			
Beryllium	0.000964	0.00100	0.00100	0	96.4	70	130			
Boron	0.0229	0.0300	0.0200	0	114	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Calcium	0.0953	0.300	0.100	0	95.3	70	130			
Chromium	0.00516	0.00500	0.00500	0	103	70	130			
Cobalt	0.00518	0.00500	0.00500	0	104	70	130			
Lead	0.000913	0.00100	0.00100	0	91.3	70	130			
Lithium	0.00989	0.0100	0.0100	0	98.9	70	130			
Molybdenum	0.00472	0.00500	0.00500	0	94.5	70	130			
Selenium	0.00500	0.00500	0.00500	0	99.9	70	130			

Sample ID	CCV6-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 1:55:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.11	0.300	5.00	0	102	90	110			

Sample ID	LCVL6-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 2:00:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.101	0.300	0.100	0	101	70	130			

Sample ID	CCV7-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 2:27:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.91	0.300	5.00	0	98.3	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160104A

Sample ID	LCVL7-160104	Batch ID:	R83456	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160104A	Analysis Date:	1/4/2016 2:37:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0949	0.300	0.100	0	94.9	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160106B

The QC data in batch 72973 applies to the following samples: 1512286-01A, 1512286-02A, 1512286-03A, 1512286-04A, 1512286-05A, 1512286-06A, 1512286-07A, 1512286-08A, 1512286-09A, 1512286-10A, 1512286-11A, 1512286-12A, 1512286-13A, 1512286-14A, 1512286-15A

Sample ID	MB-72973		Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160106B		Analysis Date:	1/6/2016 9:19:00 PM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Thallium <0.000500 0.00150

Sample ID	LCS-72973			Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_160106B		Analysis Date:	1/6/2016 9:21:00 PM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Thallium 0.187 0.00150 0.200 0 93.6 80 120

Sample ID	LCSD-72973			Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD			Run ID:	ICP-MS4_160106B		Analysis Date:	1/6/2016 9:23:00 PM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Thallium 0.186 0.00150 0.200 0 92.8 80 120 0.858 15

Sample ID	1512286-01A SD			Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_160106B		Analysis Date:	1/6/2016 9:29:00 PM		Prep Date:	12/29/2015	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Thallium <0.00250 0.00750 0 0.00160 0 10

Sample ID	1512286-01A PDS			Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	PDS			Run ID:	ICP-MS4_160106B		Analysis Date:	1/6/2016 9:49:00 PM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Thallium 0.206 0.00150 0.200 0.00160 102 80 120

Sample ID	1512286-01A MS			Batch ID:	72973		TestNo:	SW6020A		Units:	mg/L	
SampType:	MS			Run ID:	ICP-MS4_160106B		Analysis Date:	1/6/2016 9:51:00 PM		Prep Date:	12/29/2015	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Thallium 0.196 0.00150 0.200 0.00160 97.0 80 120

Sample ID	1512286-01A MSD			Batch ID:	72973			TestNo:	SW6020A			Units:	mg/L		
SampType:	MSD			Run ID:	ICP-MS4_160106B			Analysis Date:	1/6/2016 9:53:00 PM			Prep Date:	12/29/2015		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Thallium 0.197 0.00150 0.200 0.00160 97.5 80 120 0.472 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160106B

Sample ID	ICV2-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 7:56:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Thallium	0.0956	0.00150	0.100	0	95.6	90	110

Sample ID	ILCVL2-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 8:00:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Thallium	0.000858	0.00150	0.00100	0	85.8	70	130

Sample ID	CCV2-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 9:10:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Thallium	0.199	0.00150	0.200	0	99.7	90	110

Sample ID	LCVL2-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 9:14:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Thallium	0.000892	0.00150	0.00100	0	89.2	70	130

Sample ID	CCV3-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 9:55:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Thallium	0.196	0.00150	0.200	0	98.0	90	110

Sample ID	LCVL3-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 9:59:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Thallium	0.000913	0.00150	0.00100	0	91.3	70	130

Sample ID	CCV4-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 10:17:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Thallium	0.194	0.00150	0.200	0	97.0	90	110

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160106B

Sample ID	LCVL4-160106	Batch ID:	R83506	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160106B	Analysis Date:	1/6/2016 10:21:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.000872	0.00150	0.00100	0	87.2	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151229B

The QC data in batch 72978 applies to the following samples: 1512286-11D, 1512286-12D, 1512286-13D, 1512286-14D, 1512286-15D

Sample ID	MB-72978	Batch ID:	72978	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 12:14:12 P	Prep Date:	12/29/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-72978	Batch ID:	72978	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 12:28:48 P	Prep Date:	12/29/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	9.63	1.00	10.00	0	96.3	90	110			
Fluoride	3.97	0.400	4.000	0	99.4	90	110			
Sulfate	29.4	3.00	30.00	0	97.9	90	110			

Sample ID	LCSD-72978	Batch ID:	72978	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 12:43:25 P	Prep Date:	12/29/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	9.61	1.00	10.00	0	96.1	90	110	0.279	20	
Fluoride	3.98	0.400	4.000	0	99.6	90	110	0.189	20	
Sulfate	29.3	3.00	30.00	0	97.7	90	110	0.201	20	

Sample ID	1512286-11DMS	Batch ID:	72978	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 2:30:09 PM	Prep Date:	12/29/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	248	10.0	200.0	60.18	94.0	90	110			
Fluoride	195	4.00	200.0	0	97.4	90	110			
Sulfate	200	30.0	200.0	12.05	94.0	90	110			

Sample ID	1512286-11DMSD	Batch ID:	72978	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 2:44:45 PM	Prep Date:	12/29/2015			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	248	10.0	200.0	60.18	93.8	90	110	0.157	20	
Fluoride	195	4.00	200.0	0	97.6	90	110	0.174	20	
Sulfate	199	30.0	200.0	12.05	93.3	90	110	0.635	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151229B

Sample ID	ICV-151229	Batch ID:	R83396	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 9:35:15 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.6	90	110			
Fluoride	9.95	0.400	10.00	0	99.5	90	110			
Sulfate	73.4	3.00	75.00	0	97.9	90	110			

Sample ID	CCV1-151229	Batch ID:	R83396	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 11:40:13 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.73	1.00	10.00	0	97.3	90	110			
Fluoride	3.98	0.400	4.000	0	99.4	90	110			
Sulfate	29.5	3.00	30.00	0	98.3	90	110			

Sample ID	CCV2-151229	Batch ID:	R83396	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_151229B	Analysis Date:	12/29/2015 3:57:48 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.82	1.00	10.00	0	98.2	90	110			
Fluoride	4.11	0.400	4.000	0	103	90	110			
Sulfate	29.7	3.00	30.00	0	98.9	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151229A

The QC data in batch 72974 applies to the following samples: 1512286-01D, 1512286-02D, 1512286-03D, 1512286-04D, 1512286-05D, 1512286-06D, 1512286-07D, 1512286-08D, 1512286-09D, 1512286-10D

Sample ID	MB-72974		Batch ID:	72974		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC3_151229A		Analysis Date:	12/29/2015 11:02:13 A		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-72974			Batch ID:	72974		TestNo:	E300		Units:	mg/L	
SampType:	LCS			Run ID:	IC3_151229A		Analysis Date:	12/29/2015 11:25:44 A		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.60	1.00	10.00	0	96.0	90	110			
Fluoride	4.18	0.400	4.000	0	105	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	LCSD-72974		Batch ID:	72974		TestNo:	E300		Units:	mg/L	
SampType:	LCSD		Run ID:	IC3_151229A		Analysis Date:	12/29/2015 11:46:24 A		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.60	1.00	10.00	0	96.0	90	110	0.041	20	
Fluoride	4.13	0.400	4.000	0	103	90	110	1.24	20	
Sulfate	31.2	3.00	30.00	0	104	90	110	1.00	20	

Sample ID	1512286-07DMS		Batch ID:	72974		TestNo:	E300		Units:	mg/L	
SampType:	MS		Run ID:	IC3_151229A		Analysis Date:	12/29/2015 7:54:48 PM		Prep Date:	12/29/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2200	100	2000	248.2	97.5	90	110			
Fluoride	1940	40.0	2000	0	96.9	90	110			
Sulfate	2030	300	2000	0	102	90	110			

Sample ID	1512286-07DMSD			Batch ID:	72974			TestNo:	E300			Units:	mg/L		
SampType:	MSD			Run ID:	IC3_151229A			Analysis Date:	12/29/2015 8:15:27 PM			Prep Date:	12/29/2015		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Chloride	2230	100	2000	248.2	99.1	90	110	1.45	20	
Fluoride	1960	40.0	2000	0	97.8	90	110	0.860	20	
Sulfate	2110	300	2000	0	105	90	110	3.60	20	

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151229A

Sample ID	ICV-151229	Batch ID:	R83402	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC3_151229A	Analysis Date:	12/29/2015 10:03:53 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.3	1.00	25.00	0	101	90	110			
Fluoride	10.1	0.400	10.00	0	101	90	110			
Sulfate	76.3	3.00	75.00	0	102	90	110			

Sample ID	CCV1-151229	Batch ID:	R83402	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_151229A	Analysis Date:	12/29/2015 5:09:43 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.4	1.00	10.00	0	104	90	110			
Fluoride	4.17	0.400	4.000	0	104	90	110			
Sulfate	30.9	3.00	30.00	0	103	90	110			

Sample ID	CCV2-151229	Batch ID:	R83402	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_151229A	Analysis Date:	12/29/2015 8:56:45 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.69	1.00	10.00	0	96.9	90	110			
Fluoride	4.18	0.400	4.000	0	105	90	110			
Sulfate	30.9	3.00	30.00	0	103	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151222A

The QC data in batch 72889 applies to the following samples: 1512286-01D, 1512286-02D, 1512286-03D, 1512286-04D, 1512286-05D, 1512286-06D, 1512286-07D, 1512286-08D, 1512286-09D, 1512286-10D, 1512286-11D, 1512286-12D, 1512286-13D, 1512286-14D, 1512286-15D

Sample ID	1512286-10D DUP	Batch ID:	72889	TestNo:	M4500-H+ B	Units:	pH Units@17.2°C
SampType:	DUP	Run ID:	TITRATOR_151222A	Analysis Date:	12/22/2015 11:53:00 A	Prep Date:	12/22/2015
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.76	0	0	6.760		0 5

Sample ID	1512292-01C DUP	Batch ID:	72889	TestNo:	M4500-H+ B	Units:	pH Units@20.1°C
SampType:	DUP	Run ID:	TITRATOR_151222A	Analysis Date:	12/22/2015 12:14:00 P	Prep Date:	12/22/2015
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		7.63	0	0	7.560		0.922 5

LUMINANT

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151222A

Sample ID	ICV-151222	Batch ID:	R83296	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C			
SampType:	ICV	Run ID:	TITRATOR_151222A	Analysis Date:	12/22/2015 10:37:00 A	Prep Date:	12/22/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	9.97	0	10.00	0	99.7	99	101			

Sample ID	CCV1-151222	Batch ID:	R83296	TestNo:	M4500-H+ B	Units:	pH	Units@20.2℃		
SampType:	CCV	Run ID:	TITRATOR_151222A	Analysis Date:	12/22/2015 11:50:00 A	Prep Date:	12/22/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	6.97	0	7.000	0	99.6	97.1	102.9			

Sample ID	CCV2-151222	Batch ID:	R83296	TestNo:	M4500-H+ B	Units:	pH Units@20.5°C			
SampType:	CCV	Run ID:	TITRATOR_151222A	Analysis Date:	12/22/2015 12:16:00 P	Prep Date:	12/22/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	6.99	0	7.000	0	99.9	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_151222B

The QC data in batch 72907 applies to the following samples: 1512286-01D, 1512286-02D, 1512286-03D, 1512286-04D, 1512286-05D, 1512286-06D, 1512286-07D, 1512286-08D, 1512286-09D, 1512286-10D, 1512286-11D, 1512286-12D

Sample ID	MB-72907		Batch ID:	72907		TestNo:	M2540C		Units:	mg/L	
SampType:	MBLK		Run ID:	WC_151222B		Analysis Date:	12/23/2015 8:05:00 AM		Prep Date:	12/22/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-72907			Batch ID:	72907		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS			Run ID:	WC_151222B		Analysis Date:	12/23/2015 8:05:00 AM		Prep Date:	12/22/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 736 10.0 745.6 0 98.7 90 113

Sample ID	1512238-03D-DUP	Batch ID:	72907	TestNo:	M2540C	Units:	mg/L			
SampType:	DUP	Run ID:	WC_151222B	Analysis Date:	12/23/2015 8:05:00 AM	Prep Date:	12/22/2015			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2400 50.0 0 2425 1.04 5

Sample ID	1512286-06D-DUP		Batch ID:	72907		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_151222B		Analysis Date:	12/23/2015 8:05:00 AM		Prep Date:	12/22/2015	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 960 50.0 0 940.0 2.11 5

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1512286
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_151223B

The QC data in batch 72925 applies to the following samples: 1512286-13D, 1512286-14D, 1512286-15D

Sample ID	MB-72925	Batch ID:	72925	TestNo:	M2540C	Units:	mg/L
SampType:	MBLK	Run ID:	WC_151223B	Analysis Date:	12/24/2015 8:00:00 AM	Prep Date:	12/23/2015
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-72925	Batch ID:	72925	TestNo:	M2540C	Units:	mg/L
SampType:	LCS	Run ID:	WC_151223B	Analysis Date:	12/24/2015 8:00:00 AM	Prep Date:	12/23/2015
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 734 10.0 745.6 0 98.4 90 113

Sample ID	1512286-15D-DUP	Batch ID:	72925	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_151223B	Analysis Date:	12/24/2015 8:00:00 AM	Prep Date:	12/23/2015
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 1150 50.0 0 1140 0.873 5

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 NELAC certified



January 25, 2016

Mr. John DuPont
DHL Analytical
2300 Double Creek Drive
Round Rock, Texas 78664

Re: Routine Analysis
Work Order: 388114

Dear Mr. DuPont:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 24, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4707.

Sincerely,

Anna Day
Project Manager

Purchase Order: 14097
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

DHLA002 DHL Analytical

Client SDG: 388114 GEL Work Order: 388114

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Anna Day.

Reviewed by

Anna C Day

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-3
Sample ID: 388114001
Matrix: Water
Collect Date: 17-DEC-15 09:35
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		2.66	+/-1.07	1.40	3.00	pCi/L		AXM6	01/12/16	1117 1534820	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.70	+/-0.651	0.697	1.00	pCi/L		CXP3	01/15/16	0735 1533727	2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						90.4	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-4
Sample ID: 388114002
Matrix: Water
Collect Date: 17-DEC-15 10:25
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.01	+/-1.04	1.73	3.00	pCi/L		AXM6	01/12/16	1117	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	0.226	+/-0.233	0.361	1.00	pCi/L		CXP3	01/15/16	0735	1533727	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery	Test					Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"							88	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-5
Sample ID: 388114003
Matrix: Water
Collect Date: 17-DEC-15 11:15
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.17	+/-1.27	2.13	3.00	pCi/L		AXM6	01/12/16	1117	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.03	+/-0.502	0.639	1.00	pCi/L		CXP3	01/15/16	0735	1533727	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						90.1	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-2
Sample ID: 388114004
Matrix: Water
Collect Date: 17-DEC-15 12:00
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.04	+/-0.795	1.24	3.00	pCi/L		AXM6	01/12/16	1117	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.03	+/-0.534	0.696	1.00	pCi/L		CXP3	01/15/16	0735	1533727	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						90.6	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-1
Sample ID: 388114005
Matrix: Water
Collect Date: 17-DEC-15 12:50
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.628	+/-0.839	1.43	3.00	pCi/L		AXM6	01/12/16	1117	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.919	+/-0.489	0.646	1.00	pCi/L		CXP3	01/15/16	0735	1533727	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			95.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	FGD-6	Project:	DHLA00112
Sample ID:	388114006	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	17-DEC-15 13:45		
Receive Date:	24-DEC-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		3.63	+/-1.21	1.60	3.00	pCi/L		AXM6	01/12/16	1117 1534820	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.23	+/-0.530	0.608	1.00	pCi/L		CXP3	01/15/16	0820 1533727	2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						99.2	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-8
Sample ID: 388114007
Matrix: Water
Collect Date: 17-DEC-15 14:50
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		1.70	+/-0.919	1.32	3.00	pCi/L		AXM6	01/12/16	1117 1534820	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226	U	0.127	+/-0.321	0.609	1.00	pCi/L		CXP3	01/15/16	0820 1533727	2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						89.1	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-12
Sample ID: 388114008
Matrix: Water
Collect Date: 17-DEC-15 15:40
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.831	+/-1.46	2.57	3.00	pCi/L		AXM6	01/12/16	1241	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.32	+/-0.547	0.644	1.00	pCi/L		CXP3	01/15/16	0820	1533727	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						89.5	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-11
Sample ID: 388114009
Matrix: Water
Collect Date: 17-DEC-15 16:30
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.316	+/-0.901	1.63	3.00	pCi/L		AXM6	01/12/16	1118	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.786	+/-0.409	0.515	1.00	pCi/L		CXP3	01/15/16	0820	1533727	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.8	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-07
Sample ID: 388114010
Matrix: Water
Collect Date: 17-DEC-15 18:15
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.0522	+/-0.650	1.25	3.00	pCi/L		AXM6	01/12/16	1119	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.40	+/-0.561	0.648	1.00	pCi/L		CXP3	01/15/16	0820	1533727	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-05
Sample ID: 388114011
Matrix: Water
Collect Date: 18-DEC-15 07:40
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.280	+/-0.672	1.22	3.00	pCi/L		AXM6	01/12/16	1119	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	0.403	+/-0.403	0.651	1.00	pCi/L		CXP3	01/15/16	0855	1533727	2
The following Analytical Methods were performed:												
Method	Description							Analyst Comments				
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						92.6	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-02
Sample ID: 388114012
Matrix: Water
Collect Date: 18-DEC-15 08:25
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.00433	+/-0.793	1.49	3.00	pCi/L		AXM6	01/12/16	1119	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.652	+/-0.423	0.587	1.00	pCi/L		CXP3	01/15/16	0855	1533727	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						98.6	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: AL-10
Sample ID: 388114013
Matrix: Water
Collect Date: 18-DEC-15 09:20
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.796	+/-1.11	1.90	3.00	pCi/L		AXM6	01/12/16	1119	1534820	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.80	+/-0.650	0.710	1.00	pCi/L		CXP3	01/15/16	0855	1533727	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			88	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-09
Sample ID: 388114014
Matrix: Water
Collect Date: 18-DEC-15 10:20
Receive Date: 24-DEC-15
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		2.88	+/-1.07	1.40	3.00	pCi/L		AXM6	01/12/16	1119 1534820	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		2.21	+/-0.686	0.685	1.00	pCi/L		CXP3	01/15/16	0855 1533727	2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						95.9	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: January 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	MW-08	Project:	DHLA00112
Sample ID:	388114015	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	18-DEC-15 11:15		
Receive Date:	24-DEC-15		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		2.11	+/-1.07	1.55	3.00	pCi/L		AXM6	01/12/16	1119 1534820	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.24	+/-0.524	0.593	1.00	pCi/L		CXP3	01/15/16	0855 1533727	2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						90.7	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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QC Summary

Report Date: January 15, 2016

Page 1 of 2

DHL Analytical
2300 Double Creek Drive
Round Rock, Texas

Contact: Mr. John DuPont

Workorder: 388114

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1534820										
QC1203462760	388114008	DUP									
Radium-228	U	0.831	U	2.32	pCi/L	N/A		N/A	AXM6	01/12/16	11:19
	Uncertainty	+/-1.46		+/-1.61							
QC1203462761	LCS										
Radium-228	28.8			26.2	pCi/L		91	(75%-125%)		01/12/16	11:20
	Uncertainty			+/-2.41							
QC1203462759	MB										
Radium-228			U	-0.811	pCi/L					01/12/16	11:19
	Uncertainty			+/-0.782							
Rad Ra-226											
Batch	1533727										
QC1203459850	388117001	DUP									
Radium-226		1.20		2.19	pCi/L	58.1		(0% - 100%)	CXP3	01/15/16	09:30
	Uncertainty	+/-0.640		+/-0.755							
QC1203459852	LCS										
Radium-226	24.4			22.3	pCi/L		91.2	(75%-125%)		01/15/16	09:30
	Uncertainty			+/-1.81							
QC1203459849	MB										
Radium-226			U	0.371	pCi/L					01/15/16	09:30
	Uncertainty			+/-0.406							
QC1203459851	388117001	MS									
Radium-226	122	1.20		126	pCi/L		102	(75%-125%)		01/15/16	09:30
	Uncertainty	+/-0.640		+/-9.25							

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.

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QC Summary

Workorder: 388114

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
UI	Gamma Spectroscopy--Uncertain identification										
UJ	Gamma Spectroscopy--Uncertain identification										
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

There are no "Data Exception Reports" associated with this analytical report.

LUMINANT

DHL Analytical, Inc.

2300 Double Creek Drive

Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1512286

388114

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Subcontractor:

GEL Laboratories

PO Box 30712

Charleston, SC 29417

TEL: (843) 556-8171

FAX:

Acct #:

21-Dec-15

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E903.1	E904.0				
FGD-3	Aqueous	-01B	12/17/15 09:35 AM	500HDPEHNO3		1				
FGD-3	Aqueous	-01C	12/17/15 09:35 AM	500HDPEHNO3	1					
FGD-4	Aqueous	-02B	12/17/15 10:25 AM	500HDPEHNO3		1				
FGD-4	Aqueous	-02C	12/17/15 10:25 AM	500HDPEHNO3	1					
FGD-5	Aqueous	-03B	12/17/15 11:15 AM	500HDPEHNO3		1				
FGD-5	Aqueous	-03C	12/17/15 11:15 AM	500HDPEHNO3	1					
FGD-2	Aqueous	-04B	12/17/15 12:00 PM	500HDPEHNO3		1				
FGD-2	Aqueous	-04C	12/17/15 12:00 PM	500HDPEHNO3	1					
FGD-1	Aqueous	-05B	12/17/15 12:50 PM	500HDPEHNO3		1				
FGD-1	Aqueous	-05C	12/17/15 12:50 PM	500HDPEHNO3	1					
FGD-6	Aqueous	-06B	12/17/15 01:45 PM	500HDPEHNO3		1				
FGD-6	Aqueous	-06C	12/17/15 01:45 PM	500HDPEHNO3	1					
FGD-8	Aqueous	-07B	12/17/15 02:50 PM	500HDPEHNO3		1				
FGD-8	Aqueous	-07C	12/17/15 02:50 PM	500HDPEHNO3	1					
FGD-12	Aqueous	-08B	12/17/15 03:40 PM	500HDPEHNO3		1				
FGD-12	Aqueous	-08C	12/17/15 03:40 PM	500HDPEHNO3	1					
FGD-11	Aqueous	-09B	12/17/15 04:30 PM	500HDPEHNO3		1				
FGD-11	Aqueous	-09C	12/17/15 04:30 PM	500HDPEHNO3	1					

General Comments:

Please analyze these samples with a Standard Turnaround Time.
 Call John DuPont if you have questions.
 Quality Control Package Needed: Standard / _____
 EMAIL report to both cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: <u>[Signature]</u>	Date/Time: <u>12/21/15 1730</u>	Received by: <u>[Signature]</u>	Date/Time: <u>12/21/15 1730</u>
Relinquished by: <u>[Signature]</u>	Date/Time: _____	Received by: <u>[Signature]</u>	Date/Time: <u>12-24-15 0920</u>

DHL Analytical, Inc.

2300 Double Creek Drive

Round Rock, TX 78664

TEL: (512) 388-8222

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Work Order: 1512286

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Subcontractor:

GEL Laboratories

PO Box 30712

Charleston, SC 29417

TEL: (843) 556-8171

FAX:

Acct #:

21-Dec-15

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E903.1	E904.0				
MW-07	Aqueous	-10B	12/17/15 06:15 PM	500HDPEHNO3		1				
MW-07	Aqueous	-10C	12/17/15 06:15 PM	500HDPEHNO3	1					
MW-05	Aqueous	-11B	12/18/15 07:40 AM	500HDPEHNO3		1				
MW-05	Aqueous	-11C	12/18/15 07:40 AM	500HDPEHNO3	1					
MW-02	Aqueous	-12B	12/18/15 08:25 AM	500HDPEHNO3		1				
MW-02	Aqueous	-12C	12/18/15 08:25 AM	500HDPEHNO3	1					
AL-10	Aqueous	-13B	12/18/15 09:20 AM	500HDPEHNO3		1				
AL-10	Aqueous	-13C	12/18/15 09:20 AM	500HDPEHNO3	1					
MW-09	Aqueous	-14B	12/18/15 10:20 AM	500HDPEHNO3		1				
MW-09	Aqueous	-14C	12/18/15 10:20 AM	500HDPEHNO3	1					
MW-08	Aqueous	-15B	12/18/15 11:15 AM	500HDPEHNO3		1				
MW-08	Aqueous	-15C	12/18/15 11:15 AM	500HDPEHNO3	1					

General Comments:

Please analyze these samples with a Standard Turnaround Time.
 Call John DuPont if you have questions.
 Quality Control Package Needed: Standard / _____
 EMAIL report to both cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: <u>[Signature]</u>	Date/Time: <u>12/21/15 1733</u>	Received by: <u>[Signature]</u>	Date/Time: <u>12/21/15 1230</u>
Relinquished by: <u>[Signature]</u>	Date/Time: _____	Received by: <u>[Signature]</u>	Date/Time: <u>12-24-15 0920</u>



SAMPLE RECEIPT & REVIEW FORM

Client: DHL		SDG/AR/COC/Work Order: 388114	
Received By: mk		Date Received: 12-24-15	
Suspected Hazard Information		Yes	No
COC/Samples marked as radioactive?		☒	☐
Classified Radioactive II or III by RSO?		☒	☐
COC/Samples marked containing PCBs?		☒	☐
Package, COC, and/or Samples marked as beryllium or asbestos containing?		☒	☐
Shipped as a DOT Hazardous?		☒	☐
Samples identified as Foreign Soil?		☒	☐

*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

Maximum Net Counts Observed* (Observed Counts - Area Background Counts): **cpms**

If yes, Were swipes taken of sample containers < action levels?

If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.

Hazard Class Shipped: UN#:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	☒	☐	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	☒	☐	☐	Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius 20 C
2a Daily check performed and passed on IR temperature gun?	☒	☐	☐	Temperature Device Serial #: 138862962 Secondary Temperature Device Serial # (If applicable):
3 Chain of custody documents included with shipment?	☒	☐	☐	
4 Sample containers intact and sealed?	☒	☐	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	☒	☐	☐	Sample ID's, containers affected and observed pH:
6 Do Low Level Perchlorate samples have headspace as required?	☒	☐	☐	If Preservation added, Lot#: Sample ID's and containers affected:
7 VOA vials contain acid preservation?	☒	☐	☐	(If unknown, select No)
8 VOA vials free of headspace (defined as < 6mm bubble)?	☒	☐	☐	Sample ID's and containers affected:
9 Are Encore containers present?	☒	☐	☐	(If yes, immediately deliver to Volatiles laboratory)
10 Samples received within holding time?	☒	☐	☐	ID's and tests affected:
11 Sample ID's on COC match ID's on bottles?	☒	☐	☐	Sample ID's and containers affected:
12 Date & time on COC match date & time on bottles?	☒	☐	☐	Sample ID's affected:
13 Number of containers received match number indicated on COC?	☒	☐	☐	Sample ID's affected: 2 per ID
14 Are sample containers identifiable as GEL provided?	☒	☐	☐	
15 COC form is properly signed in relinquished/received sections?	☒	☐	☐	
16 Carrier and tracking number.	☒	☐	☐	Circle Applicable: FedEx Air <u>FedEx Ground</u> UPS Field Services Courier Other 7752 6232 9395

Comments (Use Continuation Form if needed):

List of current GEL Certifications as of 15 January 2016

State	Certification
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122016-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-19
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404



March 15, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Oak Grove CCR

Order No.: 1602130

Dear Will Vienne:

DHL Analytical, Inc. received 15 sample(s) on 2/11/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-15-15



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John Dupont

From: Sara Taube [Sara.Taube@pbw/llo.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 2/11/2016

Work Order Number 1602130

Received by JB

Checklist completed by [Signature] 2/11/2016

Signature

Date

Reviewed by [Signature]

Initials

2/11/2016

Date

Carrier name Hand Delivered

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐ 3.3 °C ; 0.9.0.2

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH<2 acceptable upon receipt? Yes ☒ No ☐ NA ☐ LOT # 8086

Adjusted? NO Checked by [Signature]

Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt? Yes ☐ No ☐ NA ☒ LOT #

Adjusted? _____ Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Lab Order: 1602130

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis
Sub-contract - Radium-228 and Radium-226 analyses by methods E904.0/SW8469320 Modified and E903.1 Modified. Analyzed at GEL Laboratory.

LOG IN

The samples were received and log-in performed on 2/11/16. A total of 15 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 2/23/16 (batch 73669) Boron was detected below the reporting limit in the method blank (MB-73669). All associated samples may be biased high. No further corrective actions were taken.

For Metals analysis performed on 2/23/16 (batch 73669) the matrix spike duplicate recovery was above control limits for Boron. This is flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 2/17/16 and 2/23/16 (batches 73669 & 73688) the RPDs for the serial dilutions were slightly above control limits for Boron. These are flagged accordingly. The PDSs were within control limits for this analyte. No further corrective actions were taken.

ANIONS ANALYSIS

For Anions analysis performed on 2/15/16 (batch 73678) the matrix spike duplicate recovery was slightly above control limits for Sulfate. This is flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Lab Order: 1602130

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1602130-01	FGD-11		02/10/16 09:25 AM	2/11/2016
1602130-02	FGD-12		02/10/16 10:00 AM	2/11/2016
1602130-03	FGD-8		02/10/16 11:25 AM	2/11/2016
1602130-04	FGD-1		02/10/16 12:00 PM	2/11/2016
1602130-05	FGD-5		02/10/16 01:05 PM	2/11/2016
1602130-06	FGD-2		02/10/16 01:50 PM	2/11/2016
1602130-07	FGD-3		02/10/16 02:50 PM	2/11/2016
1602130-08	FGD-6		02/10/16 04:15 PM	2/11/2016
1602130-09	FGD-4		02/10/16 04:50 PM	2/11/2016
1602130-10	MW-08		02/10/16 05:55 PM	2/11/2016
1602130-11	MW-07		02/11/16 07:45 AM	2/11/2016
1602130-12	MW-09		02/11/16 08:30 AM	2/11/2016
1602130-13	AL-10		02/11/16 09:05 AM	2/11/2016
1602130-14	MW-02		02/11/16 09:35 AM	2/11/2016
1602130-15	MW-05		02/11/16 10:45 AM	2/11/2016

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1602130-01A	FGD-11	02/10/16 09:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-11	02/10/16 09:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-11	02/10/16 09:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-11	02/10/16 09:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-01D	FGD-11	02/10/16 09:25 AM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-11	02/10/16 09:25 AM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-11	02/10/16 09:25 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-11	02/10/16 09:25 AM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-02A	FGD-12	02/10/16 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-12	02/10/16 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-12	02/10/16 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-02D	FGD-12	02/10/16 10:00 AM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-12	02/10/16 10:00 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-12	02/10/16 10:00 AM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-03A	FGD-8	02/10/16 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-8	02/10/16 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-8	02/10/16 11:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-8	02/10/16 11:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-03D	FGD-8	02/10/16 11:25 AM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-8	02/10/16 11:25 AM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-8	02/10/16 11:25 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-8	02/10/16 11:25 AM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-04A	FGD-1	02/10/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-1	02/10/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-1	02/10/16 12:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-04D	FGD-1	02/10/16 12:00 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-1	02/10/16 12:00 PM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-1	02/10/16 12:00 PM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1602130-05A	FGD-5	02/10/16 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-5	02/10/16 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-5	02/10/16 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-5	02/10/16 01:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-05D	FGD-5	02/10/16 01:05 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-5	02/10/16 01:05 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-5	02/10/16 01:05 PM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-5	02/10/16 01:05 PM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-06A	FGD-2	02/10/16 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-2	02/10/16 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-2	02/10/16 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-2	02/10/16 01:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-06D	FGD-2	02/10/16 01:50 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-2	02/10/16 01:50 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-2	02/10/16 01:50 PM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-2	02/10/16 01:50 PM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-07A	FGD-3	02/10/16 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-3	02/10/16 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-3	02/10/16 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-3	02/10/16 02:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-07D	FGD-3	02/10/16 02:50 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-3	02/10/16 02:50 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-3	02/10/16 02:50 PM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-3	02/10/16 02:50 PM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-08A	FGD-6	02/10/16 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-6	02/10/16 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-6	02/10/16 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-6	02/10/16 04:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1602130-08D	FGD-6	02/10/16 04:15 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-6	02/10/16 04:15 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-6	02/10/16 04:15 PM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-6	02/10/16 04:15 PM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-09A	FGD-4	02/10/16 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-4	02/10/16 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-4	02/10/16 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/15/16 09:11 AM	73669
	FGD-4	02/10/16 04:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-09D	FGD-4	02/10/16 04:50 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-4	02/10/16 04:50 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	FGD-4	02/10/16 04:50 PM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	FGD-4	02/10/16 04:50 PM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-10A	MW-08	02/10/16 05:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-08	02/10/16 05:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-08	02/10/16 05:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-08	02/10/16 05:55 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-10D	MW-08	02/10/16 05:55 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	MW-08	02/10/16 05:55 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	MW-08	02/10/16 05:55 PM	Aqueous	E300	Anion Preparation	02/15/16 10:20 AM	73677
	MW-08	02/10/16 05:55 PM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	MW-08	02/10/16 05:55 PM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-11A	MW-07	02/11/16 07:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-07	02/11/16 07:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-07	02/11/16 07:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-11D	MW-07	02/11/16 07:45 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	MW-07	02/11/16 07:45 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	MW-07	02/11/16 07:45 AM	Aqueous	M2540C	TDS Preparation	02/12/16 10:38 AM	73653
1602130-12A	MW-09	02/11/16 08:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1602130-12A	MW-09	02/11/16 08:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-09	02/11/16 08:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-09	02/11/16 08:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-12D	MW-09	02/11/16 08:30 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	MW-09	02/11/16 08:30 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	MW-09	02/11/16 08:30 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	MW-09	02/11/16 08:30 AM	Aqueous	M2540C	TDS Preparation	02/15/16 09:19 AM	73670
1602130-13A	AL-10	02/11/16 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	AL-10	02/11/16 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	AL-10	02/11/16 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	AL-10	02/11/16 09:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/19/16 08:28 AM	73748
1602130-13D	AL-10	02/11/16 09:05 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	AL-10	02/11/16 09:05 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	AL-10	02/11/16 09:05 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	AL-10	02/11/16 09:05 AM	Aqueous	M2540C	TDS Preparation	02/15/16 09:19 AM	73670
1602130-14A	MW-02	02/11/16 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-02	02/11/16 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-02	02/11/16 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-02	02/11/16 09:35 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/22/16 01:21 PM	73780
1602130-14D	MW-02	02/11/16 09:35 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	MW-02	02/11/16 09:35 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	MW-02	02/11/16 09:35 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	MW-02	02/11/16 09:35 AM	Aqueous	M2540C	TDS Preparation	02/15/16 09:19 AM	73670
1602130-15A	MW-05	02/11/16 10:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-05	02/11/16 10:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	02/16/16 09:04 AM	73688
	MW-05	02/11/16 10:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	02/22/16 01:21 PM	73780
1602130-15D	MW-05	02/11/16 10:45 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678
	MW-05	02/11/16 10:45 AM	Aqueous	E300	Anion Preparation	02/15/16 10:22 AM	73678

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1602130-15D	MW-05	02/11/16 10:45 AM	Aqueous	M4500-H+ B	pH Preparation	02/12/16 02:43 PM	73662
	MW-05	02/11/16 10:45 AM	Aqueous	M2540C	TDS Preparation	02/15/16 09:19 AM	73670

LUMINANT

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1602130-01A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 03:57 PM	CETAC2_HG_160219A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:19 PM	ICP-MS4_160216B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	10	02/17/16 12:15 PM	ICP-MS4_160217A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:28 PM	ICP-MS4_160223A
1602130-01D	FGD-11	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 11:45 AM	IC3_160215A
	FGD-11	Aqueous	E300	Anions by IC method - Water	73677	100	02/15/16 04:54 PM	IC3_160215A
	FGD-11	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:40 PM	TITRATOR_160212A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-02A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:00 PM	CETAC2_HG_160219A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:21 PM	ICP-MS4_160216B
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:30 PM	ICP-MS4_160223A
1602130-02D	FGD-12	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 12:06 PM	IC3_160215A
	FGD-12	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:43 PM	TITRATOR_160212A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-03A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:02 PM	CETAC2_HG_160219A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	50	02/17/16 12:17 PM	ICP-MS4_160217A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:32 PM	ICP-MS4_160223A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:23 PM	ICP-MS4_160216B
1602130-03D	FGD-8	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 12:26 PM	IC3_160215A
	FGD-8	Aqueous	E300	Anions by IC method - Water	73677	100	02/16/16 08:40 AM	IC3_160215A
	FGD-8	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:44 PM	TITRATOR_160212A
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-04A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:04 PM	CETAC2_HG_160219A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:25 PM	ICP-MS4_160216B
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:34 PM	ICP-MS4_160223A
1602130-04D	FGD-1	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 12:47 PM	IC3_160215A

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1602130-04D	FGD-1	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:47 PM	TITRATOR_160212A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-05A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:06 PM	CETAC2_HG_160219A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:27 PM	ICP-MS4_160216B
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	10	02/17/16 12:19 PM	ICP-MS4_160217A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:36 PM	ICP-MS4_160223A
1602130-05D	FGD-5	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 01:08 PM	IC3_160215A
	FGD-5	Aqueous	E300	Anions by IC method - Water	73677	10	02/16/16 09:04 AM	IC3_160215A
	FGD-5	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:48 PM	TITRATOR_160212A
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-06A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:09 PM	CETAC2_HG_160219A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:29 PM	ICP-MS4_160216B
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	10	02/17/16 12:21 PM	ICP-MS4_160217A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:38 PM	ICP-MS4_160223A
1602130-06D	FGD-2	Aqueous	E300	Anions by IC method - Water	73677	10	02/16/16 09:24 AM	IC3_160215A
	FGD-2	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 01:28 PM	IC3_160215A
	FGD-2	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:50 PM	TITRATOR_160212A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-07A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:11 PM	CETAC2_HG_160219A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:31 PM	ICP-MS4_160216B
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	10	02/17/16 12:23 PM	ICP-MS4_160217A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:40 PM	ICP-MS4_160223A
1602130-07D	FGD-3	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 01:49 PM	IC3_160215A
	FGD-3	Aqueous	E300	Anions by IC method - Water	73677	100	02/16/16 09:45 AM	IC3_160215A
	FGD-3	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:55 PM	TITRATOR_160212A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1602130-08A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:18 PM	CETAC2_HG_160219A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:50 PM	ICP-MS4_160216B
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	10	02/17/16 12:26 PM	ICP-MS4_160217A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:42 PM	ICP-MS4_160223A
1602130-08D	FGD-6	Aqueous	E300	Anions by IC method - Water	73677	10	02/16/16 10:06 AM	IC3_160215A
	FGD-6	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 02:10 PM	IC3_160215A
	FGD-6	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:57 PM	TITRATOR_160212A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-09A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:20 PM	CETAC2_HG_160219A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/16/16 12:52 PM	ICP-MS4_160216B
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	10	02/17/16 12:28 PM	ICP-MS4_160217A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73669	1	02/23/16 12:44 PM	ICP-MS4_160223A
1602130-09D	FGD-4	Aqueous	E300	Anions by IC method - Water	73677	1	02/16/16 10:26 AM	IC3_160215A
	FGD-4	Aqueous	E300	Anions by IC method - Water	73677	10	02/16/16 10:47 AM	IC3_160215A
	FGD-4	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 03:59 PM	TITRATOR_160212A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-10A	MW-08	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:22 PM	CETAC2_HG_160219A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/23/16 01:19 PM	ICP-MS4_160223A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	10	02/23/16 01:54 PM	ICP-MS4_160223A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/18/16 06:58 PM	ICP-MS4_160218A
1602130-10D	MW-08	Aqueous	E300	Anions by IC method - Water	73677	10	02/16/16 11:08 AM	IC3_160215A
	MW-08	Aqueous	E300	Anions by IC method - Water	73677	100	02/16/16 01:16 PM	IC3_160215A
	MW-08	Aqueous	E300	Anions by IC method - Water	73677	1	02/15/16 03:08 PM	IC3_160215A
	MW-08	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 04:01 PM	TITRATOR_160212A
	MW-08	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-11A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:25 PM	CETAC2_HG_160219A

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1602130-11A	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/18/16 07:02 PM	ICP-MS4_160218A
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/23/16 01:23 PM	ICP-MS4_160223A
1602130-11D	MW-07	Aqueous	E300	Anions by IC method - Water	73678	1	02/15/16 12:21 PM	IC2_160215A
	MW-07	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 04:03 PM	TITRATOR_160212A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	73653	1	02/15/16 08:39 AM	WC_160212C
1602130-12A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:27 PM	CETAC2_HG_160219A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/18/16 07:04 PM	ICP-MS4_160218A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	10	02/23/16 02:07 PM	ICP-MS4_160223A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/23/16 01:25 PM	ICP-MS4_160223A
1602130-12D	MW-09	Aqueous	E300	Anions by IC method - Water	73678	1	02/15/16 12:36 PM	IC2_160215A
	MW-09	Aqueous	E300	Anions by IC method - Water	73678	10	02/15/16 01:50 PM	IC2_160215A
	MW-09	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 04:06 PM	TITRATOR_160212A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	73670	1	02/16/16 08:40 AM	WC_160215A
1602130-13A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	73748	1	02/19/16 04:29 PM	CETAC2_HG_160219A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/18/16 07:06 PM	ICP-MS4_160218A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/23/16 01:27 PM	ICP-MS4_160223A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	10	02/23/16 02:09 PM	ICP-MS4_160223A
1602130-13D	AL-10	Aqueous	E300	Anions by IC method - Water	73678	1	02/15/16 12:51 PM	IC2_160215A
	AL-10	Aqueous	E300	Anions by IC method - Water	73678	10	02/15/16 02:04 PM	IC2_160215A
	AL-10	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 04:09 PM	TITRATOR_160212A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	73670	1	02/16/16 08:40 AM	WC_160215A
1602130-14A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	73780	1	02/23/16 01:53 PM	CETAC2_HG_160223A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/23/16 01:29 PM	ICP-MS4_160223A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	5	02/23/16 02:11 PM	ICP-MS4_160223A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/18/16 07:08 PM	ICP-MS4_160218A
1602130-14D	MW-02	Aqueous	E300	Anions by IC method - Water	73678	1	02/15/16 01:05 PM	IC2_160215A

Lab Order: 1602130
Client: Pastor, Behling & Wheeler
Project: Oak Grove CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1602130-14D	MW-02	Aqueous	E300	Anions by IC method - Water	73678	10	02/15/16 02:19 PM	IC2_160215A
	MW-02	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 04:12 PM	TITRATOR_160212A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	73670	1	02/16/16 08:40 AM	WC_160215A
1602130-15A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	73780	1	02/23/16 01:56 PM	CETAC2_HG_160223A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/18/16 07:10 PM	ICP-MS4_160218A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	73688	1	02/23/16 01:31 PM	ICP-MS4_160223A
1602130-15D	MW-05	Aqueous	E300	Anions by IC method - Water	73678	1	02/15/16 01:20 PM	IC2_160215A
	MW-05	Aqueous	E300	Anions by IC method - Water	73678	10	02/15/16 02:34 PM	IC2_160215A
	MW-05	Aqueous	M4500-H+ B	pH	73662	1	02/12/16 04:15 PM	TITRATOR_160212A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	73670	1	02/16/16 08:40 AM	WC_160215A

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-11
Lab ID: 1602130-01
Collection Date: 02/10/16 09:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 03:57 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:19 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:19 PM
Barium	0.271	0.00300	0.0100		mg/L	1	02/16/16 12:19 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:19 PM
Boron	0.0912	0.0100	0.0300		mg/L	1	02/23/16 12:28 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:19 PM
Calcium	71.5	1.00	3.00		mg/L	10	02/17/16 12:15 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:19 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/16/16 12:19 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:19 PM
Lithium	0.0110	0.00500	0.0100		mg/L	1	02/16/16 12:19 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:19 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:19 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:19 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	438	30.0	100		mg/L	100	02/15/16 04:54 PM
Fluoride	0.548	0.100	0.400		mg/L	1	02/15/16 11:45 AM
Sulfate	37.5	1.00	3.00		mg/L	1	02/15/16 11:45 AM
PH		M4500-H+ B		Analyst: JL			
pH	6.82	0	0		pH Units@21°C	1	02/12/16 03:40 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1160	10.0	10.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-12
Lab ID: 1602130-02
Collection Date: 02/10/16 10:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:00 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:21 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:21 PM
Barium	0.0664	0.00300	0.0100		mg/L	1	02/16/16 12:21 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:21 PM
Boron	0.0650	0.0100	0.0300		mg/L	1	02/23/16 12:30 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:21 PM
Calcium	11.1	0.100	0.300		mg/L	1	02/16/16 12:21 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:21 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/16/16 12:21 PM
Lead	0.000339	0.000300	0.00100	J	mg/L	1	02/16/16 12:21 PM
Lithium	0.0211	0.00500	0.0100		mg/L	1	02/16/16 12:21 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:21 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:21 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:21 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	13.5	0.300	1.00		mg/L	1	02/15/16 12:06 PM
Fluoride	0.157	0.100	0.400	J	mg/L	1	02/15/16 12:06 PM
Sulfate	14.1	1.00	3.00		mg/L	1	02/15/16 12:06 PM
PH		M4500-H+ B		Analyst: JL			
pH	6.62	0	0		pH Units@20.9°C	1	02/12/16 03:43 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	179	10.0	10.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-8
Lab ID: 1602130-03
Collection Date: 02/10/16 11:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:02 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:23 PM
Arsenic	0.0115	0.00200	0.00500		mg/L	1	02/16/16 12:23 PM
Barium	0.892	0.00300	0.0100		mg/L	1	02/16/16 12:23 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:23 PM
Boron	0.0721	0.0100	0.0300		mg/L	1	02/23/16 12:32 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:23 PM
Calcium	296	5.00	15.0		mg/L	50	02/17/16 12:17 PM
Chromium	0.00234	0.00200	0.00500	J	mg/L	1	02/16/16 12:23 PM
Cobalt	0.00609	0.00300	0.00500		mg/L	1	02/16/16 12:23 PM
Lead	0.000406	0.000300	0.00100	J	mg/L	1	02/16/16 12:23 PM
Lithium	0.0104	0.00500	0.0100		mg/L	1	02/16/16 12:23 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:23 PM
Selenium	0.00231	0.00200	0.00500	J	mg/L	1	02/16/16 12:23 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:23 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	1910	30.0	100		mg/L	100	02/16/16 08:40 AM
Fluoride	0.331	0.100	0.400	J	mg/L	1	02/15/16 12:26 PM
Sulfate	110	1.00	3.00		mg/L	1	02/15/16 12:26 PM
PH							
M4500-H+ B				Analyst: JL			
pH	6.38	0	0		pH Units@20.8°C	1	02/12/16 03:44 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	5100	50.0	50.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-1
Lab ID: 1602130-04
Collection Date: 02/10/16 12:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:04 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:25 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:25 PM
Barium	0.0315	0.00300	0.0100		mg/L	1	02/16/16 12:25 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:25 PM
Boron	0.0539	0.0100	0.0300		mg/L	1	02/23/16 12:34 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:25 PM
Calcium	11.4	0.100	0.300		mg/L	1	02/16/16 12:25 PM
Chromium	0.00437	0.00200	0.00500	J	mg/L	1	02/16/16 12:25 PM
Cobalt	0.00330	0.00300	0.00500	J	mg/L	1	02/16/16 12:25 PM
Lead	0.000379	0.000300	0.00100	J	mg/L	1	02/16/16 12:25 PM
Lithium	0.0314	0.00500	0.0100		mg/L	1	02/16/16 12:25 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:25 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:25 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:25 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	38.9	0.300	1.00		mg/L	1	02/15/16 12:47 PM
Fluoride	0.383	0.100	0.400	J	mg/L	1	02/15/16 12:47 PM
Sulfate	36.3	1.00	3.00		mg/L	1	02/15/16 12:47 PM
PH		M4500-H+ B		Analyst: JL			
pH	6.54	0	0		pH Units@21°C	1	02/12/16 03:47 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	235	10.0	10.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-5
Lab ID: 1602130-05
Collection Date: 02/10/16 01:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:06 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:27 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:27 PM
Barium	0.261	0.00300	0.0100		mg/L	1	02/16/16 12:27 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:27 PM
Boron	0.0926	0.0100	0.0300		mg/L	1	02/23/16 12:36 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:27 PM
Calcium	89.5	1.00	3.00		mg/L	10	02/17/16 12:19 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:27 PM
Cobalt	0.00441	0.00300	0.00500		mg/L	1	02/16/16 12:27 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:27 PM
Lithium	0.158	0.00500	0.0100		mg/L	1	02/16/16 12:27 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:27 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:27 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:27 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	356	3.00	10.0		mg/L	10	02/16/16 09:04 AM
Fluoride	0.495	0.100	0.400		mg/L	1	02/15/16 01:08 PM
Sulfate	62.8	1.00	3.00		mg/L	1	02/15/16 01:08 PM
PH		M4500-H+ B		Analyst: JL			
pH	6.58	0	0		pH Units@21°C	1	02/12/16 03:48 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	942	10.0	10.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-2
Lab ID: 1602130-06
Collection Date: 02/10/16 01:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:09 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:29 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:29 PM
Barium	0.133	0.00300	0.0100		mg/L	1	02/16/16 12:29 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:29 PM
Boron	0.0885	0.0100	0.0300		mg/L	1	02/23/16 12:38 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:29 PM
Calcium	44.6	1.00	3.00		mg/L	10	02/17/16 12:21 PM
Chromium	0.00426	0.00200	0.00500	J	mg/L	1	02/16/16 12:29 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/16/16 12:29 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:29 PM
Lithium	0.0221	0.00500	0.0100		mg/L	1	02/16/16 12:29 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:29 PM
Selenium	0.0181	0.00200	0.00500		mg/L	1	02/16/16 12:29 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:29 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	250	3.00	10.0		mg/L	10	02/16/16 09:24 AM
Fluoride	0.315	0.100	0.400	J	mg/L	1	02/15/16 01:28 PM
Sulfate	98.9	1.00	3.00		mg/L	1	02/15/16 01:28 PM
PH		M4500-H+ B		Analyst: JL			
pH	6.89	0	0		pH Units@21.2°C	1	02/12/16 03:50 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	750	10.0	10.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-3
Lab ID: 1602130-07
Collection Date: 02/10/16 02:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:11 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:31 PM
Arsenic	0.00206	0.00200	0.00500	J	mg/L	1	02/16/16 12:31 PM
Barium	0.0407	0.00300	0.0100		mg/L	1	02/16/16 12:31 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:31 PM
Boron	0.214	0.0100	0.0300		mg/L	1	02/23/16 12:40 PM
Cadmium	0.00343	0.000300	0.00100		mg/L	1	02/16/16 12:31 PM
Calcium	91.4	1.00	3.00		mg/L	10	02/17/16 12:23 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:31 PM
Cobalt	0.0417	0.00300	0.00500		mg/L	1	02/16/16 12:31 PM
Lead	0.000438	0.000300	0.00100	J	mg/L	1	02/16/16 12:31 PM
Lithium	0.130	0.00500	0.0100		mg/L	1	02/16/16 12:31 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:31 PM
Selenium	0.0907	0.00200	0.00500		mg/L	1	02/16/16 12:31 PM
Thallium	0.00150	0.000500	0.00150	J	mg/L	1	02/16/16 12:31 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	326	30.0	100		mg/L	100	02/16/16 09:45 AM
Fluoride	0.740	0.100	0.400		mg/L	1	02/15/16 01:49 PM
Sulfate	474	100	300		mg/L	100	02/16/16 09:45 AM
PH		M4500-H+ B		Analyst: JL			
pH	6.41	0	0		pH Units@21.5°C	1	02/12/16 03:55 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1610	50.0	50.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-6
Lab ID: 1602130-08
Collection Date: 02/10/16 04:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:18 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:50 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:50 PM
Barium	0.132	0.00300	0.0100		mg/L	1	02/16/16 12:50 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:50 PM
Boron	0.0791	0.0100	0.0300		mg/L	1	02/23/16 12:42 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:50 PM
Calcium	31.8	1.00	3.00		mg/L	10	02/17/16 12:26 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:50 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/16/16 12:50 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:50 PM
Lithium	0.0105	0.00500	0.0100		mg/L	1	02/16/16 12:50 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:50 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:50 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:50 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	252	3.00	10.0		mg/L	10	02/16/16 10:06 AM
Fluoride	0.354	0.100	0.400	J	mg/L	1	02/15/16 02:10 PM
Sulfate	59.5	1.00	3.00		mg/L	1	02/15/16 02:10 PM
PH							
M4500-H+ B				Analyst: JL			
pH	6.91	0	0		pH Units@21.4°C	1	02/12/16 03:57 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	940	50.0	50.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: FGD-4
Lab ID: 1602130-09
Collection Date: 02/10/16 04:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
		SW7470A				Analyst: AH	
Mercury	0.000288	0.0000800	0.000200		mg/L	1	02/19/16 04:20 PM
TRACE METALS: ICP-MS - WATER							
		SW6020A				Analyst: RO	
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/16/16 12:52 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:52 PM
Barium	0.113	0.00300	0.0100		mg/L	1	02/16/16 12:52 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:52 PM
Boron	0.0581	0.0100	0.0300		mg/L	1	02/23/16 12:44 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:52 PM
Calcium	45.3	1.00	3.00		mg/L	10	02/17/16 12:28 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:52 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/16/16 12:52 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/16/16 12:52 PM
Lithium	0.0419	0.00500	0.0100		mg/L	1	02/16/16 12:52 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:52 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/16/16 12:52 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/16/16 12:52 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: AV	
Chloride	195	3.00	10.0		mg/L	10	02/16/16 10:47 AM
Fluoride	0.320	0.100	0.400	J	mg/L	1	02/16/16 10:26 AM
Sulfate	45.0	1.00	3.00		mg/L	1	02/16/16 10:26 AM
PH							
		M4500-H+ B				Analyst: JL	
pH	6.74	0	0		pH Units@21.4°C	1	02/12/16 03:59 PM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: AJH	
Total Dissolved Solids (Residue, Filterable)	653	10.0	10.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: MW-08
Lab ID: 1602130-10
Collection Date: 02/10/16 05:55 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:22 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/18/16 06:58 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 06:58 PM
Barium	0.0885	0.00300	0.0100		mg/L	1	02/18/16 06:58 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 06:58 PM
Boron	0.0695	0.0100	0.0300		mg/L	1	02/23/16 01:19 PM
Cadmium	0.000360	0.000300	0.00100	J	mg/L	1	02/18/16 06:58 PM
Calcium	140	1.00	3.00		mg/L	10	02/23/16 01:54 PM
Chromium	0.00715	0.00200	0.00500		mg/L	1	02/18/16 06:58 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/18/16 06:58 PM
Lead	0.000437	0.000300	0.00100	J	mg/L	1	02/18/16 06:58 PM
Lithium	0.113	0.00500	0.0100		mg/L	1	02/18/16 06:58 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 06:58 PM
Selenium	0.0337	0.00200	0.00500		mg/L	1	02/18/16 06:58 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/18/16 06:58 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	612	30.0	100		mg/L	100	02/16/16 01:16 PM
Fluoride	0.175	0.100	0.400	J	mg/L	1	02/15/16 03:08 PM
Sulfate	170	10.0	30.0		mg/L	10	02/16/16 11:08 AM
PH		M4500-H+ B		Analyst: JL			
pH	6.37	0	0		pH Units@21.4°C	1	02/12/16 04:01 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1530	50.0	50.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: MW-07
Lab ID: 1602130-11
Collection Date: 02/11/16 07:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:25 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/18/16 07:02 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:02 PM
Barium	0.0397	0.00300	0.0100		mg/L	1	02/18/16 07:02 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:02 PM
Boron	0.0547	0.0100	0.0300		mg/L	1	02/23/16 01:23 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:02 PM
Calcium	13.3	0.100	0.300		mg/L	1	02/18/16 07:02 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:02 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/18/16 07:02 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:02 PM
Lithium	0.0213	0.00500	0.0100		mg/L	1	02/18/16 07:02 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:02 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:02 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/18/16 07:02 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	28.9	0.300	1.00		mg/L	1	02/15/16 12:21 PM
Fluoride	0.276	0.100	0.400	J	mg/L	1	02/15/16 12:21 PM
Sulfate	25.3	1.00	3.00		mg/L	1	02/15/16 12:21 PM
PH							
M4500-H+ B				Analyst: JL			
pH	6.84	0	0		pH Units@21.5°C	1	02/12/16 04:03 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	283	10.0	10.0		mg/L	1	02/15/16 08:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: MW-09
Lab ID: 1602130-12
Collection Date: 02/11/16 08:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:27 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/18/16 07:04 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:04 PM
Barium	0.0991	0.00300	0.0100		mg/L	1	02/18/16 07:04 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:04 PM
Boron	0.0720	0.0100	0.0300		mg/L	1	02/23/16 01:25 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:04 PM
Calcium	38.4	1.00	3.00		mg/L	10	02/23/16 02:07 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:04 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/18/16 07:04 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:04 PM
Lithium	0.0559	0.00500	0.0100		mg/L	1	02/18/16 07:04 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:04 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:04 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/18/16 07:04 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	158	3.00	10.0		mg/L	10	02/15/16 01:50 PM
Fluoride	0.152	0.100	0.400	J	mg/L	1	02/15/16 12:36 PM
Sulfate	80.0	1.00	3.00		mg/L	1	02/15/16 12:36 PM
PH							
M4500-H+ B				Analyst: JL			
pH	6.32	0	0		pH Units@21.7°C	1	02/12/16 04:06 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	445	10.0	10.0		mg/L	1	02/16/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: AL-10
Lab ID: 1602130-13
Collection Date: 02/11/16 09:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/19/16 04:29 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/18/16 07:06 PM
Arsenic	0.00218	0.00200	0.00500	J	mg/L	1	02/18/16 07:06 PM
Barium	0.143	0.00300	0.0100		mg/L	1	02/18/16 07:06 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:06 PM
Boron	0.0637	0.0100	0.0300		mg/L	1	02/23/16 01:27 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:06 PM
Calcium	48.6	1.00	3.00		mg/L	10	02/23/16 02:09 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:06 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/18/16 07:06 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:06 PM
Lithium	0.00719	0.00500	0.0100	J	mg/L	1	02/18/16 07:06 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:06 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:06 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/18/16 07:06 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	108	3.00	10.0		mg/L	10	02/15/16 02:04 PM
Fluoride	0.197	0.100	0.400	J	mg/L	1	02/15/16 12:51 PM
Sulfate	34.9	1.00	3.00		mg/L	1	02/15/16 12:51 PM
PH							
M4500-H+ B				Analyst: JL			
pH	7.08	0	0		pH Units@21.8°C	1	02/12/16 04:09 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	599	10.0	10.0		mg/L	1	02/16/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: MW-02
Lab ID: 1602130-14
Collection Date: 02/11/16 09:35 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/23/16 01:53 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/18/16 07:08 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:08 PM
Barium	0.0933	0.00300	0.0100		mg/L	1	02/18/16 07:08 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:08 PM
Boron	0.0853	0.0100	0.0300		mg/L	1	02/23/16 01:29 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:08 PM
Calcium	25.4	0.500	1.50		mg/L	5	02/23/16 02:11 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:08 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/18/16 07:08 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:08 PM
Lithium	0.0681	0.00500	0.0100		mg/L	1	02/18/16 07:08 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:08 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:08 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/18/16 07:08 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	83.5	3.00	10.0		mg/L	10	02/15/16 02:19 PM
Fluoride	0.229	0.100	0.400	J	mg/L	1	02/15/16 01:05 PM
Sulfate	34.0	1.00	3.00		mg/L	1	02/15/16 01:05 PM
PH							
M4500-H+ B				Analyst: JL			
pH	6.60	0	0		pH Units@21.9°C	1	02/12/16 04:12 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	320	10.0	10.0		mg/L	1	02/16/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 15-Mar-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove CCR
Project No: 5164D
Lab Order: 1602130

Client Sample ID: MW-05
Lab ID: 1602130-15
Collection Date: 02/11/16 10:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	02/23/16 01:56 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	02/18/16 07:10 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:10 PM
Barium	0.0390	0.00300	0.0100		mg/L	1	02/18/16 07:10 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:10 PM
Boron	0.0447	0.0100	0.0300		mg/L	1	02/23/16 01:31 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:10 PM
Calcium	14.0	0.100	0.300		mg/L	1	02/18/16 07:10 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:10 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	02/18/16 07:10 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	02/18/16 07:10 PM
Lithium	0.0459	0.00500	0.0100		mg/L	1	02/18/16 07:10 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:10 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	02/18/16 07:10 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	02/18/16 07:10 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	59.7	3.00	10.0		mg/L	10	02/15/16 02:34 PM
Fluoride	0.397	0.100	0.400	J	mg/L	1	02/15/16 01:20 PM
Sulfate	11.9	1.00	3.00		mg/L	1	02/15/16 01:20 PM
PH							
M4500-H+ B				Analyst: JL			
pH	6.76	0	0		pH Units@22°C	1	02/12/16 04:15 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	235	10.0	10.0		mg/L	1	02/16/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1602130

Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160219A

The QC data in batch 73748 applies to the following samples: 1602130-01A, 1602130-02A, 1602130-03A, 1602130-04A, 1602130-05A, 1602130-06A, 1602130-07A, 1602130-08A, 1602130-09A, 1602130-10A, 1602130-11A, 1602130-12A, 1602130-13A

Sample ID	MB-73748	Batch ID:	73748	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_160219A	Analysis Date:	2/19/2016 3:30:39 PM	Prep Date:	2/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-73748		Batch ID:	73748		TestNo:	SW7470A		Units:	mg/L	
SampType:	LCS		Run ID:	CETAC2_HG_160219A		Analysis Date:	2/19/2016 3:37:28 PM		Prep Date:	2/19/2016	
Analyte	Result		RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00196 0.000200 0.00200 0 98.0 85 115

Sample ID	LCSD-73748	Batch ID:	73748	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCSD	Run ID:	CETAC2_HG_160219A	Analysis Date:	2/19/2016 3:39:44 PM	Prep Date:	2/19/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00187 0.000200 0.00200 0 93.5 85 115 4.70 15

Sample ID	1602095-01A SD	Batch ID:	73748	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160219A	Analysis Date:	2/19/2016 3:44:15 PM	Prep Date:	2/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1602095-01A PDS		Batch ID:	73748		TestNo:	SW7470A		Units:	mg/L	
SampType:	PDS		Run ID:	CETAC2_HG_160219A		Analysis Date:	2/19/2016 3:46:31 PM		Prep Date:	2/19/2016	
Analyte	Result		RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00237 0.000200 0.00250 0 94.8 85 115

Sample ID	1602095-01A MS			Batch ID:	73748		TestNo:	SW7470A		Units:	mg/L	
SampType:	MS			Run ID:	CETAC2_HG_160219A		Analysis Date:	2/19/2016 3:48:47 PM		Prep Date:	2/19/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00196 0.000200 0.00200 0 98.0 80 120

Sample ID	1602095-01A MSD			Batch ID:	73748		TestNo:	SW7470A		Units:	mg/L	
SampType:	MSD			Run ID:	CETAC2_HG_160219A		Analysis Date:	2/19/2016 3:51:03 PM		Prep Date:	2/19/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00192 0.000200 0.00200 0 96.0 80 120 2.06 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160219A

Sample ID	ICV-160219	Batch ID:	R84257	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_160219A	Analysis Date:	2/19/2016 2:20:12 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00388	0.000200	0.00400	0	97.0	90	110			

Sample ID	CCV2-160219	Batch ID:	R84257	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160219A	Analysis Date:	2/19/2016 3:26:05 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00195	0.000200	0.00200	0	97.5	90	110			

Sample ID	CCV3-160219	Batch ID:	R84257	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_160219A	Analysis Date:	2/19/2016 4:13:44 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00196	0.000200	0.00200	0	98.0	90	110			

Sample ID	CCV4-160219	Batch ID:	R84257	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160219A	Analysis Date:	2/19/2016 4:38:48 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	90	110			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160223A

The QC data in batch 73780 applies to the following samples: 1602130-14A, 1602130-15A

Sample ID	MB-73780	Batch ID:	73780	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 1:47:10 PM	Prep Date:	2/22/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-73780	Batch ID:	73780	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 1:49:26 PM	Prep Date:	2/22/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00198 0.000200 0.00200 0 99.0 85 115

Sample ID	LCSD-73780	Batch ID:	73780	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 1:51:42 PM	Prep Date:	2/22/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00197 0.000200 0.00200 0 98.5 85 115 0.506 15

Sample ID	1602183-03B SD	Batch ID:	73780	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 2:23:29 PM	Prep Date:	2/22/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1602183-03B PDS	Batch ID:	73780	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 2:25:45 PM	Prep Date:	2/22/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00230 0.000200 0.00250 0 92.0 85 115

Sample ID	1602183-03B MS	Batch ID:	73780	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 2:28:01 PM	Prep Date:	2/22/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00184 0.000200 0.00200 0 92.0 80 120

Sample ID	1602183-03B MSD	Batch ID:	73780	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 2:30:17 PM	Prep Date:	2/22/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00181 0.000200 0.00200 0 90.5 80 120 1.64 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160223A

Sample ID	ICV-160223	Batch ID:	R84299	TestNo:	SW7470A	Units:	mg/L
SampType:	ICV	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 1:42:36 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Mercury 0.00380 0.000200 0.00400 0 95.0 90 110

Sample ID	CCV1-160223	Batch ID:	R84299	TestNo:	SW7470A	Units:	mg/L
SampType:	CCV	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 2:16:39 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Mercury 0.00198 0.000200 0.00200 0 99.0 90 110

Sample ID	CCV2-160223	Batch ID:	R84299	TestNo:	SW7470A	Units:	mg/L
SampType:	CCV	Run ID:	CETAC2_HG_160223A	Analysis Date:	2/23/2016 2:53:02 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Mercury 0.00196 0.000200 0.00200 0 98.0 90 110

Qualifiers: B Analyte detected in the associated Method Blank
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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160216B

The QC data in batch 73669 applies to the following samples: 1602130-01A, 1602130-02A, 1602130-03A, 1602130-04A, 1602130-05A, 1602130-06A, 1602130-07A, 1602130-08A, 1602130-09A

Sample ID	MB-73669		Batch ID:	73669		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160216B		Analysis Date:	2/16/2016 12:03:00 PM		Prep Date:	2/15/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID	LCS-73669		Batch ID:	73669		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_160216B		Analysis Date:	2/16/2016 12:05:00 PM		Prep Date:	2/15/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.200	0.00250	0.200	0	100	80	120			
Arsenic	0.200	0.00500	0.200	0	100	80	120			
Barium	0.195	0.0100	0.200	0	97.4	80	120			
Beryllium	0.199	0.00100	0.200	0	99.7	80	120			
Cadmium	0.198	0.00100	0.200	0	99.0	80	120			
Calcium	4.72	0.300	5.00	0	94.4	80	120			
Chromium	0.197	0.00500	0.200	0	98.6	80	120			
Cobalt	0.204	0.00500	0.200	0	102	80	120			
Lead	0.196	0.00100	0.200	0	97.9	80	120			
Lithium	0.199	0.0100	0.200	0	99.7	80	120			
Molybdenum	0.190	0.00500	0.200	0	94.8	80	120			
Selenium	0.205	0.00500	0.200	0	102	80	120			
Thallium	0.194	0.00150	0.200	0	96.9	80	120			

Sample ID	LCSD-73669	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:07:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.202	0.00250	0.200	0	101	80	120	0.937	15	
Arsenic	0.198	0.00500	0.200	0	99.1	80	120	0.896	15	
Barium	0.195	0.0100	0.200	0	97.4	80	120	0.022	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160216B

Sample ID	LCSD-73669	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:07:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.199	0.00100	0.200	0	99.7	80	120	0.012	15	
Cadmium	0.198	0.00100	0.200	0	98.8	80	120	0.201	15	
Calcium	4.68	0.300	5.00	0	93.6	80	120	0.781	15	
Chromium	0.196	0.00500	0.200	0	98.2	80	120	0.438	15	
Cobalt	0.200	0.00500	0.200	0	100	80	120	1.93	15	
Lead	0.197	0.00100	0.200	0	98.5	80	120	0.582	15	
Lithium	0.199	0.0100	0.200	0	99.3	80	120	0.381	15	
Molybdenum	0.191	0.00500	0.200	0	95.4	80	120	0.558	15	
Selenium	0.201	0.00500	0.200	0	101	80	120	1.67	15	
Thallium	0.196	0.00150	0.200	0	98.1	80	120	1.23	15	

Sample ID	1602141-03A SD	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:13:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0.00714				0	10	
Barium	0.0861	0.0500	0	0.0868				0.762	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	<0.0250	0.0500	0	0.00818				0	10	
Molybdenum	<0.0100	0.0250	0	0.00497				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1602141-03A PDS	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:33:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.199	0.00250	0.200	0	99.3	80	120			
Arsenic	0.200	0.00500	0.200	0.00714	96.4	80	120			
Barium	0.274	0.0100	0.200	0.0868	93.8	80	120			
Beryllium	0.191	0.00100	0.200	0	95.6	80	120			
Cadmium	0.186	0.00100	0.200	0	93.1	80	120			
Chromium	0.194	0.00500	0.200	0	97.0	80	120			
Cobalt	0.196	0.00500	0.200	0	97.9	80	120			
Lead	0.200	0.00100	0.200	0	100	80	120			
Lithium	0.196	0.0100	0.200	0.00818	93.7	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160216B

Sample ID	1602141-03A PDS	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:33:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.191	0.00500	0.200	0.00497	93.1	80	120			
Selenium	0.193	0.00500	0.200	0	96.6	80	120			
Thallium	0.197	0.00150	0.200	0	98.7	80	120			

Sample ID	1602141-03A MS	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:35:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	80	120			
Arsenic	0.206	0.00500	0.200	0.00714	99.6	80	120			
Barium	0.284	0.0100	0.200	0.0868	98.8	80	120			
Beryllium	0.199	0.00100	0.200	0	99.7	80	120			
Cadmium	0.195	0.00100	0.200	0	97.4	80	120			
Calcium	52.2	0.300	5.00	47.0	103	80	120			
Chromium	0.195	0.00500	0.200	0	97.7	80	120			
Cobalt	0.198	0.00500	0.200	0	99.2	80	120			
Lead	0.200	0.00100	0.200	0	100	80	120			
Lithium	0.205	0.0100	0.200	0.00818	98.5	80	120			
Molybdenum	0.196	0.00500	0.200	0.00497	95.5	80	120			
Selenium	0.197	0.00500	0.200	0	98.4	80	120			
Thallium	0.200	0.00150	0.200	0	100	80	120			

Sample ID	1602141-03A MSD	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:37:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	80	120	0.024	15	
Arsenic	0.208	0.00500	0.200	0.00714	100	80	120	0.579	15	
Barium	0.288	0.0100	0.200	0.0868	101	80	120	1.39	15	
Beryllium	0.204	0.00100	0.200	0	102	80	120	2.37	15	
Cadmium	0.196	0.00100	0.200	0	97.8	80	120	0.419	15	
Calcium	52.6	0.300	5.00	47.0	112	80	120	0.855	15	
Chromium	0.198	0.00500	0.200	0	99.0	80	120	1.32	15	
Cobalt	0.201	0.00500	0.200	0	101	80	120	1.43	15	
Lead	0.202	0.00100	0.200	0	101	80	120	0.967	15	
Lithium	0.207	0.0100	0.200	0.00818	99.6	80	120	1.11	15	
Molybdenum	0.198	0.00500	0.200	0.00497	96.8	80	120	1.25	15	
Selenium	0.200	0.00500	0.200	0	99.8	80	120	1.41	15	
Thallium	0.200	0.00150	0.200	0	100	80	120	0.080	15	

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160216B

Sample ID	ICV-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 11:14:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.102	0.00250	0.100	0	102	90	110			
Arsenic	0.101	0.00500	0.100	0	101	90	110			
Barium	0.102	0.0100	0.100	0	102	90	110			
Beryllium	0.105	0.00100	0.100	0	105	90	110			
Cadmium	0.102	0.00100	0.100	0	102	90	110			
Calcium	2.27	0.300	2.50	0	90.8	90	110			
Chromium	0.107	0.00500	0.100	0	107	90	110			
Cobalt	0.105	0.00500	0.100	0	105	90	110			
Lead	0.103	0.00100	0.100	0	103	90	110			
Lithium	0.101	0.0100	0.100	0	101	90	110			
Molybdenum	0.0979	0.00500	0.100	0	97.9	90	110			
Selenium	0.104	0.00500	0.100	0	104	90	110			
Thallium	0.101	0.00150	0.100	0	101	90	110			

Sample ID	LCVL-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 11:20:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00202	0.00250	0.00200	0	101	70	130			
Arsenic	0.00512	0.00500	0.00500	0	102	70	130			
Barium	0.00506	0.0100	0.00500	0	101	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Calcium	0.0978	0.300	0.100	0	97.8	70	130			
Chromium	0.00520	0.00500	0.00500	0	104	70	130			
Cobalt	0.00530	0.00500	0.00500	0	106	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Lithium	0.0116	0.0100	0.0100	0	116	70	130			
Molybdenum	0.00495	0.00500	0.00500	0	99.1	70	130			
Selenium	0.00510	0.00500	0.00500	0	102	70	130			
Thallium	0.00101	0.00150	0.00100	0	101	70	130			

Sample ID	CCV1-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 11:53:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.203	0.00250	0.200	0	101	90	110			
Arsenic	0.203	0.00500	0.200	0	102	90	110			
Barium	0.201	0.0100	0.200	0	100	90	110			
Beryllium	0.203	0.00100	0.200	0	101	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160216B

Sample ID	CCV1-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 11:53:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.73	0.300	5.00	0	94.6	90	110			
Chromium	0.203	0.00500	0.200	0	101	90	110			
Cobalt	0.207	0.00500	0.200	0	104	90	110			
Lead	0.202	0.00100	0.200	0	101	90	110			
Lithium	0.199	0.0100	0.200	0	99.4	90	110			
Molybdenum	0.194	0.00500	0.200	0	97.1	90	110			
Selenium	0.207	0.00500	0.200	0	103	90	110			
Thallium	0.200	0.00150	0.200	0	100	90	110			

Sample ID	LCVL1-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 11:58:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00220	0.00250	0.00200	0	110	70	130			
Arsenic	0.00516	0.00500	0.00500	0	103	70	130			
Barium	0.00511	0.0100	0.00500	0	102	70	130			
Beryllium	0.000976	0.00100	0.00100	0	97.6	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Calcium	0.0983	0.300	0.100	0	98.3	70	130			
Chromium	0.00528	0.00500	0.00500	0	106	70	130			
Cobalt	0.00528	0.00500	0.00500	0	106	70	130			
Lead	0.00102	0.00100	0.00100	0	102	70	130			
Lithium	0.0110	0.0100	0.0100	0	110	70	130			
Molybdenum	0.00486	0.00500	0.00500	0	97.2	70	130			
Selenium	0.00512	0.00500	0.00500	0	102	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV2-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:39:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.202	0.00250	0.200	0	101	90	110			
Arsenic	0.207	0.00500	0.200	0	103	90	110			
Barium	0.202	0.0100	0.200	0	101	90	110			
Beryllium	0.205	0.00100	0.200	0	102	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Calcium	4.74	0.300	5.00	0	94.8	90	110			
Chromium	0.203	0.00500	0.200	0	102	90	110			
Cobalt	0.211	0.00500	0.200	0	106	90	110			
Lead	0.206	0.00100	0.200	0	103	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160216B

Sample ID	CCV2-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:39:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.197	0.00500	0.200	0	98.4	90	110			
Selenium		0.213	0.00500	0.200	0	107	90	110			
Thallium		0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL2-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 12:45:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00209	0.00250	0.00200	0	105	70	130			
Arsenic	0.00530	0.00500	0.00500	0	106	70	130			
Barium	0.00498	0.0100	0.00500	0	99.6	70	130			
Beryllium	0.00127	0.00100	0.00100	0	127	70	130			
Cadmium	0.000968	0.00100	0.00100	0	96.8	70	130			
Calcium	0.0938	0.300	0.100	0	93.8	70	130			
Chromium	0.00526	0.00500	0.00500	0	105	70	130			
Cobalt	0.00525	0.00500	0.00500	0	105	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Lithium	0.0109	0.0100	0.0100	0	109	70	130			
Molybdenum	0.00487	0.00500	0.00500	0	97.4	70	130			
Selenium	0.00531	0.00500	0.00500	0	106	70	130			
Thallium	0.00101	0.00150	0.00100	0	101	70	130			

Sample ID	CCV3-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 1:09:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.202	0.00250	0.200	0	101	90	110			
Arsenic	0.207	0.00500	0.200	0	103	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.198	0.00100	0.200	0	98.9	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Chromium	0.200	0.00500	0.200	0	99.9	90	110			
Cobalt	0.211	0.00500	0.200	0	106	90	110			
Lead	0.204	0.00100	0.200	0	102	90	110			
Lithium	0.195	0.0100	0.200	0	97.7	90	110			
Molybdenum	0.192	0.00500	0.200	0	95.9	90	110			
Selenium	0.210	0.00500	0.200	0	105	90	110			
Thallium	0.203	0.00150	0.200	0	102	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160216B

Sample ID	LCVL3-160216	Batch ID:	R84200	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160216B	Analysis Date:	2/16/2016 1:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00205	0.00250	0.00200	0	102	70	130			
Arsenic	0.00528	0.00500	0.00500	0	106	70	130			
Barium	0.00495	0.0100	0.00500	0	99.0	70	130			
Beryllium	0.00115	0.00100	0.00100	0	115	70	130			
Cadmium	0.000973	0.00100	0.00100	0	97.3	70	130			
Chromium	0.00513	0.00500	0.00500	0	103	70	130			
Cobalt	0.00519	0.00500	0.00500	0	104	70	130			
Lead	0.000946	0.00100	0.00100	0	94.6	70	130			
Lithium	0.0111	0.0100	0.0100	0	111	70	130			
Molybdenum	0.00492	0.00500	0.00500	0	98.3	70	130			
Selenium	0.00502	0.00500	0.00500	0	100	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160217A

The QC data in batch 73669 applies to the following samples: 1602130-01A, 1602130-02A, 1602130-03A, 1602130-04A, 1602130-05A, 1602130-06A, 1602130-07A, 1602130-08A, 1602130-09A

Sample ID	1602141-03A SD	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 12:13:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.21	1.50	0	1.94				13.0	10	R
Calcium	46.3	15.0	0	46.3				0.013	10	

Sample ID	1602141-03A PDS	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 12:34:00 PM	Prep Date:	2/15/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		3.80	0.300	2.00	1.94	93.0	80	120			
Calcium		90.0	3.00	50.0	46.3	87.5	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160217A

Sample ID	ICV-160217	Batch ID:	R84221	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 10:44:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.105	0.0300	0.100	0	105	90	110			
Calcium	2.27	0.300	2.50	0	90.7	90	110			

Sample ID	LCVL-160217	Batch ID:	R84221	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 10:49:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0238	0.0300	0.0200	0	119	70	130			
Calcium	0.0924	0.300	0.100	0	92.4	70	130			

Sample ID	CCV2-160217	Batch ID:	R84221	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 11:57:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.189	0.0300	0.200	0	94.3	90	110			
Calcium	4.74	0.300	5.00	0	94.8	90	110			

Sample ID	LCVL2-160217	Batch ID:	R84221	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 12:07:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0193	0.0300	0.0200	0	96.3	70	130			
Calcium	0.0967	0.300	0.100	0	96.7	70	130			

Sample ID	CCV3-160217	Batch ID:	R84221	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 12:36:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.203	0.0300	0.200	0	102	90	110			
Calcium	4.75	0.300	5.00	0	95.0	90	110			

Sample ID	LCVL3-160217	Batch ID:	R84221	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160217A	Analysis Date:	2/17/2016 12:45:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0215	0.0300	0.0200	0	108	70	130			
Calcium	0.0955	0.300	0.100	0	95.5	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160218A

The QC data in batch 73688 applies to the following samples: 1602130-10A, 1602130-11A, 1602130-12A, 1602130-13A, 1602130-14A, 1602130-15A

Sample ID MB-73688	Batch ID: 73688	TestNo: SW6020A	Units: mg/L
SampType: MBLK	Run ID: ICP-MS4_160218A	Analysis Date: 2/18/2016 6:50:00 PM	Prep Date: 2/16/2016

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

Sample ID LCS-73688	Batch ID: 73688	TestNo: SW6020A	Units: mg/L
SampType: LCS	Run ID: ICP-MS4_160218A	Analysis Date: 2/18/2016 6:52:00 PM	Prep Date: 2/16/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	80	120			
Arsenic	0.203	0.00500	0.200	0	102	80	120			
Barium	0.199	0.0100	0.200	0	99.6	80	120			
Beryllium	0.220	0.00100	0.200	0	110	80	120			
Cadmium	0.203	0.00100	0.200	0	101	80	120			
Calcium	4.99	0.300	5.00	0	99.7	80	120			
Chromium	0.212	0.00500	0.200	0	106	80	120			
Cobalt	0.213	0.00500	0.200	0	106	80	120			
Lead	0.201	0.00100	0.200	0	100	80	120			
Lithium	0.223	0.0100	0.200	0	112	80	120			
Molybdenum	0.196	0.00500	0.200	0	98.2	80	120			
Selenium	0.205	0.00500	0.200	0	103	80	120			
Thallium	0.203	0.00150	0.200	0	101	80	120			

Sample ID LCSD-73688	Batch ID: 73688	TestNo: SW6020A	Units: mg/L
SampType: LCSD	Run ID: ICP-MS4_160218A	Analysis Date: 2/18/2016 6:54:00 PM	Prep Date: 2/16/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	100	80	120	1.45	15	
Arsenic	0.201	0.00500	0.200	0	101	80	120	0.963	15	
Barium	0.195	0.0100	0.200	0	97.3	80	120	2.36	15	
Beryllium	0.218	0.00100	0.200	0	109	80	120	1.08	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160218A

Sample ID	LCSD-73688	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 6:54:00 PM	Prep Date:	2/16/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.200	0.00100	0.200	0	99.8	80	120	1.50	15	
Calcium	4.91	0.300	5.00	0	98.2	80	120	1.57	15	
Chromium	0.208	0.00500	0.200	0	104	80	120	1.82	15	
Cobalt	0.211	0.00500	0.200	0	105	80	120	0.956	15	
Lead	0.204	0.00100	0.200	0	102	80	120	1.63	15	
Lithium	0.220	0.0100	0.200	0	110	80	120	1.62	15	
Molybdenum	0.191	0.00500	0.200	0	95.7	80	120	2.60	15	
Selenium	0.204	0.00500	0.200	0	102	80	120	0.907	15	
Thallium	0.206	0.00150	0.200	0	103	80	120	1.66	15	

Sample ID	1602130-10A SD	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L				
SampType:	SD	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 7:00:00 PM	Prep Date:	2/16/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0904	0.0500	0	0.0885				2.11	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0.000360				0	10	
Chromium	<0.0100	0.0250	0	0.00715				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0.000437				0	10	
Lithium	0.115	0.0500	0	0.113				1.55	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	0.0350	0.0250	0	0.0337				3.71	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1602130-10A PDS			Batch ID:	73688			TestNo:	SW6020A			Units:	mg/L		
SampType:	PDS			Run ID:	ICP-MS4_160218A			Analysis Date:	2/18/2016 7:12:00 PM			Prep Date:	2/16/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Antimony	0.201	0.00250	0.200	0	100	80	120			
Arsenic	0.196	0.00500	0.200	0	97.8	80	120			
Barium	0.284	0.0100	0.200	0.0885	97.6	80	120			
Beryllium	0.203	0.00100	0.200	0	101	80	120			
Cadmium	0.192	0.00100	0.200	0.000360	96.0	80	120			
Chromium	0.211	0.00500	0.200	0.00715	102	80	120			
Cobalt	0.195	0.00500	0.200	0	97.6	80	120			
Lead	0.199	0.00100	0.200	0.000437	99.4	80	120			
Lithium	0.308	0.0100	0.200	0.113	97.4	80	120			
Molybdenum	0.197	0.00500	0.200	0	98.3	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160218A

Sample ID	1602130-10A PDS	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 7:12:00 PM	Prep Date:	2/16/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Selenium	0.226	0.00500	0.200	0.0337	96.1	80	120			
Thallium	0.199	0.00150	0.200	0	99.5	80	120			

Sample ID	1602130-10A MS			Batch ID:	73688		TestNo:	SW6020A		Units:	mg/L	
SampType:	MS			Run ID:	ICP-MS4_160218A		Analysis Date:	2/18/2016 7:14:00 PM		Prep Date:	2/16/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.207	0.00250	0.200	0	104	80	120			
Arsenic	0.201	0.00500	0.200	0	101	80	120			
Barium	0.294	0.0100	0.200	0.0885	103	80	120			
Beryllium	0.210	0.00100	0.200	0	105	80	120			
Cadmium	0.198	0.00100	0.200	0.000360	99.0	80	120			
Calcium	147	0.300	5.00	141	115	80	120			
Chromium	0.217	0.00500	0.200	0.00715	105	80	120			
Cobalt	0.199	0.00500	0.200	0	99.6	80	120			
Lead	0.203	0.00100	0.200	0.000437	101	80	120			
Lithium	0.322	0.0100	0.200	0.113	105	80	120			
Molybdenum	0.204	0.00500	0.200	0	102	80	120			
Selenium	0.232	0.00500	0.200	0.0337	99.0	80	120			
Thallium	0.206	0.00150	0.200	0	103	80	120			

Sample ID	1602130-10A MSD	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 7:16:00 PM	Prep Date:	2/16/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.210	0.00250	0.200	0	105	80	120	1.10	15	
Arsenic	0.200	0.00500	0.200	0	100	80	120	0.464	15	
Barium	0.295	0.0100	0.200	0.0885	103	80	120	0.362	15	
Beryllium	0.213	0.00100	0.200	0	106	80	120	1.29	15	
Cadmium	0.202	0.00100	0.200	0.000360	101	80	120	1.77	15	
Calcium	146	0.300	5.00	141	99.1	80	120	0.541	15	
Chromium	0.219	0.00500	0.200	0.00715	106	80	120	1.06	15	
Cobalt	0.196	0.00500	0.200	0	97.8	80	120	1.80	15	
Lead	0.204	0.00100	0.200	0.000437	102	80	120	0.516	15	
Lithium	0.319	0.0100	0.200	0.113	103	80	120	1.17	15	
Molybdenum	0.207	0.00500	0.200	0	103	80	120	1.38	15	
Selenium	0.231	0.00500	0.200	0.0337	98.6	80	120	0.299	15	
Thallium	0.205	0.00150	0.200	0	102	80	120	0.593	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160218A

Sample ID	ICV-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 4:47:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.101	0.00250	0.100	0	101	90	110			
Arsenic	0.100	0.00500	0.100	0	100	90	110			
Barium	0.100	0.0100	0.100	0	100	90	110			
Beryllium	0.0986	0.00100	0.100	0	98.6	90	110			
Cadmium	0.0992	0.00100	0.100	0	99.2	90	110			
Calcium	2.33	0.300	2.50	0	93.3	90	110			
Chromium	0.104	0.00500	0.100	0	104	90	110			
Cobalt	0.104	0.00500	0.100	0	104	90	110			
Lead	0.0995	0.00100	0.100	0	99.5	90	110			
Lithium	0.0956	0.0100	0.100	0	95.6	90	110			
Molybdenum	0.0963	0.00500	0.100	0	96.3	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			
Thallium	0.0993	0.00150	0.100	0	99.3	90	110			

Sample ID	LCVL-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 4:51:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00202	0.00250	0.00200	0	101	70	130			
Arsenic	0.00510	0.00500	0.00500	0	102	70	130			
Barium	0.00510	0.0100	0.00500	0	102	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Calcium	0.112	0.300	0.100	0	112	70	130			
Chromium	0.00544	0.00500	0.00500	0	109	70	130			
Cobalt	0.00538	0.00500	0.00500	0	108	70	130			
Lead	0.00109	0.00100	0.00100	0	109	70	130			
Lithium	0.0103	0.0100	0.0100	0	103	70	130			
Molybdenum	0.00495	0.00500	0.00500	0	98.9	70	130			
Selenium	0.00528	0.00500	0.00500	0	106	70	130			
Thallium	0.00106	0.00150	0.00100	0	106	70	130			

Sample ID	CCV3-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 6:42:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.206	0.00250	0.200	0	103	90	110			
Arsenic	0.201	0.00500	0.200	0	100	90	110			
Barium	0.197	0.0100	0.200	0	98.7	90	110			
Beryllium	0.215	0.00100	0.200	0	108	90	110			
Cadmium	0.201	0.00100	0.200	0	101	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160218A

Sample ID	CCV3-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 6:42:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.05	0.300	5.00	0	101	90	110			
Chromium	0.207	0.00500	0.200	0	104	90	110			
Cobalt	0.207	0.00500	0.200	0	103	90	110			
Lead	0.201	0.00100	0.200	0	101	90	110			
Lithium	0.216	0.0100	0.200	0	108	90	110			
Molybdenum	0.195	0.00500	0.200	0	97.5	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			
Thallium	0.203	0.00150	0.200	0	102	90	110			

Sample ID	LCVL3-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 6:46:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00221	0.00250	0.00200	0	111	70	130			
Arsenic	0.00513	0.00500	0.00500	0	103	70	130			
Barium	0.00514	0.0100	0.00500	0	103	70	130			
Beryllium	0.00111	0.00100	0.00100	0	110	70	130			
Cadmium	0.00105	0.00100	0.00100	0	105	70	130			
Calcium	0.0973	0.300	0.100	0	97.3	70	130			
Chromium	0.00542	0.00500	0.00500	0	108	70	130			
Cobalt	0.00533	0.00500	0.00500	0	107	70	130			
Lead	0.00127	0.00100	0.00100	0	127	70	130			
Lithium	0.0114	0.0100	0.0100	0	114	70	130			
Molybdenum	0.00512	0.00500	0.00500	0	102	70	130			
Selenium	0.00508	0.00500	0.00500	0	102	70	130			
Thallium	0.00107	0.00150	0.00100	0	107	70	130			

Sample ID	CCV4-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 7:18:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.205	0.00250	0.200	0	103	90	110			
Arsenic	0.203	0.00500	0.200	0	102	90	110			
Barium	0.197	0.0100	0.200	0	98.3	90	110			
Beryllium	0.214	0.00100	0.200	0	107	90	110			
Cadmium	0.200	0.00100	0.200	0	100	90	110			
Calcium	5.15	0.300	5.00	0	103	90	110			
Chromium	0.209	0.00500	0.200	0	104	90	110			
Cobalt	0.212	0.00500	0.200	0	106	90	110			
Lead	0.201	0.00100	0.200	0	101	90	110			
Lithium	0.216	0.0100	0.200	0	108	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160218A

Sample ID	CCV4-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 7:18:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.195	0.00500	0.200	0	97.4	90	110			
Selenium	0.206	0.00500	0.200	0	103	90	110			
Thallium	0.202	0.00150	0.200	0	101	90	110			

Sample ID	LCVL4-160218	Batch ID:	R84234	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160218A	Analysis Date:	2/18/2016 7:22:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Arsenic	0.00524	0.00500	0.00500	0	105	70	130			
Barium	0.00515	0.0100	0.00500	0	103	70	130			
Beryllium	0.00104	0.00100	0.00100	0	104	70	130			
Cadmium	0.000997	0.00100	0.00100	0	99.7	70	130			
Calcium	0.0995	0.300	0.100	0	99.5	70	130			
Chromium	0.00543	0.00500	0.00500	0	109	70	130			
Cobalt	0.00545	0.00500	0.00500	0	109	70	130			
Lead	0.00117	0.00100	0.00100	0	117	70	130			
Lithium	0.0114	0.0100	0.0100	0	114	70	130			
Molybdenum	0.00512	0.00500	0.00500	0	102	70	130			
Selenium	0.00539	0.00500	0.00500	0	108	70	130			
Thallium	0.00105	0.00150	0.00100	0	105	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160223A

The QC data in batch 73669 applies to the following samples: 1602130-01A, 1602130-02A, 1602130-03A, 1602130-04A, 1602130-05A, 1602130-06A, 1602130-07A, 1602130-08A, 1602130-09A

Sample ID	MB-73669		Batch ID:	73669		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160223A		Analysis Date:	2/23/2016 12:20:00 PM		Prep Date:	2/15/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.0132 0.0300

Sample ID	LCS-73669		Batch ID:	73669		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_160223A		Analysis Date:	2/23/2016 12:22:00 PM		Prep Date:	2/15/2016	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron 0.206 0.0300 0.200 0 103 80 120

Sample ID	LCSD-73669	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 12:24:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.208 0.0300 0.200 0 104 80 120 0.620 15

Sample ID	1602141-03A MS	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 2:21:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 2.19 0.300 0.200 1.95 119 80 120

Sample ID	1602141-03A MSD	Batch ID:	73669	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 2:23:00 PM	Prep Date:	2/15/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 2.28 0.300 0.200 1.95 162 80 120 3.77 15 S

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160223A

The QC data in batch 73688 applies to the following samples: 1602130-10A, 1602130-11A, 1602130-12A, 1602130-13A, 1602130-14A, 1602130-15A

Sample ID	MB-73688	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 1:09:00 PM	Prep Date:	2/16/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID	LCS-73688		Batch ID:	73688		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_160223A		Analysis Date:	2/23/2016 1:11:00 PM		Prep Date:	2/16/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.211 0.0300 0.200 0 105 80 120

Sample ID	LCSD-73688	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 1:13:00 PM	Prep Date:	2/16/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.212 0.0300 0.200 0 106 80 120 0.669 15

Sample ID	1602130-10A SD		Batch ID:	73688		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD		Run ID:	ICP-MS4_160223A		Analysis Date:	2/23/2016 1:21:00 PM		Prep Date:	2/16/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.0852 0.150 0 0.0695 20.3 10 R

Sample ID	1602130-10A PDS		Batch ID:	73688		TestNo:	SW6020A		Units:	mg/L		
SampType:	PDS		Run ID:	ICP-MS4_160223A		Analysis Date:	2/23/2016 1:33:00 PM		Prep Date:	2/16/2016		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.263 0.0300 0.200 0.0695 97.0 80 120

Sample ID	1602130-10A MS	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 1:35:00 PM	Prep Date:	2/16/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.277 0.0300 0.200 0.0695 104 80 120

Sample ID	1602130-10A MSD	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 1:37:00 PM	Prep Date:	2/16/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.285 0.0300 0.200 0.0695 108 80 120 2.95 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160223A

Sample ID	1602130-10A SD			Batch ID:	73688		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_160223A		Analysis Date:	2/23/2016 1:56:00 PM		Prep Date:	2/16/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	141	15.0	0	140				0.669	10	

Sample ID	1602130-10A PDS	Batch ID:	73688	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 2:13:00 PM	Prep Date:	2/16/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	182	3.00	50.0	140	84.8	80	120			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160223A

Sample ID	ICV-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 12:05:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.100	0.0300	0.100	0	100	90	110
Calcium	2.31	0.300	2.50	0	92.5	90	110

Sample ID	LCVL-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 12:13:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.0221	0.0300	0.0200	0	110	70	130
Calcium	0.0987	0.300	0.100	0	98.7	70	130

Sample ID	CCV1-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 12:54:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.197	0.0300	0.200	0	98.6	90	110

Sample ID	LCVL1-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 1:00:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.0219	0.0300	0.0200	0	109	70	130

Sample ID	CCV2-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 1:43:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.201	0.0300	0.200	0	100	90	110
Calcium	4.88	0.300	5.00	0	97.6	90	110

Sample ID	LCVL2-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 1:49:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.0217	0.0300	0.0200	0	109	70	130
Calcium	0.108	0.300	0.100	0	108	70	130

Sample ID	CCV3-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 2:29:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.203	0.0300	0.200	0	102	90	110

Qualifiers: B Analyte detected in the associated Method Blank
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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160223A

Sample ID	CCV3-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 2:29:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.87	0.300	5.00	0	97.4	90	110			

Sample ID	LCVL3-160223	Batch ID:	R84297	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160223A	Analysis Date:	2/23/2016 2:36:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0205	0.0300	0.0200	0	103	70	130			
Calcium	0.100	0.300	0.100	0	100	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_160215A

The QC data in batch 73678 applies to the following samples: 1602130-11D, 1602130-12D, 1602130-13D, 1602130-14D, 1602130-15D

Sample ID	MB-73678	Batch ID:	73678	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC2_160215A	Analysis Date:	2/15/2016 11:18:21 AM	Prep Date:	2/15/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-73678	Batch ID:	73678	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC2_160215A	Analysis Date:	2/15/2016 11:32:57 AM	Prep Date:	2/15/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	9.75	1.00	10.00	0	97.5	90	110			
Fluoride	3.93	0.400	4.000	0	98.2	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	LCSD-73678	Batch ID:	73678	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC2_160215A	Analysis Date:	2/15/2016 11:47:34 AM	Prep Date:	2/15/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	9.81	1.00	10.00	0	98.1	90	110	0.640	20	
Fluoride	4.02	0.400	4.000	0	101	90	110	2.36	20	
Sulfate	31.7	3.00	30.00	0	106	90	110	0.479	20	

Sample ID	1602130-15DMS	Batch ID:	73678	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_160215A	Analysis Date:	2/15/2016 2:48:43 PM	Prep Date:	2/15/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	264	10.0	200.0	59.65	102	90	110			
Fluoride	207	4.00	200.0	0	103	90	110			
Sulfate	230	30.0	200.0	12.57	109	90	110			

Sample ID	1602130-15DMSD	Batch ID:	73678	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_160215A	Analysis Date:	2/15/2016 3:03:20 PM	Prep Date:	2/15/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	266	10.0	200.0	59.65	103	90	110	1.03	20	
Fluoride	210	4.00	200.0	0	105	90	110	1.72	20	
Sulfate	234	30.0	200.0	12.57	111	90	110	1.58	20	S

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_160215A

Sample ID	ICV-160215	Batch ID:	R84186	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_160215A	Analysis Date:	2/15/2016 10:35:09 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.2	1.00	25.00	0	96.9	90	110			
Fluoride	9.81	0.400	10.00	0	98.1	90	110			
Sulfate	77.3	3.00	75.00	0	103	90	110			

Sample ID	CCV1-160215	Batch ID:	R84186	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_160215A	Analysis Date:	2/15/2016 3:29:21 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.69	1.00	10.00	0	96.9	90	110			
Fluoride	4.10	0.400	4.000	0	103	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_160215A

The QC data in batch 73677 applies to the following samples: 1602130-01D, 1602130-02D, 1602130-03D, 1602130-04D, 1602130-05D, 1602130-06D, 1602130-07D, 1602130-08D, 1602130-09D, 1602130-10D

Sample ID	MB-73677		Batch ID:	73677		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC3_160215A		Analysis Date:	2/15/2016 10:40:29 AM		Prep Date:	2/15/2016	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-73677			Batch ID:	73677		TestNo:	E300		Units:	mg/L	
SampType:	LCS			Run ID:	IC3_160215A		Analysis Date:	2/15/2016 11:04:00 AM		Prep Date:	2/15/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.66	1.00	10.00	0	96.6	90	110			
Fluoride	4.40	0.400	4.000	0	110	90	110			
Sulfate	32.1	3.00	30.00	0	107	90	110			

Sample ID	LCSD-73677			Batch ID:	73677		TestNo:	E300		Units:	mg/L	
SampType:	LCSD			Run ID:	IC3_160215A		Analysis Date:	2/15/2016 11:24:41 AM		Prep Date:	2/15/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.64	1.00	10.00	0	96.4	90	110	0.192	20	
Fluoride	4.30	0.400	4.000	0	107	90	110	2.29	20	
Sulfate	32.1	3.00	30.00	0	107	90	110	0.143	20	

Sample ID	1602130-01DMS			Batch ID:	73677		TestNo:	E300		Units:	mg/L	
SampType:	MS			Run ID:	IC3_160215A		Analysis Date:	2/15/2016 5:17:44 PM		Prep Date:	2/15/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	2410	100	2000	437.7	98.4	90	110			
Fluoride	1980	40.0	2000	0	98.9	90	110			
Sulfate	2160	300	2000	0	108	90	110			

Sample ID	1602130-01DMSD			Batch ID:	73677			TestNo:	E300			Units:	mg/L		
SampType:	MSD			Run ID:	IC3_160215A			Analysis Date:	2/16/2016 12:53:06 PM			Prep Date:	2/15/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Chloride	2390	100	2000	437.7	97.8	90	110	0.464	20	
Fluoride	1980	40.0	2000	0	98.8	90	110	0.121	20	
Sulfate	2130	300	2000	0	106	90	110	1.36	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_160215A

Sample ID	ICV-160215	Batch ID:	R84202	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC3_160215A	Analysis Date:	2/15/2016 9:38:16 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.6	90	110			
Fluoride	10.3	0.400	10.00	0	103	90	110			
Sulfate	76.9	3.00	75.00	0	102	90	110			

Sample ID	CCV1-160215	Batch ID:	R84202	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_160215A	Analysis Date:	2/15/2016 3:57:30 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.73	1.00	10.00	0	97.3	90	110			
Fluoride	4.23	0.400	4.000	0	106	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	CCV2-160215	Batch ID:	R84202	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_160215A	Analysis Date:	2/16/2016 11:49:20 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.66	1.00	10.00	0	96.6	90	110			
Fluoride	4.15	0.400	4.000	0	104	90	110			
Sulfate	31.0	3.00	30.00	0	103	90	110			

Sample ID	CCV3-160215	Batch ID:	R84202	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_160215A	Analysis Date:	2/16/2016 2:02:16 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.53	1.00	10.00	0	95.3	90	110			
Fluoride	4.23	0.400	4.000	0	106	90	110			
Sulfate	30.8	3.00	30.00	0	103	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160212A

The QC data in batch 73662 applies to the following samples: 1602130-01D, 1602130-02D, 1602130-03D, 1602130-04D, 1602130-05D, 1602130-06D, 1602130-07D, 1602130-08D, 1602130-09D, 1602130-10D, 1602130-11D, 1602130-12D, 1602130-13D, 1602130-14D, 1602130-15D

Sample ID	1602130-06D-DUP	Batch ID:	73662	TestNo:	M4500-H+ B	Units:	pH Units@21.4°C
SampType:	DUP	Run ID:	TITRATOR_160212A	Analysis Date:	2/12/2016 3:52:00 PM	Prep Date:	2/12/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.90	0	0	6.890		0.145 5

Sample ID	1602130-15D-DUP	Batch ID:	73662	TestNo:	M4500-H+ B	Units:	pH Units@21.8°C
SampType:	DUP	Run ID:	TITRATOR_160212A	Analysis Date:	2/12/2016 4:25:00 PM	Prep Date:	2/12/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.76	0	0	6.760		0 5

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160212A

Sample ID	ICV-160212	Batch ID:	R84145	TestNo:	M4500-H+ B	Units:	pH Units@22.4°C			
SampType:	ICV	Run ID:	TITRATOR_160212A	Analysis Date:	2/12/2016 3:31:00 PM	Prep Date:	2/12/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	9.98	0	10.00	0	99.8	99	101			

Sample ID	CCV1-160212	Batch ID:	R84145	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C			
SampType:	CCV	Run ID:	TITRATOR_160212A	Analysis Date:	2/12/2016 3:53:00 PM	Prep Date:	2/12/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	7.02	0	7.000	0	100	97.1	102.9			

Sample ID	CCV2-160212	Batch ID:	R84145	TestNo:	M4500-H+ B	Units:	pH Units@21.8°C			
SampType:	CCV	Run ID:	TITRATOR_160212A	Analysis Date:	2/12/2016 4:26:00 PM	Prep Date:	2/12/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	7.02	0	7.000	0	100	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160212C

The QC data in batch 73653 applies to the following samples: 1602130-01D, 1602130-02D, 1602130-03D, 1602130-04D, 1602130-05D, 1602130-06D, 1602130-07D, 1602130-08D, 1602130-09D, 1602130-10D, 1602130-11D

Sample ID	MB-73653		Batch ID:	73653		TestNo:	M2540C		Units:	mg/L	
SampType:	MBLK		Run ID:	WC_160212C		Analysis Date:	2/15/2016 8:39:00 AM		Prep Date:	2/12/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-73653		Batch ID:	73653		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS		Run ID:	WC_160212C		Analysis Date:	2/15/2016 8:39:00 AM		Prep Date:	2/12/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 764 10.0 745.6 0 102 90 113

Sample ID	1602109-05D-DUP		Batch ID:	73653		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_160212C		Analysis Date:	2/15/2016 8:39:00 AM		Prep Date:	2/12/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2490 50.0 0 2565 3.17 5

Sample ID	1602130-03D-DUP		Batch ID:	73653		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_160212C		Analysis Date:	2/15/2016 8:39:00 AM		Prep Date:	2/12/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 5120 50.0 0 5100 0.294 5

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1602130
Project: Oak Grove CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160215A

The QC data in batch 73670 applies to the following samples: 1602130-12D, 1602130-13D, 1602130-14D, 1602130-15D

Sample ID	MB-73670	Batch ID:	73670	TestNo:	M2540C	Units:	mg/L				
SampType:	MBLK	Run ID:	WC_160215A	Analysis Date:	2/16/2016 8:40:00 AM	Prep Date:	2/15/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-73670	Batch ID:	73670	TestNo:	M2540C	Units:	mg/L				
SampType:	LCS	Run ID:	WC_160215A	Analysis Date:	2/16/2016 8:40:00 AM	Prep Date:	2/15/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 724 10.0 745.6 0 97.1 90 113

Sample ID	1602122-01D-DUP	Batch ID:	73670	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_160215A	Analysis Date:	2/16/2016 8:40:00 AM	Prep Date:	2/15/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3550 50.0 0 3650 2.78 5

Sample ID	1602144-03D-DUP	Batch ID:	73670	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_160215A	Analysis Date:	2/16/2016 8:40:00 AM	Prep Date:	2/15/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 4680 50.0 0 4515 3.59 5

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 NELAC certified



March 15, 2016

Mr. John DuPont
DHL Analytical
2300 Double Creek Drive
Round Rock, Texas 78664

Re: Routine Analysis
Work Order: 391437

Dear Mr. DuPont:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 16, 2016. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4707.

Sincerely,

Anna Day
Project Manager

Purchase Order: 14243
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

DHLA002 DHL Analytical

Client SDG: 391437 GEL Work Order: 391437

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Anna Day.

Reviewed by



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	FGD-11	Project:	DHLA00112
Sample ID:	391437001	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	10-FEB-16 09:25		
Receive Date:	16-FEB-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		2.64	+/-1.17	1.62	3.00	pCi/L		AXM6	03/11/16	1302 1547123	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.39	+/-0.413	0.401	1.00	pCi/L		CXP3	03/15/16	0720 1545935	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-12
Sample ID: 391437002
Matrix: Water
Collect Date: 10-FEB-16 10:00
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.460	+/-0.867	1.53	3.00	pCi/L		AXM6	03/11/16	1302	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.771	+/-0.367	0.462	1.00	pCi/L		CXP3	03/15/16	0720	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery	Test					Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"							90.8	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-08
Sample ID: 391437003
Matrix: Water
Collect Date: 10-FEB-16 11:25
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		3.55	+/-1.31	1.78	3.00	pCi/L		AXM6	03/11/16	1302	1547123 1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.77	+/-0.444	0.320	1.00	pCi/L		CXP3	03/15/16	0720	1545935 2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						91.2	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-1
Sample ID: 391437004
Matrix: Water
Collect Date: 10-FEB-16 12:00
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.42	+/-0.901	1.35	3.00	pCi/L		AXM6	03/11/16	1302	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	0.318	+/-0.258	0.396	1.00	pCi/L		CXP3	03/15/16	0720	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						95.1	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-5
Sample ID: 391437005
Matrix: Water
Collect Date: 10-FEB-16 13:05
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.50	+/-0.886	1.30	3.00	pCi/L		AXM6	03/11/16	1302	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.99	+/-0.463	0.382	1.00	pCi/L		CXP3	03/15/16	0720	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						95.8	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-2
Sample ID: 391437006
Matrix: Water
Collect Date: 10-FEB-16 13:50
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.81	+/-0.999	1.46	3.00	pCi/L		AXM6	03/11/16	1302	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.669	+/-0.303	0.373	1.00	pCi/L		CXP3	03/15/16	0720	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						90	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-3
Sample ID: 391437007
Matrix: Water
Collect Date: 10-FEB-16 14:50
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.37	+/-1.17	1.35	3.00	pCi/L		AXM6	03/11/16	1433	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.04	+/-0.381	0.420	1.00	pCi/L		CXP3	03/15/16	0750	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						91	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-6
Sample ID: 391437008
Matrix: Water
Collect Date: 10-FEB-16 16:15
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.416	+/-0.966	1.71	3.00	pCi/L		AXM6	03/11/16	1302	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.801	+/-0.346	0.397	1.00	pCi/L		CXP3	03/15/16	0750	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						97.7	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: FGD-4
Sample ID: 391437009
Matrix: Water
Collect Date: 10-FEB-16 16:50
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.992	+/-0.722	1.11	3.00	pCi/L		AXM6	03/11/16	1302	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	0.115	+/-0.186	0.332	1.00	pCi/L		CXP3	03/15/16	0750	1545935	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			98.1	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	MW-08	Project:	DHLA00112
Sample ID:	391437010	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	10-FEB-16 17:55		
Receive Date:	16-FEB-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.450	+/-1.29	2.28	3.00	pCi/L		AXM6	03/11/16	1305	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.01	+/-0.363	0.397	1.00	pCi/L		CXP3	03/15/16	0750	1545935	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			88.3	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-07
Sample ID: 391437011
Matrix: Water
Collect Date: 11-FEB-16 07:45
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.07	+/-1.27	2.14	3.00	pCi/L		AXM6	03/11/16	1305	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.633	+/-0.327	0.426	1.00	pCi/L		CXP3	03/15/16	0750	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery	Test					Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"							95.6	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-09
Sample ID: 391437012
Matrix: Water
Collect Date: 11-FEB-16 08:30
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.04	+/-0.903	1.46	3.00	pCi/L		AXM6	03/11/16	1305	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.820	+/-0.328	0.379	1.00	pCi/L		CXP3	03/15/16	0750	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						97.1	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	AL-10	Project:	DHLA00112
Sample ID:	391437013	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	11-FEB-16 09:05		
Receive Date:	16-FEB-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		1.19	+/-0.791	1.18	3.00	pCi/L		AXM6	03/11/16	1305 1547123	1
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		0.979	+/-0.390	0.427	1.00	pCi/L		CXP3	03/15/16	0820 1545935	2
The following Analytical Methods were performed:											
Method	Description						Analyst Comments				
1	EPA 904.0/SW846 9320 Modified										
2	EPA 903.1 Modified										
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits		
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						93.2	(15%-125%)		

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID:	MW-02	Project:	DHLA00112
Sample ID:	391437014	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	11-FEB-16 09:35		
Receive Date:	16-FEB-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.61	+/-0.998	1.50	3.00	pCi/L		AXM6	03/11/16	1305	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	0.275	+/-0.275	0.445	1.00	pCi/L		CXP3	03/15/16	0820	1545935	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			89	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 15, 2016

Company : DHL Analytical
Address : 2300 Double Creek Drive

Round Rock, Texas 78664

Contact: Mr. John DuPont
Project: Routine Analysis

Client Sample ID: MW-05
Sample ID: 391437015
Matrix: Water
Collect Date: 11-FEB-16 10:45
Receive Date: 16-FEB-16
Collector: Client

Project: DHLA00112
Client ID: DHLA002

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.397	+/-0.885	1.57	3.00	pCi/L		AXM6	03/11/16	1306	1547123	1
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.883	+/-0.391	0.476	1.00	pCi/L		CXP3	03/15/16	0820	1545935	2
The following Analytical Methods were performed:												
Method	Description						Analyst Comments					
1	EPA 904.0/SW846 9320 Modified											
2	EPA 903.1 Modified											
Surrogate/Tracer Recovery		Test				Result	Nominal	Recovery%	Acceptable Limits			
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"						93.4	(15%-125%)			

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: March 15, 2016

Page 1 of 2

DHL Analytical
2300 Double Creek Drive
Round Rock, Texas

Contact: Mr. John DuPont

Workorder: 391437

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1547123										
QC1203495270	391437008	DUP									
Radium-228	U	0.416	U	1.16	pCi/L	N/A			N/A AXM6	03/11/16	13:05
	Uncertainty	+/-0.966		+/-0.838							
QC1203495271	LCS										
Radium-228	47.1			46.4	pCi/L		98.5	(75%-125%)		03/11/16	13:15
	Uncertainty			+/-3.20							
QC1203495269	MB										
Radium-228			U	0.924	pCi/L					03/11/16	13:05
	Uncertainty			+/-0.864							
Rad Ra-226											
Batch	1545935										
QC1203492177	391476001	DUP									
Radium-226		0.545		0.974	pCi/L	56.5		(0% - 100%)	CXP3	03/15/16	08:55
	Uncertainty	+/-0.346		+/-0.405							
QC1203492179	LCS										
Radium-226	24.4			21.1	pCi/L		86.3	(75%-125%)		03/15/16	08:55
	Uncertainty			+/-1.54							
QC1203492176	MB										
Radium-226			U	0.271	pCi/L					03/15/16	08:20
	Uncertainty			+/-0.250							
QC1203492178	391476001	MS									
Radium-226	122	0.545		114	pCi/L		92.6	(75%-125%)		03/15/16	08:55
	Uncertainty	+/-0.346		+/-8.07							

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 391437

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
UI	Gamma Spectroscopy--Uncertain identification										
UJ	Gamma Spectroscopy--Uncertain identification										
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

There are no "Data Exception Reports" associated with this analytical report.

LUMINANT

DHL Analytical, Inc.

2300 Double Creek Drive

Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1602130

391437

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Subcontractor:

GEL Laboratories

PO Box 30712

Charleston, SC 29417

TEL: (843) 556-8171

FAX:

Acct #:

11-Feb-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E903.1	E904.0				
FGD-11	Aqueous	-01B	02/10/16 09:25 AM	500HDPEHNO3		1				
FGD-11	Aqueous	-01C	02/10/16 09:25 AM	500HDPEHNO3	1					
FGD-12	Aqueous	-02B	02/10/16 10:00 AM	500HDPEHNO3		1				
FGD-12	Aqueous	-02C	02/10/16 10:00 AM	500HDPEHNO3	1					
FGD-08	Aqueous	-03B	02/10/16 11:25 AM	500HDPEHNO3		1				
FGD-08	Aqueous	-03C	02/10/16 11:25 AM	500HDPEHNO3	1					
FGD-1	Aqueous	-04B	02/10/16 12:00 PM	500HDPEHNO3		1				
FGD-1	Aqueous	-04C	02/10/16 12:00 PM	500HDPEHNO3	1					
FGD-5	Aqueous	-05B	02/10/16 01:05 PM	500HDPEHNO3		1				
FGD-5	Aqueous	-05C	02/10/16 01:05 PM	500HDPEHNO3	1					
FGD-2	Aqueous	-06B	02/10/16 01:50 PM	500HDPEHNO3		1				
FGD-2	Aqueous	-06C	02/10/16 01:50 PM	500HDPEHNO3	1					
FGD-3	Aqueous	-07B	02/10/16 02:50 PM	500HDPEHNO3		1				
FGD-3	Aqueous	-07C	02/10/16 02:50 PM	500HDPEHNO3	1					
FGD-6	Aqueous	-08B	02/10/16 04:15 PM	500HDPEHNO3		1				
FGD-6	Aqueous	-08C	02/10/16 04:15 PM	500HDPEHNO3	1					
FGD-4	Aqueous	-09B	02/10/16 04:50 PM	500HDPEHNO3		1				
FGD-4	Aqueous	-09C	02/10/16 04:50 PM	500HDPEHNO3	1					

General Comments:

Please analyze these samples with a Standard Turnaround Time.
 Call John DuPont if you have questions.
 Quality Control Package Needed: Standard / _____
 EMAIL report to both cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/11/16 1730</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/11/16 1730</u>
Relinquished by: _____	Date/Time: _____	Received by: <u>[Signature]</u>	Date/Time: <u>2/16/16 8:40</u>

DHL Analytical, Inc.

2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1602130

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Subcontractor:

GEL Laboratories
PO Box 30712
Charleston, SC 29417

TEL: (843) 556-8171

FAX:

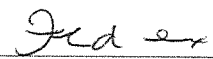
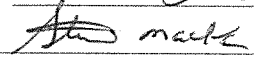
Acct #:

11-Feb-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E903.1	E904.0				
MW-08	Aqueous	-10B	02/10/16 05:55 PM	500HDPEHNO3		1				
MW-08	Aqueous	-10C	02/10/16 05:55 PM	500HDPEHNO3	1					
MW-07	Aqueous	-11B	02/11/16 07:45 AM	500HDPEHNO3		1				
MW-07	Aqueous	-11C	02/11/16 07:45 AM	500HDPEHNO3	1					
MW-09	Aqueous	-12B	02/11/16 08:30 AM	500HDPEHNO3		1				
MW-09	Aqueous	-12C	02/11/16 08:30 AM	500HDPEHNO3	1					
AL-10	Aqueous	-13B	02/11/16 09:05 AM	500HDPEHNO3		1				
AL-10	Aqueous	-13C	02/11/16 09:05 AM	500HDPEHNO3	1					
MW-02	Aqueous	-14B	02/11/16 09:35 AM	500HDPEHNO3		1				
MW-02	Aqueous	-14C	02/11/16 09:35 AM	500HDPEHNO3	1					
MW-05	Aqueous	-15B	02/11/16 10:45 AM	500HDPEHNO3		1				
MW-05	Aqueous	-15C	02/11/16 10:45 AM	500HDPEHNO3	1					

General Comments:

Please analyze these samples with a Standard Turnaround Time.
Call John DuPont if you have questions.
Quality Control Package Needed: Standard / _____
EMAIL report to both cac@dhlanalytical.com & dupont@dhlanalytical.com

		Date/Time			Date/Time
Relinquished by:		2/11/16 1730	Received by:		2/11/16 1730
Relinquished by:			Received by:		2/16/16 8:40

SAMPLE RECEIPT & REVIEW FORM

Client: <u>DHLA</u>		SDG/AR/COC/Work Order: <u>391437</u>	
Received By: <u>Shanta mck</u>		Date Received: <u>2/16/16</u> <u>8:40</u>	
Suspected Hazard Information	Yes ☐ No ☒	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	☒	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>Background</u>	
Classified Radioactive II or III by RSO?	☒	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	☒		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	☒	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	☒	Hazard Class Shipped: UN#:	
Samples identified as Foreign Soil?	☒		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	☒	☐	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	☒	☐	☐	Preservation Method: Ice bags Blue ice Dry ice None Other (describe) *all temperatures are recorded in Celsius <u>14C</u>
2a Daily check performed and passed on IR temperature gun?	☒	☐	☐	Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>ES03205835</u>
3 Chain of custody documents included with shipment?	☒	☐	☐	
4 Sample containers intact and sealed?	☒	☐	☐	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	☒	☐	☐	Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples have headspace as required?	☒	☐	☐	Sample ID's and containers affected:
7 VOA vials contain acid preservation?	☒	☐	☐	(If unknown, select No)
8 VOA vials free of headspace (defined as < 6mm bubble)?	☒	☐	☐	Sample ID's and containers affected:
9 Are Encore containers present?	☒	☐	☐	(If yes, immediately deliver to Volatiles laboratory)
10 Samples received within holding time?	☒	☐	☐	ID's and tests affected:
11 Sample ID's on COC match ID's on bottles?	☒	☐	☐	Sample ID's and containers affected:
12 Date & time on COC match date & time on bottles?	☒	☐	☐	Sample ID's affected:
13 Number of containers received match number indicated on COC?	☒	☐	☐	Sample ID's affected:
14 Are sample containers identifiable as GEL provided?	☒	☐	☐	
15 COC form is properly signed in relinquished/received sections?	☒	☐	☐	
16 Carrier and tracking number.	☒	☐	☐	Circle Applicable: FedEx Air ☒ FedEx Ground ☐ UPS ☐ Field Services ☐ Courier ☐ Other ☐ <u>7756 3067 8989</u>

Comments (Use Continuation Form if needed):

List of current GEL Certifications as of 15 March 2016

State	Certification
Alaska	UST-0110
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA160006
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122016-1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-16-11
Utah NELAP	SC000122016-20
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404



May 26, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Luminant - Oak Grove

Order No.: 1604175

Dear Will Vienne:

DHL Analytical, Inc. received 17 sample(s) on 4/18/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16



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CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX 78664
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3446
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

DATE: 4-15-16 PAGE 2 OF 2
PO #: 5164-D **DHL WORK ORDER #:** 11004175
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLIENT PROJECT #: 5164-D **COLLECTOR:** J. BRAYTON

[illegible]

John Dupont

From: Sara Taube [Sara.Taube@pbwflc.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015



Airbill No. Z1

SHIP TO:
JOHN BRAYTON

1823 CALLENDER HILL ROAD
MANSFIELD, TX 76063
5126958609

DI.
2300
ROUND
512388822

W RBD

LSO GROUND
END OF BUSINESS DAY

3/30/2016
JOHN BRAYTON
1000V.0000
E

WEIGHT: 9.00LBS



Airbill No. ZT579910

Lone Star Overnight
1-800-800-898
www.lso.com

SHIP TO:
JOHN BRAYTON

1823 CALLENDER HILL ROAD
MANSFIELD, TX 76063
5126958609

From:
JENNIFER BARKER
DHL ANALYTICAL
2300 DOUBLE CREEK DR.
ROUND ROCK, TX 78664
5123888222

W RBD

LSO GROUND
END OF BUSINESS DAY DELIVERY

PRINT DATE: 3/30/2016
QUICKCODE: JOHN BRAYTON
REF 1: COOLER 1000V.0000
SIGNATURE RELEASE

WEIGHT: 9.00LBS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 4/18/2016

Work Order Number 1604175

Received by JT

Checklist completed by: [Signature] 4/18/2016
Signature Date

Reviewed by: [Initials] 4/18/2016
Initials Date

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	0.9 °C / 0.16 °C / 0.4 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 8086
	Adjusted? <u>no</u>		Checked by <u>[Signature]</u>
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____		Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1604175

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 4/18/16. A total of 17 sample was received. The sample arrived in good condition and was properly packaged.

METALS ANALYSIS

For Metals analysis performed on 4/28/16 (batch 74670) matrix spike and matrix spike duplicate recoveries were above control limits for Boron. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 4/26/16 (batch 74701) the RPD for the serial dilution was above control limits for Boron. This is flagged accordingly. The PDS was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1604175

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1604175-01	FGD-2		04/14/16 08:15 AM	4/18/2016
1604175-02	FGD-3		04/14/16 09:05 AM	4/18/2016
1604175-03	FGD-6		04/14/16 10:00 AM	4/18/2016
1604175-04	FGD-4		04/14/16 10:50 AM	4/18/2016
1604175-05	FGD-5		04/14/16 11:40 AM	4/18/2016
1604175-06	FGD-1		04/14/16 12:35 PM	4/18/2016
1604175-07	FGD-8		04/14/16 02:50 PM	4/18/2016
1604175-08	FGD-12		04/14/16 03:40 PM	4/18/2016
1604175-09	FGD-11		04/14/16 04:30 PM	4/18/2016
1604175-10	MW-07		04/15/16 07:50 AM	4/18/2016
1604175-11	AL-10		04/15/16 09:15 AM	4/18/2016
1604175-12	MW-02		04/15/16 10:20 AM	4/18/2016
1604175-13	MW-09		04/15/16 11:20 AM	4/18/2016
1604175-14	MW-08		04/15/16 12:25 PM	4/18/2016
1604175-15	DUP-1		04/15/16 12:25 PM	4/18/2016
1604175-16	EB-1		04/15/16 08:25 AM	4/18/2016
1604175-17	MW-05		04/15/16 01:40 PM	4/18/2016

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1604175-01A	FGD-2	04/14/16 08:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-2	04/14/16 08:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-2	04/14/16 08:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-2	04/14/16 08:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-01D	FGD-2	04/14/16 08:15 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-2	04/14/16 08:15 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-2	04/14/16 08:15 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-2	04/14/16 08:15 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-02A	FGD-3	04/14/16 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-3	04/14/16 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-3	04/14/16 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-3	04/14/16 09:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-02D	FGD-3	04/14/16 09:05 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-3	04/14/16 09:05 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-3	04/14/16 09:05 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-3	04/14/16 09:05 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-03A	FGD-6	04/14/16 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-6	04/14/16 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-6	04/14/16 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-6	04/14/16 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-03D	FGD-6	04/14/16 10:00 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-6	04/14/16 10:00 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-6	04/14/16 10:00 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-6	04/14/16 10:00 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-04A	FGD-4	04/14/16 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-4	04/14/16 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-4	04/14/16 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-4	04/14/16 10:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1604175-04D	FGD-4	04/14/16 10:50 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-4	04/14/16 10:50 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-4	04/14/16 10:50 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-4	04/14/16 10:50 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-05A	FGD-5	04/14/16 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-5	04/14/16 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-5	04/14/16 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/19/16 09:29 AM	74670
	FGD-5	04/14/16 11:40 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-05D	FGD-5	04/14/16 11:40 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-5	04/14/16 11:40 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-5	04/14/16 11:40 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-5	04/14/16 11:40 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-06A	FGD-1	04/14/16 12:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-1	04/14/16 12:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-1	04/14/16 12:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-1	04/14/16 12:35 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-06D	FGD-1	04/14/16 12:35 PM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-1	04/14/16 12:35 PM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-1	04/14/16 12:35 PM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-07A	FGD-8	04/14/16 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-8	04/14/16 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-8	04/14/16 02:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-8	04/14/16 02:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-07D	FGD-8	04/14/16 02:50 PM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-8	04/14/16 02:50 PM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-8	04/14/16 02:50 PM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-8	04/14/16 02:50 PM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-08A	FGD-12	04/14/16 03:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1604175-08A	FGD-12	04/14/16 03:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-12	04/14/16 03:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-08D	FGD-12	04/14/16 03:40 PM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-12	04/14/16 03:40 PM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-12	04/14/16 03:40 PM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-09A	FGD-11	04/14/16 04:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-11	04/14/16 04:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-11	04/14/16 04:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	FGD-11	04/14/16 04:30 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-09D	FGD-11	04/14/16 04:30 PM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-11	04/14/16 04:30 PM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	FGD-11	04/14/16 04:30 PM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	FGD-11	04/14/16 04:30 PM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-10A	MW-07	04/15/16 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-07	04/15/16 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-07	04/15/16 07:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-10D	MW-07	04/15/16 07:50 AM	Aqueous	E300	Anion Preparation	04/25/16 09:20 AM	74764
	MW-07	04/15/16 07:50 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	MW-07	04/15/16 07:50 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-11A	AL-10	04/15/16 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	AL-10	04/15/16 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	AL-10	04/15/16 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	AL-10	04/15/16 09:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-11D	AL-10	04/15/16 09:15 AM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	AL-10	04/15/16 09:15 AM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	AL-10	04/15/16 09:15 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	AL-10	04/15/16 09:15 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-12A	MW-02	04/15/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1604175-12A	MW-02	04/15/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-02	04/15/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-02	04/15/16 10:20 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-12D	MW-02	04/15/16 10:20 AM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-02	04/15/16 10:20 AM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-02	04/15/16 10:20 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	MW-02	04/15/16 10:20 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-13A	MW-09	04/15/16 11:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-09	04/15/16 11:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-09	04/15/16 11:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-09	04/15/16 11:20 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-13D	MW-09	04/15/16 11:20 AM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-09	04/15/16 11:20 AM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-09	04/15/16 11:20 AM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	MW-09	04/15/16 11:20 AM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-14A	MW-08	04/15/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-08	04/15/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-08	04/15/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-08	04/15/16 12:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-14D	MW-08	04/15/16 12:25 PM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-08	04/15/16 12:25 PM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-08	04/15/16 12:25 PM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	MW-08	04/15/16 12:25 PM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-15A	DUP-1	04/15/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	DUP-1	04/15/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	DUP-1	04/15/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	DUP-1	04/15/16 12:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-15D	DUP-1	04/15/16 12:25 PM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1604175-15D	DUP-1	04/15/16 12:25 PM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	DUP-1	04/15/16 12:25 PM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	DUP-1	04/15/16 12:25 PM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-16A	EB-1	04/15/16 08:25 AM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	EB-1	04/15/16 08:25 AM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	EB-1	04/15/16 08:25 AM	Equip Blank	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-16D	EB-1	04/15/16 08:25 AM	Equip Blank	E300	Anion Preparation	04/25/16 09:05 AM	74762
	EB-1	04/15/16 08:25 AM	Equip Blank	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	EB-1	04/15/16 08:25 AM	Equip Blank	M2540C	TDS Preparation	04/20/16 12:18 PM	74704
1604175-17A	MW-05	04/15/16 01:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-05	04/15/16 01:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	04/20/16 11:01 AM	74701
	MW-05	04/15/16 01:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/19/16 11:59 AM	74678
1604175-17D	MW-05	04/15/16 01:40 PM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-05	04/15/16 01:40 PM	Aqueous	E300	Anion Preparation	04/25/16 09:05 AM	74762
	MW-05	04/15/16 01:40 PM	Aqueous	M4500-H+ B	pH Preparation	04/20/16 08:28 AM	74689
	MW-05	04/15/16 01:40 PM	Aqueous	M2540C	TDS Preparation	04/20/16 12:18 PM	74704

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1604175-01A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 11:37 AM	CETAC2_HG_160421A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/25/16 04:33 PM	ICP-MS4_160425E
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	10	04/27/16 02:06 PM	ICP-MS4_160427A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/28/16 12:51 PM	ICP-MS4_160428B
1604175-01D	FGD-2	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 10:51 AM	IC4_160425A
	FGD-2	Aqueous	E300	Anions by IC method - Water	74764	10	04/25/16 02:28 PM	IC4_160425A
	FGD-2	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:32 AM	TITRATOR_160420A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-02A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 11:49 AM	CETAC2_HG_160421A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	10	04/27/16 02:08 PM	ICP-MS4_160427A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/28/16 12:53 PM	ICP-MS4_160428B
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/25/16 04:35 PM	ICP-MS4_160425E
1604175-02D	FGD-3	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 11:06 AM	IC4_160425A
	FGD-3	Aqueous	E300	Anions by IC method - Water	74764	10	04/25/16 02:43 PM	IC4_160425A
	FGD-3	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:34 AM	TITRATOR_160420A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-03A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 11:51 AM	CETAC2_HG_160421A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/25/16 04:37 PM	ICP-MS4_160425E
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	10	04/27/16 02:14 PM	ICP-MS4_160427A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/28/16 12:55 PM	ICP-MS4_160428B
1604175-03D	FGD-6	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 11:21 AM	IC4_160425A
	FGD-6	Aqueous	E300	Anions by IC method - Water	74764	10	04/25/16 02:58 PM	IC4_160425A
	FGD-6	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:37 AM	TITRATOR_160420A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-04A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 11:53 AM	CETAC2_HG_160421A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	10	04/27/16 02:17 PM	ICP-MS4_160427A

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1604175-04A	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/28/16 12:57 PM	ICP-MS4_160428B
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/25/16 04:39 PM	ICP-MS4_160425E
1604175-04D	FGD-4	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 11:36 AM	IC4_160425A
	FGD-4	Aqueous	E300	Anions by IC method - Water	74764	10	04/25/16 03:13 PM	IC4_160425A
	FGD-4	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:38 AM	TITRATOR_160420A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-05A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 11:55 AM	CETAC2_HG_160421A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	10	04/27/16 02:19 PM	ICP-MS4_160427A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/28/16 12:59 PM	ICP-MS4_160428B
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74670	1	04/25/16 04:41 PM	ICP-MS4_160425E
1604175-05D	FGD-5	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 11:51 AM	IC4_160425A
	FGD-5	Aqueous	E300	Anions by IC method - Water	74764	100	04/25/16 03:28 PM	IC4_160425A
	FGD-5	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:39 AM	TITRATOR_160420A
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-06A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 11:58 AM	CETAC2_HG_160421A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:41 PM	ICP-MS4_160426B
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	10	04/26/16 04:12 PM	ICP-MS4_160426B
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:01 PM	ICP-MS4_160425E
1604175-06D	FGD-1	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 12:06 PM	IC4_160425A
	FGD-1	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:42 AM	TITRATOR_160420A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-07A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:00 PM	CETAC2_HG_160421A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	50	04/26/16 04:16 PM	ICP-MS4_160426B
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:07 PM	ICP-MS4_160425E
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:47 PM	ICP-MS4_160426B
1604175-07D	FGD-8	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 12:21 PM	IC4_160425A

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1604175-07D	FGD-8	Aqueous	E300	Anions by IC method - Water	74764	100	04/25/16 03:43 PM	IC4_160425A
	FGD-8	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:45 AM	TITRATOR_160420A
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-08A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:02 PM	CETAC2_HG_160421A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:09 PM	ICP-MS4_160425E
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:49 PM	ICP-MS4_160426B
1604175-08D	FGD-12	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 12:36 PM	IC4_160425A
	FGD-12	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:48 AM	TITRATOR_160420A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-09A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:04 PM	CETAC2_HG_160421A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:51 PM	ICP-MS4_160426B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	10	04/26/16 04:18 PM	ICP-MS4_160426B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:11 PM	ICP-MS4_160425E
1604175-09D	FGD-11	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 12:51 PM	IC4_160425A
	FGD-11	Aqueous	E300	Anions by IC method - Water	74764	100	04/25/16 04:13 PM	IC4_160425A
	FGD-11	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:51 AM	TITRATOR_160420A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-10A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:11 PM	CETAC2_HG_160421A
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:53 PM	ICP-MS4_160426B
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:13 PM	ICP-MS4_160425E
1604175-10D	MW-07	Aqueous	E300	Anions by IC method - Water	74764	1	04/25/16 01:06 PM	IC4_160425A
	MW-07	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:55 AM	TITRATOR_160420A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-11A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:14 PM	CETAC2_HG_160421A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:15 PM	ICP-MS4_160425E
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:55 PM	ICP-MS4_160426B

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1604175-11A	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	10	04/26/16 04:20 PM	ICP-MS4_160426B
1604175-11D	AL-10	Aqueous	E300	Anions by IC method - Water	74762	1	04/25/16 12:06 PM	IC2_160425A
	AL-10	Aqueous	E300	Anions by IC method - Water	74762	10	04/25/16 02:42 PM	IC2_160425A
	AL-10	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 09:58 AM	TITRATOR_160420A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-12A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:16 PM	CETAC2_HG_160421A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:17 PM	ICP-MS4_160425E
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:57 PM	ICP-MS4_160426B
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	10	04/26/16 04:22 PM	ICP-MS4_160426B
1604175-12D	MW-02	Aqueous	E300	Anions by IC method - Water	74762	1	04/25/16 12:21 PM	IC2_160425A
	MW-02	Aqueous	E300	Anions by IC method - Water	74762	10	04/25/16 02:56 PM	IC2_160425A
	MW-02	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 10:01 AM	TITRATOR_160420A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-13A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:18 PM	CETAC2_HG_160421A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:19 PM	ICP-MS4_160425E
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 02:59 PM	ICP-MS4_160426B
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	10	04/26/16 04:24 PM	ICP-MS4_160426B
1604175-13D	MW-09	Aqueous	E300	Anions by IC method - Water	74762	1	04/25/16 12:36 PM	IC2_160425A
	MW-09	Aqueous	E300	Anions by IC method - Water	74762	10	04/25/16 03:11 PM	IC2_160425A
	MW-09	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 10:04 AM	TITRATOR_160420A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-14A	MW-08	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:20 PM	CETAC2_HG_160421A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:21 PM	ICP-MS4_160425E
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 03:01 PM	ICP-MS4_160426B
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	10	04/26/16 04:26 PM	ICP-MS4_160426B
1604175-14D	MW-08	Aqueous	E300	Anions by IC method - Water	74762	1	04/25/16 12:50 PM	IC2_160425A

Lab Order: 1604175
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1604175-14D	MW-08	Aqueous	E300	Anions by IC method - Water	74762	100	04/25/16 03:25 PM	IC2_160425A
	MW-08	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 10:07 AM	TITRATOR_160420A
	MW-08	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-15A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:23 PM	CETAC2_HG_160421A
	DUP-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:37 PM	ICP-MS4_160425E
	DUP-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 03:25 PM	ICP-MS4_160426B
	DUP-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	10	04/26/16 04:28 PM	ICP-MS4_160426B
1604175-15D	DUP-1	Aqueous	E300	Anions by IC method - Water	74762	1	04/25/16 01:05 PM	IC2_160425A
	DUP-1	Aqueous	E300	Anions by IC method - Water	74762	100	04/25/16 04:09 PM	IC2_160425A
	DUP-1	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 10:09 AM	TITRATOR_160420A
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-16A	EB-1	Equip Blank	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:25 PM	CETAC2_HG_160421A
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:39 PM	ICP-MS4_160425E
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 03:27 PM	ICP-MS4_160426B
1604175-16D	EB-1	Equip Blank	E300	Anions by IC method - Water	74762	1	04/25/16 01:56 PM	IC2_160425A
	EB-1	Equip Blank	M4500-H+ B	pH	74689	1	04/20/16 10:12 AM	TITRATOR_160420A
	EB-1	Equip Blank	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A
1604175-17A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	74678	1	04/21/16 12:27 PM	CETAC2_HG_160421A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/25/16 05:41 PM	ICP-MS4_160425E
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	74701	1	04/26/16 03:29 PM	ICP-MS4_160426B
1604175-17D	MW-05	Aqueous	E300	Anions by IC method - Water	74762	1	04/25/16 02:10 PM	IC2_160425A
	MW-05	Aqueous	E300	Anions by IC method - Water	74762	10	04/25/16 04:53 PM	IC2_160425A
	MW-05	Aqueous	M4500-H+ B	pH	74689	1	04/20/16 10:15 AM	TITRATOR_160420A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	74704	1	04/21/16 08:40 AM	WC_160420A

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-2
Lab ID: 1604175-01
Collection Date: 04/14/16 08:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 11:37 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 04:33 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:33 PM
Barium	0.129	0.00300	0.0100		mg/L	1	04/25/16 04:33 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:33 PM
Boron	0.136	0.0100	0.0300		mg/L	1	04/28/16 12:51 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:33 PM
Calcium	53.8	1.00	3.00		mg/L	10	04/27/16 02:06 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:33 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 04:33 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:33 PM
Lithium	0.0196	0.00500	0.0100		mg/L	1	04/25/16 04:33 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:33 PM
Selenium	0.0166	0.00200	0.00500		mg/L	1	04/25/16 04:33 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 04:33 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	285	3.00	10.0		mg/L	10	04/25/16 02:28 PM
Fluoride	0.192	0.100	0.400	J	mg/L	1	04/25/16 10:51 AM
Sulfate	103	1.00	3.00		mg/L	1	04/25/16 10:51 AM
PH		M4500-H+ B		Analyst: BJT			
pH	7.00	0	0		pH Units@18.9°C	1	04/20/16 09:32 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	924	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-3
Lab ID: 1604175-02
Collection Date: 04/14/16 09:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 11:49 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 04:35 PM
Arsenic	0.00218	0.00200	0.00500	J	mg/L	1	04/25/16 04:35 PM
Barium	0.0371	0.00300	0.0100		mg/L	1	04/25/16 04:35 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:35 PM
Boron	0.231	0.0100	0.0300		mg/L	1	04/28/16 12:53 PM
Cadmium	0.00212	0.000300	0.00100		mg/L	1	04/25/16 04:35 PM
Calcium	98.1	1.00	3.00		mg/L	10	04/27/16 02:08 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:35 PM
Cobalt	0.0326	0.00300	0.00500		mg/L	1	04/25/16 04:35 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:35 PM
Lithium	0.119	0.00500	0.0100		mg/L	1	04/25/16 04:35 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:35 PM
Selenium	0.0640	0.00200	0.00500		mg/L	1	04/25/16 04:35 PM
Thallium	0.00137	0.000500	0.00150	J	mg/L	1	04/25/16 04:35 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	314	3.00	10.0		mg/L	10	04/25/16 02:43 PM
Fluoride	0.690	0.100	0.400		mg/L	1	04/25/16 11:06 AM
Sulfate	396	10.0	30.0		mg/L	10	04/25/16 02:43 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.61	0	0		pH Units@18.1°C	1	04/20/16 09:34 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1980	50.0	50.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-6
Lab ID: 1604175-03
Collection Date: 04/14/16 10:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 11:51 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 04:37 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:37 PM
Barium	0.122	0.00300	0.0100		mg/L	1	04/25/16 04:37 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:37 PM
Boron	0.0936	0.0100	0.0300		mg/L	1	04/28/16 12:55 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:37 PM
Calcium	36.4	1.00	3.00		mg/L	10	04/27/16 02:14 PM
Chromium	0.0568	0.00200	0.00500		mg/L	1	04/25/16 04:37 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 04:37 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:37 PM
Lithium	0.0110	0.00500	0.0100		mg/L	1	04/25/16 04:37 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:37 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:37 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 04:37 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	259	3.00	10.0		mg/L	10	04/25/16 02:58 PM
Fluoride	0.442	0.100	0.400		mg/L	1	04/25/16 11:21 AM
Sulfate	57.9	1.00	3.00		mg/L	1	04/25/16 11:21 AM
PH		M4500-H+ B		Analyst: BJT			
pH	7.02	0	0		pH Units@18.4°C	1	04/20/16 09:37 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1140	50.0	50.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-4
Lab ID: 1604175-04
Collection Date: 04/14/16 10:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	0.000232	0.0000800	0.000200		mg/L	1	04/21/16 11:53 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 04:39 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:39 PM
Barium	0.120	0.00300	0.0100		mg/L	1	04/25/16 04:39 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:39 PM
Boron	0.0726	0.0100	0.0300		mg/L	1	04/28/16 12:57 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:39 PM
Calcium	50.3	1.00	3.00		mg/L	10	04/27/16 02:17 PM
Chromium	0.00208	0.00200	0.00500	J	mg/L	1	04/25/16 04:39 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 04:39 PM
Lead	0.0271	0.000300	0.00100		mg/L	1	04/25/16 04:39 PM
Lithium	0.0357	0.00500	0.0100		mg/L	1	04/25/16 04:39 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:39 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:39 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 04:39 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	182	3.00	10.0		mg/L	10	04/25/16 03:13 PM
Fluoride	0.323	0.100	0.400	J	mg/L	1	04/25/16 11:36 AM
Sulfate	55.4	1.00	3.00		mg/L	1	04/25/16 11:36 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.83	0	0		pH Units@18.5°C	1	04/20/16 09:38 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	726	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-5
Lab ID: 1604175-05
Collection Date: 04/14/16 11:40 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 11:55 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 04:41 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:41 PM
Barium	0.224	0.00300	0.0100		mg/L	1	04/25/16 04:41 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:41 PM
Boron	0.107	0.0100	0.0300		mg/L	1	04/28/16 12:59 PM
Cadmium	0.000392	0.000300	0.00100	J	mg/L	1	04/25/16 04:41 PM
Calcium	101	1.00	3.00		mg/L	10	04/27/16 02:19 PM
Chromium	0.00477	0.00200	0.00500	J	mg/L	1	04/25/16 04:41 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 04:41 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 04:41 PM
Lithium	0.164	0.00500	0.0100		mg/L	1	04/25/16 04:41 PM
Molybdenum	0.0183	0.00200	0.00500		mg/L	1	04/25/16 04:41 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 04:41 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 04:41 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	359	30.0	100		mg/L	100	04/25/16 03:28 PM
Fluoride	0.491	0.100	0.400		mg/L	1	04/25/16 11:51 AM
Sulfate	50.8	1.00	3.00		mg/L	1	04/25/16 11:51 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.66	0	0		pH Units@18.6°C	1	04/20/16 09:39 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1510	50.0	50.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-1
Lab ID: 1604175-06
Collection Date: 04/14/16 12:35 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 11:58 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:01 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:01 PM
Barium	0.0296	0.00300	0.0100		mg/L	1	04/25/16 05:01 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:01 PM
Boron	0.0867	0.0100	0.0300		mg/L	1	04/26/16 02:41 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:01 PM
Calcium	12.2	0.100	0.300		mg/L	1	04/25/16 05:01 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:01 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:01 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:01 PM
Lithium	0.0338	0.00500	0.0100		mg/L	1	04/25/16 05:01 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:01 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:01 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:01 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	38.6	0.300	1.00		mg/L	1	04/25/16 12:06 PM
Fluoride	0.229	0.100	0.400	J	mg/L	1	04/25/16 12:06 PM
Sulfate	35.7	1.00	3.00		mg/L	1	04/25/16 12:06 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.60	0	0		pH Units@19.4°C	1	04/20/16 09:42 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	77.0	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-8
Lab ID: 1604175-07
Collection Date: 04/14/16 02:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:00 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:07 PM
Arsenic	0.0146	0.00200	0.00500		mg/L	1	04/25/16 05:07 PM
Barium	0.965	0.00300	0.0100		mg/L	1	04/25/16 05:07 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:07 PM
Boron	0.0805	0.0100	0.0300		mg/L	1	04/26/16 02:47 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:07 PM
Calcium	323	5.00	15.0		mg/L	50	04/26/16 04:16 PM
Chromium	0.00202	0.00200	0.00500	J	mg/L	1	04/25/16 05:07 PM
Cobalt	0.00876	0.00300	0.00500		mg/L	1	04/25/16 05:07 PM
Lead	0.00160	0.000300	0.00100		mg/L	1	04/25/16 05:07 PM
Lithium	0.0160	0.00500	0.0100		mg/L	1	04/25/16 05:07 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:07 PM
Selenium	0.00211	0.00200	0.00500	J	mg/L	1	04/25/16 05:07 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:07 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	1920	30.0	100		mg/L	100	04/25/16 03:43 PM
Fluoride	0.218	0.100	0.400	J	mg/L	1	04/25/16 12:21 PM
Sulfate	68.0	1.00	3.00		mg/L	1	04/25/16 12:21 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.24	0	0		pH Units@19.4°C	1	04/20/16 09:45 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	6210	50.0	50.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-12
Lab ID: 1604175-08
Collection Date: 04/14/16 03:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:02 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:09 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:09 PM
Barium	0.104	0.00300	0.0100		mg/L	1	04/25/16 05:09 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:09 PM
Boron	0.0753	0.0100	0.0300		mg/L	1	04/26/16 02:49 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:09 PM
Calcium	14.7	0.100	0.300		mg/L	1	04/25/16 05:09 PM
Chromium	0.00425	0.00200	0.00500	J	mg/L	1	04/25/16 05:09 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:09 PM
Lead	0.00371	0.000300	0.00100		mg/L	1	04/25/16 05:09 PM
Lithium	0.0255	0.00500	0.0100		mg/L	1	04/25/16 05:09 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:09 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:09 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:09 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	25.4	0.300	1.00		mg/L	1	04/25/16 12:36 PM
Fluoride	0.109	0.100	0.400	J	mg/L	1	04/25/16 12:36 PM
Sulfate	15.8	1.00	3.00		mg/L	1	04/25/16 12:36 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.74	0	0		pH Units@19°C	1	04/20/16 09:48 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	163	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: FGD-11
Lab ID: 1604175-09
Collection Date: 04/14/16 04:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:04 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:11 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:11 PM
Barium	0.260	0.00300	0.0100		mg/L	1	04/25/16 05:11 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:11 PM
Boron	0.0963	0.0100	0.0300		mg/L	1	04/26/16 02:51 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:11 PM
Calcium	72.5	1.00	3.00		mg/L	10	04/26/16 04:18 PM
Chromium	0.00222	0.00200	0.00500	J	mg/L	1	04/25/16 05:11 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:11 PM
Lead	0.00120	0.000300	0.00100		mg/L	1	04/25/16 05:11 PM
Lithium	0.0110	0.00500	0.0100		mg/L	1	04/25/16 05:11 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:11 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:11 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:11 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	393	30.0	100		mg/L	100	04/25/16 04:13 PM
Fluoride	0.671	0.100	0.400		mg/L	1	04/25/16 12:51 PM
Sulfate	32.9	1.00	3.00		mg/L	1	04/25/16 12:51 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.93	0	0		pH Units@19.4°C	1	04/20/16 09:51 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1120	50.0	50.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: MW-07
Lab ID: 1604175-10
Collection Date: 04/15/16 07:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:11 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:13 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:13 PM
Barium	0.0405	0.00300	0.0100		mg/L	1	04/25/16 05:13 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:13 PM
Boron	0.0567	0.0100	0.0300		mg/L	1	04/26/16 02:53 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:13 PM
Calcium	10.0	0.100	0.300		mg/L	1	04/25/16 05:13 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:13 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:13 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:13 PM
Lithium	0.0152	0.00500	0.0100		mg/L	1	04/25/16 05:13 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:13 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:13 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:13 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	20.9	0.300	1.00		mg/L	1	04/25/16 01:06 PM
Fluoride	0.187	0.100	0.400	J	mg/L	1	04/25/16 01:06 PM
Sulfate	16.0	1.00	3.00		mg/L	1	04/25/16 01:06 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.86	0	0		pH Units@19.7°C	1	04/20/16 09:55 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	341	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: AL-10
Lab ID: 1604175-11
Collection Date: 04/15/16 09:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:14 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:15 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:15 PM
Barium	0.180	0.00300	0.0100		mg/L	1	04/25/16 05:15 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:15 PM
Boron	0.0573	0.0100	0.0300		mg/L	1	04/26/16 02:55 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:15 PM
Calcium	44.8	1.00	3.00		mg/L	10	04/26/16 04:20 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:15 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:15 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:15 PM
Lithium	0.00971	0.00500	0.0100	J	mg/L	1	04/25/16 05:15 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:15 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:15 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:15 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	86.0	3.00	10.0		mg/L	10	04/25/16 02:42 PM
Fluoride	0.133	0.100	0.400	J	mg/L	1	04/25/16 12:06 PM
Sulfate	23.6	1.00	3.00		mg/L	1	04/25/16 12:06 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	7.29	0	0		pH Units@19.5°C	1	04/20/16 09:58 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	549	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: MW-02
Lab ID: 1604175-12
Collection Date: 04/15/16 10:20 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:16 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:17 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:17 PM
Barium	0.164	0.00300	0.0100		mg/L	1	04/25/16 05:17 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:17 PM
Boron	0.0597	0.0100	0.0300		mg/L	1	04/26/16 02:57 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:17 PM
Calcium	39.6	1.00	3.00		mg/L	10	04/26/16 04:22 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:17 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:17 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:17 PM
Lithium	0.00868	0.00500	0.0100	J	mg/L	1	04/25/16 05:17 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:17 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:17 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:17 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	68.0	3.00	10.0		mg/L	10	04/25/16 02:56 PM
Fluoride	0.102	0.100	0.400	J	mg/L	1	04/25/16 12:21 PM
Sulfate	18.1	1.00	3.00		mg/L	1	04/25/16 12:21 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	7.45	0	0		pH Units@19.8°C	1	04/20/16 10:01 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	440	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: MW-09
Lab ID: 1604175-13
Collection Date: 04/15/16 11:20 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:18 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:19 PM
Arsenic	0.00201	0.00200	0.00500	J	mg/L	1	04/25/16 05:19 PM
Barium	0.104	0.00300	0.0100		mg/L	1	04/25/16 05:19 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:19 PM
Boron	0.0734	0.0100	0.0300		mg/L	1	04/26/16 02:59 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:19 PM
Calcium	42.2	1.00	3.00		mg/L	10	04/26/16 04:24 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:19 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:19 PM
Lead	0.000400	0.000300	0.00100	J	mg/L	1	04/25/16 05:19 PM
Lithium	0.0550	0.00500	0.0100		mg/L	1	04/25/16 05:19 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:19 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:19 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:19 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	151	3.00	10.0		mg/L	10	04/25/16 03:11 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	04/25/16 12:36 PM
Sulfate	80.9	1.00	3.00		mg/L	1	04/25/16 12:36 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.22	0	0		pH Units@19.9°C	1	04/20/16 10:04 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	568	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: MW-08
Lab ID: 1604175-14
Collection Date: 04/15/16 12:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
		SW7470A				Analyst: AH	
Mercury	0.000837	0.0000800	0.000200		mg/L	1	04/21/16 12:20 PM
TRACE METALS: ICP-MS - WATER							
		SW6020A				Analyst: RO	
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:21 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:21 PM
Barium	0.112	0.00300	0.0100		mg/L	1	04/25/16 05:21 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:21 PM
Boron	0.0726	0.0100	0.0300		mg/L	1	04/26/16 03:01 PM
Cadmium	0.000403	0.000300	0.00100	J	mg/L	1	04/25/16 05:21 PM
Calcium	133	1.00	3.00		mg/L	10	04/26/16 04:26 PM
Chromium	0.328	0.00200	0.00500		mg/L	1	04/25/16 05:21 PM
Cobalt	0.00375	0.00300	0.00500	J	mg/L	1	04/25/16 05:21 PM
Lead	0.00134	0.000300	0.00100		mg/L	1	04/25/16 05:21 PM
Lithium	0.0932	0.00500	0.0100		mg/L	1	04/25/16 05:21 PM
Molybdenum	0.0360	0.00200	0.00500		mg/L	1	04/25/16 05:21 PM
Selenium	0.0318	0.00200	0.00500		mg/L	1	04/25/16 05:21 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:21 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: AV	
Chloride	566	30.0	100		mg/L	100	04/25/16 03:25 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	04/25/16 12:50 PM
Sulfate	139	1.00	3.00		mg/L	1	04/25/16 12:50 PM
PH							
		M4500-H+ B				Analyst: BJT	
pH	6.48	0	0		pH Units@19.9°C	1	04/20/16 10:07 AM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: AJH	
Total Dissolved Solids (Residue, Filterable)	1680	50.0	50.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: DUP-1
Lab ID: 1604175-15
Collection Date: 04/15/16 12:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	0.000562	0.0000800	0.000200		mg/L	1	04/21/16 12:23 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:37 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:37 PM
Barium	0.121	0.00300	0.0100		mg/L	1	04/25/16 05:37 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:37 PM
Boron	0.0770	0.0100	0.0300		mg/L	1	04/26/16 03:25 PM
Cadmium	0.000377	0.000300	0.00100	J	mg/L	1	04/25/16 05:37 PM
Calcium	133	1.00	3.00		mg/L	10	04/26/16 04:28 PM
Chromium	0.365	0.00200	0.00500		mg/L	1	04/25/16 05:37 PM
Cobalt	0.00479	0.00300	0.00500	J	mg/L	1	04/25/16 05:37 PM
Lead	0.00151	0.000300	0.00100		mg/L	1	04/25/16 05:37 PM
Lithium	0.0908	0.00500	0.0100		mg/L	1	04/25/16 05:37 PM
Molybdenum	0.0305	0.00200	0.00500		mg/L	1	04/25/16 05:37 PM
Selenium	0.0299	0.00200	0.00500		mg/L	1	04/25/16 05:37 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:37 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	569	30.0	100		mg/L	100	04/25/16 04:09 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	04/25/16 01:05 PM
Sulfate	140	1.00	3.00		mg/L	1	04/25/16 01:05 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.45	0	0		pH Units@19.9°C	1	04/20/16 10:09 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1730	50.0	50.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: EB-1
Lab ID: 1604175-16
Collection Date: 04/15/16 08:25 AM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:25 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:39 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:39 PM
Barium	0.0694	0.00300	0.0100		mg/L	1	04/25/16 05:39 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:39 PM
Boron	0.0379	0.0100	0.0300		mg/L	1	04/26/16 03:27 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:39 PM
Calcium	3.07	0.100	0.300		mg/L	1	04/25/16 05:39 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:39 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	04/25/16 05:39 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:39 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	04/25/16 05:39 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:39 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:39 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:39 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	8.24	0.300	1.00		mg/L	1	04/25/16 01:56 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	04/25/16 01:56 PM
Sulfate	1.92	1.00	3.00	J	mg/L	1	04/25/16 01:56 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.24	0	0		pH Units@20.1°C	1	04/20/16 10:12 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	47.0	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-May-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1604175

Client Sample ID: MW-05
Lab ID: 1604175-17
Collection Date: 04/15/16 01:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	04/21/16 12:27 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	04/25/16 05:41 PM
Arsenic	0.0103	0.00200	0.00500		mg/L	1	04/25/16 05:41 PM
Barium	0.0686	0.00300	0.0100		mg/L	1	04/25/16 05:41 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:41 PM
Boron	0.0458	0.0100	0.0300		mg/L	1	04/26/16 03:29 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	04/25/16 05:41 PM
Calcium	14.3	0.100	0.300		mg/L	1	04/25/16 05:41 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:41 PM
Cobalt	0.00419	0.00300	0.00500	J	mg/L	1	04/25/16 05:41 PM
Lead	0.000420	0.000300	0.00100	J	mg/L	1	04/25/16 05:41 PM
Lithium	0.0421	0.00500	0.0100		mg/L	1	04/25/16 05:41 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:41 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	04/25/16 05:41 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	04/25/16 05:41 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	55.4	3.00	10.0		mg/L	10	04/25/16 04:53 PM
Fluoride	0.284	0.100	0.400	J	mg/L	1	04/25/16 02:10 PM
Sulfate	10.7	1.00	3.00		mg/L	1	04/25/16 02:10 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.75	0	0		pH Units@20.3°C	1	04/20/16 10:15 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	288	10.0	10.0		mg/L	1	04/21/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1604175

Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160421A

The QC data in batch 74678 applies to the following samples: 1604175-01A, 1604175-02A, 1604175-03A, 1604175-04A, 1604175-05A, 1604175-06A, 1604175-07A, 1604175-08A, 1604175-09A, 1604175-10A, 1604175-11A, 1604175-12A, 1604175-13A, 1604175-14A, 1604175-15A, 1604175-16A, 1604175-17A

Sample ID	MB-74678	Batch ID:	74678	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:28:44 AM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.0000800	0.000200								

Sample ID	LCS-74678	Batch ID:	74678	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:31:00 AM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00209	0.000200	0.00200	0	104	85	115			

Sample ID	LCSD-74678	Batch ID:	74678	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:33:16 AM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00204	0.000200	0.00200	0	102	85	115	2.42	15	

Sample ID	1604175-01A SD	Batch ID:	74678	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:40:04 AM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.000400	0.00100	0	0				0	10	

Sample ID	1604175-01A PDS	Batch ID:	74678	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:42:20 AM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00234	0.000200	0.00250	0	93.6	85	115			

Sample ID	1604175-01A MS	Batch ID:	74678	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:44:35 AM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00192	0.000200	0.00200	0	96.0	80	120			

Sample ID	1604175-01A MSD	Batch ID:	74678	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:46:51 AM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00190	0.000200	0.00200	0	95.0	80	120	1.05	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160421A

Sample ID	ICV-160421	Batch ID:	R85352	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 10:03:42 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00383	0.000200	0.00400	0	95.8	90	110			

Sample ID	CCV2-160421	Batch ID:	R85352	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 11:19:18 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00202	0.000200	0.00200	0	101	90	110			

Sample ID	CCV3-160421	Batch ID:	R85352	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 12:07:17 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00202	0.000200	0.00200	0	101	90	110			

Sample ID	CCV4-160421	Batch ID:	R85352	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160421A	Analysis Date:	4/21/2016 12:34:36 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00204	0.000200	0.00200	0	102	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

The QC data in batch 74670 applies to the following samples: 1604175-01A, 1604175-02A, 1604175-03A, 1604175-04A, 1604175-05A

Sample ID MB-74670	Batch ID: 74670	TestNo: SW6020A	Units: mg/L
SampType: MBLK	Run ID: ICP-MS4_160425E	Analysis Date: 4/25/2016 3:19:00 PM	Prep Date: 4/19/2016

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

Sample ID LCS-74670	Batch ID: 74670	TestNo: SW6020A	Units: mg/L
SampType: LCS	Run ID: ICP-MS4_160425E	Analysis Date: 4/25/2016 3:21:00 PM	Prep Date: 4/19/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.4	80	120			
Arsenic	0.200	0.00500	0.200	0	99.8	80	120			
Barium	0.196	0.0100	0.200	0	98.2	80	120			
Beryllium	0.202	0.00100	0.200	0	101	80	120			
Cadmium	0.195	0.00100	0.200	0	97.6	80	120			
Calcium	5.06	0.300	5.00	0	101	80	120			
Chromium	0.204	0.00500	0.200	0	102	80	120			
Cobalt	0.207	0.00500	0.200	0	104	80	120			
Lead	0.199	0.00100	0.200	0	99.5	80	120			
Lithium	0.207	0.0100	0.200	0	104	80	120			
Molybdenum	0.197	0.00500	0.200	0	98.6	80	120			
Selenium	0.201	0.00500	0.200	0	100	80	120			
Thallium	0.203	0.00150	0.200	0	101	80	120			

Sample ID LCSD-74670	Batch ID: 74670	TestNo: SW6020A	Units: mg/L
SampType: LCSD	Run ID: ICP-MS4_160425E	Analysis Date: 4/25/2016 3:23:00 PM	Prep Date: 4/19/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.194	0.00250	0.200	0	96.9	80	120	1.62	15	
Arsenic	0.200	0.00500	0.200	0	100	80	120	0.450	15	
Barium	0.195	0.0100	0.200	0	97.4	80	120	0.857	15	
Beryllium	0.202	0.00100	0.200	0	101	80	120	0.190	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	LCSD-74670	Batch ID:	74670	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 3:23:00 PM	Prep Date:	4/19/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.194	0.00100	0.200	0	96.8	80	120	0.887	15	
Calcium	4.96	0.300	5.00	0	99.2	80	120	2.12	15	
Chromium	0.201	0.00500	0.200	0	100	80	120	1.47	15	
Cobalt	0.206	0.00500	0.200	0	103	80	120	0.625	15	
Lead	0.197	0.00100	0.200	0	98.7	80	120	0.798	15	
Lithium	0.205	0.0100	0.200	0	103	80	120	1.14	15	
Molybdenum	0.195	0.00500	0.200	0	97.5	80	120	1.08	15	
Selenium	0.201	0.00500	0.200	0	101	80	120	0.192	15	
Thallium	0.203	0.00150	0.200	0	102	80	120	0.275	15	

Sample ID	1604166-37B SD			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_160425E		Analysis Date:	4/25/2016 3:29:00 PM		Prep Date:	4/19/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	0.0231	0.0250	0	0.0234				1.23	10	
Barium	0.0412	0.0500	0	0.0447				8.03	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0.000432				0	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0.00569				0	10	
Lead	0.00485	0.00500	0	0.00446				8.36	10	
Lithium	<0.0250	0.0500	0	0.00715				0	10	
Molybdenum	<0.0100	0.0250	0	0.00224				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1604166-37B PDS			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L		
SampType:	PDS			Run ID:	ICP-MS4_160425E		Analysis Date:	4/25/2016 3:49:00 PM		Prep Date:	4/19/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.192	0.00250	0.200	0	96.0	80	120			
Arsenic	0.216	0.00500	0.200	0.0234	96.1	80	120			
Barium	0.231	0.0100	0.200	0.0447	93.1	80	120			
Beryllium	0.190	0.00100	0.200	0	95.2	80	120			
Cadmium	0.183	0.00100	0.200	0.000432	91.5	80	120			
Chromium	0.195	0.00500	0.200	0	97.5	80	120			
Cobalt	0.204	0.00500	0.200	0.00569	99.2	80	120			
Lead	0.194	0.00100	0.200	0.00446	94.9	80	120			
Lithium	0.197	0.0100	0.200	0.00715	94.9	80	120			
Molybdenum	0.191	0.00500	0.200	0.00224	94.5	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	1604166-37B PDS	Batch ID:	74670	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 3:49:00 PM	Prep Date:	4/19/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Selenium	0.191	0.00500	0.200	0	95.7	80	120			
Thallium	0.189	0.00150	0.200	0	94.3	80	120			

Sample ID	1604166-37B MS			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	MS			Run ID:	ICP-MS4_160425E		Analysis Date:	4/25/2016 3:51:00 PM		Prep Date:	4/19/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	98.8	80	120			
Arsenic	0.227	0.00500	0.200	0.0234	102	80	120			
Barium	0.244	0.0100	0.200	0.0447	99.9	80	120			
Beryllium	0.197	0.00100	0.200	0	98.4	80	120			
Cadmium	0.193	0.00100	0.200	0.000432	96.5	80	120			
Calcium	36.7	0.300	5.00	31.7	99.6	80	120			
Chromium	0.199	0.00500	0.200	0	99.5	80	120			
Cobalt	0.212	0.00500	0.200	0.00569	103	80	120			
Lead	0.202	0.00100	0.200	0.00446	99.0	80	120			
Lithium	0.205	0.0100	0.200	0.00715	99.0	80	120			
Molybdenum	0.203	0.00500	0.200	0.00224	100	80	120			
Selenium	0.204	0.00500	0.200	0	102	80	120			
Thallium	0.200	0.00150	0.200	0	99.8	80	120			

Sample ID	1604166-37B MSD			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	MSD			Run ID:	ICP-MS4_160425E		Analysis Date:	4/25/2016 3:53:00 PM		Prep Date:	4/19/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.195	0.00250	0.200	0	97.5	80	120	1.42	15	
Arsenic	0.224	0.00500	0.200	0.0234	101	80	120	0.943	15	
Barium	0.238	0.0100	0.200	0.0447	96.7	80	120	2.64	15	
Beryllium	0.197	0.00100	0.200	0	98.3	80	120	0.004	15	
Cadmium	0.189	0.00100	0.200	0.000432	94.4	80	120	2.20	15	
Calcium	36.2	0.300	5.00	31.7	90.8	80	120	1.21	15	
Chromium	0.197	0.00500	0.200	0	98.3	80	120	1.20	15	
Cobalt	0.208	0.00500	0.200	0.00569	101	80	120	1.97	15	
Lead	0.199	0.00100	0.200	0.00446	97.4	80	120	1.59	15	
Lithium	0.208	0.0100	0.200	0.00715	100	80	120	1.44	15	
Molybdenum	0.200	0.00500	0.200	0.00224	99.1	80	120	1.31	15	
Selenium	0.198	0.00500	0.200	0	99.0	80	120	2.75	15	
Thallium	0.200	0.00150	0.200	0	100	80	120	0.331	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1604175

Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

The QC data in batch 74701 applies to the following samples: 1604175-06A, 1604175-07A, 1604175-08A, 1604175-09A, 1604175-10A, 1604175-11A, 1604175-12A, 1604175-13A, 1604175-14A, 1604175-15A, 1604175-16A, 1604175-17A

Sample ID	MB-74701	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L
SampType:	MBLK	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:53:00 PM	Prep Date:	4/20/2016

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

Sample ID	LCS-74701	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L
SampType:	LCS	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:55:00 PM	Prep Date:	4/20/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.192	0.00250	0.200	0	96.0	80	120			
Arsenic	0.199	0.00500	0.200	0	99.3	80	120			
Barium	0.192	0.0100	0.200	0	96.2	80	120			
Beryllium	0.194	0.00100	0.200	0	96.8	80	120			
Cadmium	0.192	0.00100	0.200	0	95.9	80	120			
Calcium	4.96	0.300	5.00	0	99.3	80	120			
Chromium	0.199	0.00500	0.200	0	99.6	80	120			
Cobalt	0.206	0.00500	0.200	0	103	80	120			
Lead	0.194	0.00100	0.200	0	97.2	80	120			
Lithium	0.200	0.0100	0.200	0	99.8	80	120			
Molybdenum	0.195	0.00500	0.200	0	97.5	80	120			
Selenium	0.201	0.00500	0.200	0	100	80	120			
Thallium	0.202	0.00150	0.200	0	101	80	120			

Sample ID	LCSD-74701	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L
SampType:	LCSD	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:57:00 PM	Prep Date:	4/20/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.191	0.00250	0.200	0	95.7	80	120	0.336	15	
Arsenic	0.199	0.00500	0.200	0	99.4	80	120	0.174	15	
Barium	0.193	0.0100	0.200	0	96.6	80	120	0.428	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	LCSD-74701	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:57:00 PM	Prep Date:	4/20/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.194	0.00100	0.200	0	97.1	80	120	0.348	15	
Cadmium	0.191	0.00100	0.200	0	95.7	80	120	0.255	15	
Calcium	5.00	0.300	5.00	0	100	80	120	0.703	15	
Chromium	0.199	0.00500	0.200	0	99.5	80	120	0.074	15	
Cobalt	0.206	0.00500	0.200	0	103	80	120	0.396	15	
Lead	0.193	0.00100	0.200	0	96.6	80	120	0.632	15	
Lithium	0.199	0.0100	0.200	0	99.7	80	120	0.122	15	
Molybdenum	0.195	0.00500	0.200	0	97.3	80	120	0.216	15	
Selenium	0.197	0.00500	0.200	0	98.6	80	120	1.70	15	
Thallium	0.197	0.00150	0.200	0	98.7	80	120	2.28	15	

Sample ID	1604175-06A SD		Batch ID:	74701		TestNo:	SW6020A		Units:	mg/L		
SampType:	SD		Run ID:	ICP-MS4_160425E		Analysis Date:	4/25/2016 5:03:00 PM		Prep Date:	4/20/2016		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0307	0.0500	0	0.0296				3.61	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Calcium	12.4	1.50	0	12.2				2.05	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	0.0346	0.0500	0	0.0338				2.17	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1604175-06A PDS	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 5:23:00 PM	Prep Date:	4/20/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.185	0.00250	0.200	0	92.3	80	120			
Arsenic	0.196	0.00500	0.200	0	98.1	80	120			
Barium	0.221	0.0100	0.200	0.0296	95.9	80	120			
Beryllium	0.191	0.00100	0.200	0	95.3	80	120			
Cadmium	0.186	0.00100	0.200	0	92.8	80	120			
Calcium	16.2	0.300	5.00	12.2	80.6	80	120			
Chromium	0.199	0.00500	0.200	0	99.4	80	120			
Cobalt	0.202	0.00500	0.200	0	101	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	1604175-06A PDS	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 5:23:00 PM	Prep Date:	4/20/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Lead	0.190	0.00100	0.200	0	95.1	80	120			
Lithium	0.222	0.0100	0.200	0.0338	93.9	80	120			
Molybdenum	0.188	0.00500	0.200	0	94.1	80	120			
Selenium	0.194	0.00500	0.200	0	96.9	80	120			
Thallium	0.188	0.00150	0.200	0	93.9	80	120			

Sample ID	1604175-06A MS			Batch ID:	74701		TestNo:	SW6020A		Units:	mg/L	
SampType:	MS			Run ID:	ICP-MS4_160425E		Analysis Date:	4/25/2016 5:25:00 PM		Prep Date:	4/20/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.195	0.00250	0.200	0	97.6	80	120			
Arsenic	0.198	0.00500	0.200	0	99.2	80	120			
Barium	0.225	0.0100	0.200	0.0296	97.9	80	120			
Beryllium	0.192	0.00100	0.200	0	95.8	80	120			
Cadmium	0.189	0.00100	0.200	0	94.6	80	120			
Calcium	17.4	0.300	5.00	12.2	103	80	120			
Chromium	0.197	0.00500	0.200	0	98.6	80	120			
Cobalt	0.203	0.00500	0.200	0	101	80	120			
Lead	0.191	0.00100	0.200	0	95.3	80	120			
Lithium	0.233	0.0100	0.200	0.0338	99.4	80	120			
Molybdenum	0.194	0.00500	0.200	0	96.9	80	120			
Selenium	0.197	0.00500	0.200	0	98.4	80	120			
Thallium	0.195	0.00150	0.200	0	97.7	80	120			

Sample ID	1604175-06A MSD	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 5:27:00 PM	Prep Date:	4/20/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.193	0.00250	0.200	0	96.7	80	120	0.908	15	
Arsenic	0.199	0.00500	0.200	0	99.4	80	120	0.156	15	
Barium	0.224	0.0100	0.200	0.0296	97.0	80	120	0.795	15	
Beryllium	0.193	0.00100	0.200	0	96.4	80	120	0.619	15	
Cadmium	0.188	0.00100	0.200	0	94.2	80	120	0.490	15	
Calcium	17.2	0.300	5.00	12.2	99.6	80	120	1.07	15	
Chromium	0.197	0.00500	0.200	0	98.5	80	120	0.077	15	
Cobalt	0.203	0.00500	0.200	0	102	80	120	0.370	15	
Lead	0.193	0.00100	0.200	0	96.6	80	120	1.35	15	
Lithium	0.228	0.0100	0.200	0.0338	97.0	80	120	2.04	15	
Molybdenum	0.194	0.00500	0.200	0	97.0	80	120	0.101	15	
Selenium	0.195	0.00500	0.200	0	97.5	80	120	0.921	15	
Thallium	0.197	0.00150	0.200	0	98.3	80	120	0.680	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	ICV-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 10:36:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.0974	0.00250	0.100	0	97.4	90	110			
Arsenic	0.0993	0.00500	0.100	0	99.3	90	110			
Barium	0.0970	0.0100	0.100	0	97.0	90	110			
Beryllium	0.0975	0.00100	0.100	0	97.5	90	110			
Cadmium	0.0958	0.00100	0.100	0	95.8	90	110			
Calcium	2.37	0.300	2.50	0	94.9	90	110			
Chromium	0.102	0.00500	0.100	0	102	90	110			
Cobalt	0.103	0.00500	0.100	0	103	90	110			
Lead	0.0984	0.00100	0.100	0	98.4	90	110			
Lithium	0.0953	0.0100	0.100	0	95.3	90	110			
Molybdenum	0.0957	0.00500	0.100	0	95.7	90	110			
Selenium	0.100	0.00500	0.100	0	100	90	110			
Thallium	0.0974	0.00150	0.100	0	97.4	90	110			

Sample ID	LCVL-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 10:47:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00179	0.00250	0.00200	0	89.7	70	130			
Arsenic	0.00484	0.00500	0.00500	0	96.7	70	130			
Barium	0.00471	0.0100	0.00500	0	94.2	70	130			
Beryllium	0.00102	0.00100	0.00100	0	102	70	130			
Cadmium	0.000927	0.00100	0.00100	0	92.7	70	130			
Calcium	0.0899	0.300	0.100	0	89.9	70	130			
Chromium	0.00492	0.00500	0.00500	0	98.4	70	130			
Cobalt	0.00497	0.00500	0.00500	0	99.3	70	130			
Lead	0.000956	0.00100	0.00100	0	95.6	70	130			
Lithium	0.0105	0.0100	0.0100	0	105	70	130			
Molybdenum	0.00456	0.00500	0.00500	0	91.2	70	130			
Selenium	0.00528	0.00500	0.00500	0	106	70	130			
Thallium	0.000926	0.00150	0.00100	0	92.6	70	130			

Sample ID	CCV6-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 2:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.196	0.00250	0.200	0	98.0	90	110			
Arsenic	0.196	0.00500	0.200	0	98.0	90	110			
Barium	0.192	0.0100	0.200	0	95.9	90	110			
Beryllium	0.195	0.00100	0.200	0	97.6	90	110			
Cadmium	0.191	0.00100	0.200	0	95.7	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	CCV6-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 2:59:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.94	0.300	5.00	0	98.8	90	110			
Chromium	0.195	0.00500	0.200	0	97.7	90	110			
Cobalt	0.203	0.00500	0.200	0	101	90	110			
Lead	0.193	0.00100	0.200	0	96.3	90	110			
Lithium	0.196	0.0100	0.200	0	98.2	90	110			
Molybdenum	0.190	0.00500	0.200	0	94.9	90	110			
Selenium	0.198	0.00500	0.200	0	98.9	90	110			
Thallium	0.196	0.00150	0.200	0	97.8	90	110			

Sample ID	LCVL6-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 3:13:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00181	0.00250	0.00200	0	90.7	70	130			
Arsenic	0.00487	0.00500	0.00500	0	97.3	70	130			
Barium	0.00459	0.0100	0.00500	0	91.7	70	130			
Beryllium	0.000957	0.00100	0.00100	0	95.7	70	130			
Cadmium	0.000910	0.00100	0.00100	0	91.0	70	130			
Calcium	0.0911	0.300	0.100	0	91.1	70	130			
Chromium	0.00492	0.00500	0.00500	0	98.4	70	130			
Cobalt	0.00491	0.00500	0.00500	0	98.2	70	130			
Lead	0.000917	0.00100	0.00100	0	91.7	70	130			
Lithium	0.0112	0.0100	0.0100	0	112	70	130			
Molybdenum	0.00462	0.00500	0.00500	0	92.5	70	130			
Selenium	0.00503	0.00500	0.00500	0	101	70	130			
Thallium	0.000922	0.00150	0.00100	0	92.2	70	130			

Sample ID	CCV7-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:07:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.196	0.00250	0.200	0	98.1	90	110			
Arsenic	0.198	0.00500	0.200	0	98.8	90	110			
Barium	0.192	0.0100	0.200	0	95.9	90	110			
Beryllium	0.194	0.00100	0.200	0	96.8	90	110			
Cadmium	0.190	0.00100	0.200	0	95.1	90	110			
Calcium	4.96	0.300	5.00	0	99.1	90	110			
Chromium	0.195	0.00500	0.200	0	97.7	90	110			
Cobalt	0.205	0.00500	0.200	0	103	90	110			
Lead	0.192	0.00100	0.200	0	96.2	90	110			
Lithium	0.199	0.0100	0.200	0	99.4	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	CCV7-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:07:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.192	0.00500	0.200	0	95.9	90	110			
Selenium		0.198	0.00500	0.200	0	99.0	90	110			
Thallium		0.197	0.00150	0.200	0	98.5	90	110			

Sample ID	LCVL7-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:14:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00183	0.00250	0.00200	0	91.6	70	130			
Arsenic	0.00499	0.00500	0.00500	0	99.8	70	130			
Barium	0.00463	0.0100	0.00500	0	92.5	70	130			
Beryllium	0.000961	0.00100	0.00100	0	96.1	70	130			
Cadmium	0.000895	0.00100	0.00100	0	89.5	70	130			
Calcium	0.0953	0.300	0.100	0	95.3	70	130			
Chromium	0.00496	0.00500	0.00500	0	99.2	70	130			
Cobalt	0.00501	0.00500	0.00500	0	100	70	130			
Lead	0.000909	0.00100	0.00100	0	90.9	70	130			
Lithium	0.0111	0.0100	0.0100	0	111	70	130			
Molybdenum	0.00447	0.00500	0.00500	0	89.4	70	130			
Selenium	0.00540	0.00500	0.00500	0	108	70	130			
Thallium	0.000932	0.00150	0.00100	0	93.2	70	130			

Sample ID	CCV8-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:43:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.7	90	110			
Arsenic	0.199	0.00500	0.200	0	99.3	90	110			
Barium	0.194	0.0100	0.200	0	97.0	90	110			
Beryllium	0.194	0.00100	0.200	0	97.0	90	110			
Cadmium	0.191	0.00100	0.200	0	95.7	90	110			
Calcium	4.99	0.300	5.00	0	99.8	90	110			
Chromium	0.198	0.00500	0.200	0	99.0	90	110			
Cobalt	0.204	0.00500	0.200	0	102	90	110			
Lead	0.190	0.00100	0.200	0	95.2	90	110			
Lithium	0.195	0.0100	0.200	0	97.3	90	110			
Molybdenum	0.192	0.00500	0.200	0	95.9	90	110			
Selenium	0.200	0.00500	0.200	0	99.8	90	110			
Thallium	0.196	0.00150	0.200	0	98.0	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	LCVL8-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 4:48:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00183	0.00250	0.00200	0	91.5	70	130			
Arsenic	0.00491	0.00500	0.00500	0	98.2	70	130			
Barium	0.00469	0.0100	0.00500	0	93.7	70	130			
Beryllium	0.000822	0.00100	0.00100	0	82.2	70	130			
Cadmium	0.000924	0.00100	0.00100	0	92.4	70	130			
Calcium	0.108	0.300	0.100	0	108	70	130			
Chromium	0.00489	0.00500	0.00500	0	97.9	70	130			
Cobalt	0.00503	0.00500	0.00500	0	101	70	130			
Lead	0.000901	0.00100	0.00100	0	90.1	70	130			
Lithium	0.0105	0.0100	0.0100	0	105	70	130			
Molybdenum	0.00468	0.00500	0.00500	0	93.6	70	130			
Selenium	0.00540	0.00500	0.00500	0	108	70	130			
Thallium	0.000903	0.00150	0.00100	0	90.3	70	130			

Sample ID	CCV9-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 5:29:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	98.8	90	110			
Arsenic	0.200	0.00500	0.200	0	99.8	90	110			
Barium	0.193	0.0100	0.200	0	96.4	90	110			
Beryllium	0.189	0.00100	0.200	0	94.4	90	110			
Cadmium	0.190	0.00100	0.200	0	95.1	90	110			
Calcium	4.95	0.300	5.00	0	99.0	90	110			
Chromium	0.197	0.00500	0.200	0	98.7	90	110			
Cobalt	0.206	0.00500	0.200	0	103	90	110			
Lead	0.193	0.00100	0.200	0	96.4	90	110			
Lithium	0.194	0.0100	0.200	0	97.0	90	110			
Molybdenum	0.191	0.00500	0.200	0	95.6	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			
Thallium	0.197	0.00150	0.200	0	98.6	90	110			

Sample ID	LCVL9-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 5:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00196	0.00250	0.00200	0	98.1	70	130			
Arsenic	0.00488	0.00500	0.00500	0	97.7	70	130			
Barium	0.00475	0.0100	0.00500	0	95.0	70	130			
Beryllium	0.000866	0.00100	0.00100	0	86.6	70	130			
Cadmium	0.000953	0.00100	0.00100	0	95.3	70	130			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	LCVL9-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 5:33:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.107	0.300	0.100	0	107	70	130			
Chromium	0.00495	0.00500	0.00500	0	99.0	70	130			
Cobalt	0.00500	0.00500	0.00500	0	100	70	130			
Lead	0.000945	0.00100	0.00100	0	94.5	70	130			
Lithium	0.0109	0.0100	0.0100	0	109	70	130			
Molybdenum	0.00462	0.00500	0.00500	0	92.3	70	130			
Selenium	0.00515	0.00500	0.00500	0	103	70	130			
Thallium	0.000949	0.00150	0.00100	0	94.9	70	130			

Sample ID	CCV10-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 5:58:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.194	0.00250	0.200	0	97.0	90	110			
Arsenic	0.200	0.00500	0.200	0	100	90	110			
Barium	0.189	0.0100	0.200	0	94.4	90	110			
Beryllium	0.192	0.00100	0.200	0	96.2	90	110			
Cadmium	0.186	0.00100	0.200	0	93.2	90	110			
Calcium	4.95	0.300	5.00	0	99.1	90	110			
Chromium	0.198	0.00500	0.200	0	98.9	90	110			
Cobalt	0.205	0.00500	0.200	0	103	90	110			
Lead	0.192	0.00100	0.200	0	95.8	90	110			
Lithium	0.194	0.0100	0.200	0	97.2	90	110			
Molybdenum	0.189	0.00500	0.200	0	94.4	90	110			
Selenium	0.201	0.00500	0.200	0	101	90	110			
Thallium	0.197	0.00150	0.200	0	98.3	90	110			

Sample ID	LCVL10-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 6:02:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00182	0.00250	0.00200	0	91.0	70	130			
Arsenic	0.00485	0.00500	0.00500	0	96.9	70	130			
Barium	0.00465	0.0100	0.00500	0	93.1	70	130			
Beryllium	0.00104	0.00100	0.00100	0	104	70	130			
Cadmium	0.000948	0.00100	0.00100	0	94.8	70	130			
Calcium	0.105	0.300	0.100	0	105	70	130			
Chromium	0.00499	0.00500	0.00500	0	99.8	70	130			
Cobalt	0.00503	0.00500	0.00500	0	101	70	130			
Lead	0.000915	0.00100	0.00100	0	91.5	70	130			
Lithium	0.0111	0.0100	0.0100	0	111	70	130			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160425E

Sample ID	LCVL10-160425	Batch ID:	R85434	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160425E	Analysis Date:	4/25/2016 6:02:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.00448	0.00500	0.00500	0	89.6	70	130			
Selenium	0.00520	0.00500	0.00500	0	104	70	130			
Thallium	0.000946	0.00150	0.00100	0	94.6	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160426B

The QC data in batch 74701 applies to the following samples: 1604175-06A, 1604175-07A, 1604175-08A, 1604175-09A, 1604175-10A, 1604175-11A, 1604175-12A, 1604175-13A, 1604175-14A, 1604175-15A, 1604175-16A, 1604175-17A

Sample ID	MB-74701		Batch ID:	74701		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160426B		Analysis Date:	4/26/2016 2:33:00 PM		Prep Date:	4/20/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID	LCS-74701			Batch ID:	74701		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_160426B		Analysis Date:	4/26/2016 2:35:00 PM		Prep Date:	4/20/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron 0.187 0.0300 0.200 0 93.3 80 120

Sample ID	LCSD-74701	Batch ID:	74701	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 2:37:00 PM	Prep Date:	4/20/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.202 0.0300 0.200 0 101 80 120 7.96 15

Sample ID	1604175-06A SD		Batch ID:	74701		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD		Run ID:	ICP-MS4_160426B		Analysis Date:	4/26/2016 2:43:00 PM		Prep Date:	4/20/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.107 0.150 0 0.0867 20.8 10 R

Sample ID	1604175-06A PDS			Batch ID:	74701			TestNo:	SW6020A			Units:	mg/L		
SampType:	PDS			Run ID:	ICP-MS4_160426B			Analysis Date:	4/26/2016 3:03:00 PM			Prep Date:	4/20/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Boron 0.292 0.0300 0.200 0.0867 103 80 120

Sample ID	1604175-06A MS			Batch ID:	74701		TestNo:	SW6020A		Units:	mg/L	
SampType:	MS			Run ID:	ICP-MS4_160426B		Analysis Date:	4/26/2016 3:05:00 PM		Prep Date:	4/20/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.289 0.0300 0.200 0.0867 101 80 120

Sample ID	1604175-06A MSD			Batch ID:	74701			TestNo:	SW6020A			Units:	mg/L		
SampType:	MSD			Run ID:	ICP-MS4_160426B			Analysis Date:	4/26/2016 3:08:00 PM			Prep Date:	4/20/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Boron 0.292 0.0300 0.200 0.0867 102 80 120 0.704 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160426B

Sample ID	ICV-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 11:36:00 AM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.0978	0.0300	0.100	0	97.8	90	110
Calcium	2.39	0.300	2.50	0	95.5	90	110

Sample ID	LCVL-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 11:45:00 AM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.0198	0.0300	0.0200	0	99.0	70	130
Calcium	0.100	0.300	0.100	0	100	70	130

Sample ID	CCV4-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 2:19:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.202	0.0300	0.200	0	101	90	110

Sample ID	LCVL4-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 2:29:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.0218	0.0300	0.0200	0	109	70	130

Sample ID	CCV5-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 3:14:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.200	0.0300	0.200	0	100	90	110

Sample ID	LCVL5-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 3:20:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.0211	0.0300	0.0200	0	105	70	130

Sample ID	CCV6-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 3:49:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

Boron	0.207	0.0300	0.200	0	103	90	110
Calcium	4.99	0.300	5.00	0	99.9	90	110

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160426B

Sample ID	LCVL6-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 4:08:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0211	0.0300	0.0200	0	106	70	130			
Calcium	0.0978	0.300	0.100	0	97.8	70	130			

Sample ID	CCV7-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 4:36:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.98	0.300	5.00	0	99.7	90	110			

Sample ID	LCVL7-160426	Batch ID:	R85458	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160426B	Analysis Date:	4/26/2016 4:41:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0939	0.300	0.100	0	93.9	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160427A

The QC data in batch 74670 applies to the following samples: 1604175-01A, 1604175-02A, 1604175-03A, 1604175-04A, 1604175-05A

Sample ID	1604166-37B SD			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_160427A		Analysis Date:	4/27/2016 2:12:00 PM		Prep Date:	4/19/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	32.3	15.0	0	31.8				1.55	10	

Sample ID	1604166-37B PDS			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	PDS			Run ID:	ICP-MS4_160427A		Analysis Date:	4/27/2016 2:21:00 PM		Prep Date:	4/19/2016	
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Calcium	80.1	3.00	50.0	31.8	96.6	80	120			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160427A

Sample ID	ICV-160427	Batch ID:	R85480	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS4_160427A	Analysis Date:	4/27/2016 1:41:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		2.51	0.300	2.50	0	100	90	110			

Sample ID	LCVL-160427	Batch ID:	R85480	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160427A	Analysis Date:	4/27/2016 1:55:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0931	0.300	0.100	0	93.1	70	130			

Sample ID	CCV1-160427	Batch ID:	R85480	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160427A	Analysis Date:	4/27/2016 2:23:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		4.89	0.300	5.00	0	97.8	90	110			

Sample ID	LCVL1-160427	Batch ID:	R85480	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160427A	Analysis Date:	4/27/2016 2:28:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0945	0.300	0.100	0	94.5	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160428B

The QC data in batch 74670 applies to the following samples: 1604175-01A, 1604175-02A, 1604175-03A, 1604175-04A, 1604175-05A

Sample ID	MB-74670		Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160428B		Analysis Date:	4/28/2016 12:38:00 PM		Prep Date:	4/19/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID	LCS-74670		Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_160428B		Analysis Date:	4/28/2016 12:41:00 PM		Prep Date:	4/19/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.202 0.0300 0.200 0 101 80 120

Sample ID	LCSD-74670		Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD		Run ID:	ICP-MS4_160428B		Analysis Date:	4/28/2016 12:43:00 PM		Prep Date:	4/19/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.210 0.0300 0.200 0 105 80 120 3.72 15

Sample ID	1604166-37B SD		Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD		Run ID:	ICP-MS4_160428B		Analysis Date:	4/28/2016 12:49:00 PM		Prep Date:	4/19/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.250 0.750 0 0.0590 0 10

Sample ID	1604166-37B PDS	Batch ID:	74670	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160428B	Analysis Date:	4/28/2016 1:05:00 PM	Prep Date:	4/19/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 1.15 0.150 1.00 0.0590 109 80 120

Sample ID	1604166-37B MS			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	MS			Run ID:	ICP-MS4_160428B		Analysis Date:	4/28/2016 1:07:00 PM		Prep Date:	4/19/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron 0.329 0.150 0.200 0.0590 135 80 120 S

Sample ID	1604166-37B MSD			Batch ID:	74670		TestNo:	SW6020A		Units:	mg/L	
SampType:	MSD			Run ID:	ICP-MS4_160428B		Analysis Date:	4/28/2016 1:09:00 PM		Prep Date:	4/19/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.301 0.150 0.200 0.0590 121 80 120 8.63 15 S

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160428B

Sample ID	ICV-160428	Batch ID:	R85511	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160428B	Analysis Date:	4/28/2016 12:21:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.103	0.0300	0.100	0	103	90	110			

Sample ID	LCVL-160428	Batch ID:	R85511	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160428B	Analysis Date:	4/28/2016 12:27:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0209	0.0300	0.0200	0	105	70	130			

Sample ID	CCV1-160428	Batch ID:	R85511	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160428B	Analysis Date:	4/28/2016 1:19:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.197	0.0300	0.200	0	98.5	90	110			

Sample ID	LCVL1-160428	Batch ID:	R85511	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160428B	Analysis Date:	4/28/2016 1:32:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0234	0.0300	0.0200	0	117	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_160425A

The QC data in batch 74762 applies to the following samples: 1604175-11D, 1604175-12D, 1604175-13D, 1604175-14D, 1604175-15D, 1604175-16D, 1604175-17D

Sample ID	MB-74762		Batch ID:	74762		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC2_160425A		Analysis Date:	4/25/2016 9:40:38 AM		Prep Date:	4/25/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-74762		Batch ID:	74762		TestNo:	E300		Units:	mg/L	
SampType:	LCS		Run ID:	IC2_160425A		Analysis Date:	4/25/2016 9:55:14 AM		Prep Date:	4/25/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.29	1.00	10.00	0	92.9	90	110			
Fluoride	3.70	0.400	4.000	0	92.4	90	110			
Sulfate	29.9	3.00	30.00	0	99.7	90	110			

Sample ID	LCSD-74762	Batch ID:	74762	TestNo:	E300	Units:	mg/L				
SampType:	LCSD	Run ID:	IC2_160425A	Analysis Date:	4/25/2016 10:09:51 AM	Prep Date:	4/25/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.21	1.00	10.00	0	92.1	90	110	0.829	20	
Fluoride	3.72	0.400	4.000	0	92.9	90	110	0.529	20	
Sulfate	29.8	3.00	30.00	0	99.2	90	110	0.490	20	

Sample ID	1604175-14DMS			Batch ID:	74762		TestNo:	E300		Units:	mg/L	
SampType:	MS			Run ID:	IC2_160425A		Analysis Date:	4/25/2016 3:40:26 PM		Prep Date:	4/25/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	2520	100	2000	565.9	97.9	90	110			
Fluoride	1950	40.0	2000	0	97.7	90	110			
Sulfate	2250	300	2000	145.5	105	90	110			

Sample ID: 1604175-14DMSD	Batch ID: 74762	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_160425A	Analysis Date: 4/25/2016 3:55:03 PM	Prep Date: 4/25/2016							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2530	100	2000	565.9	98.4	90	110	0.410	20	
Fluoride	1960	40.0	2000	0	97.9	90	110	0.189	20	
Sulfate	2270	300	2000	145.5	106	90	110	0.893	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_160425A

Sample ID	1604175-15DMS	Batch ID:	74762	TestNo:	E300	Units:	mg/L		
SampType:	MS	Run ID:	IC2_160425A	Analysis Date:	4/25/2016 4:24:16 PM	Prep Date:	4/25/2016		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride	2540	100	2000	568.5	98.5	90	110		
Fluoride	1970	40.0	2000	0	98.3	90	110		
Sulfate	2270	300	2000	196.9	104	90	110		

Sample ID	1604175-15DMSD	Batch ID:	74762	TestNo:	E300	Units:	mg/L		
SampType:	MSD	Run ID:	IC2_160425A	Analysis Date:	4/25/2016 4:38:52 PM	Prep Date:	4/25/2016		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride	2560	100	2000	568.5	99.5	90	110	0.832	20
Fluoride	1980	40.0	2000	0	99.0	90	110	0.693	20
Sulfate	2300	300	2000	196.9	105	90	110	1.32	20

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_160425A

Sample ID	ICV-160425	Batch ID:	R85438	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_160425A	Analysis Date:	4/25/2016 9:04:31 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	23.6	1.00	25.00	0	94.4	90	110			
Fluoride	9.59	0.400	10.00	0	95.9	90	110			
Sulfate	75.8	3.00	75.00	0	101	90	110			

Sample ID	CCV1-160425	Batch ID:	R85438	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_160425A	Analysis Date:	4/25/2016 1:19:54 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.39	1.00	10.00	0	93.9	90	110			
Fluoride	3.81	0.400	4.000	0	95.2	90	110			
Sulfate	30.0	3.00	30.00	0	100	90	110			

Sample ID	CCV2-160425	Batch ID:	R85438	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_160425A	Analysis Date:	4/25/2016 5:08:05 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.26	1.00	10.00	0	92.6	90	110			
Fluoride	3.84	0.400	4.000	0	96.0	90	110			
Sulfate	30.0	3.00	30.00	0	100	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160425A

The QC data in batch 74764 applies to the following samples: 1604175-01D, 1604175-02D, 1604175-03D, 1604175-04D, 1604175-05D, 1604175-06D, 1604175-07D, 1604175-08D, 1604175-09D, 1604175-10D

Sample ID	MB-74764		Batch ID:	74764		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC4_160425A		Analysis Date:	4/25/2016 10:01:12 AM		Prep Date:	4/25/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-74764			Batch ID:	74764		TestNo:	E300		Units:	mg/L	
SampType:	LCS			Run ID:	IC4_160425A		Analysis Date:	4/25/2016 10:16:12 AM		Prep Date:	4/25/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.56	1.00	10.00	0	95.6	90	110			
Fluoride	3.80	0.400	4.000	0	95.0	90	110			
Sulfate	28.4	3.00	30.00	0	94.6	90	110			

Sample ID	LCSD-74764		Batch ID:	74764		TestNo:	E300		Units:	mg/L	
SampType:	LCSD		Run ID:	IC4_160425A		Analysis Date:	4/25/2016 10:31:12 AM		Prep Date:	4/25/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.58	1.00	10.00	0	95.8	90	110	0.181	20	
Fluoride	3.81	0.400	4.000	0	95.3	90	110	0.344	20	
Sulfate	28.8	3.00	30.00	0	96.0	90	110	1.39	20	

Sample ID	1604175-09DMS			Batch ID:	74764		TestNo:	E300		Units:	mg/L	
SampType:	MS			Run ID:	IC4_160425A		Analysis Date:	4/25/2016 4:28:44 PM		Prep Date:	4/25/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	2450	100	2000	393.1	103	90	110			
Fluoride	2020	40.0	2000	0	101	90	110			
Sulfate	2040	300	2000	0	102	90	110			

Sample ID	1604175-09DMSD			Batch ID:	74764			TestNo:	E300			Units:	mg/L		
SampType:	MSD			Run ID:	IC4_160425A			Analysis Date:	4/25/2016 4:43:44 PM			Prep Date:	4/25/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Chloride	2470	100	2000	393.1	104	90	110	0.690	20	
Fluoride	2040	40.0	2000	0	102	90	110	0.972	20	
Sulfate	2090	300	2000	0	104	90	110	2.12	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160425A

Sample ID	ICV-160425	Batch ID:	R85439	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_160425A	Analysis Date:	4/25/2016 9:19:38 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	23.7	1.00	25.00	0	94.8	90	110			
Fluoride	9.45	0.400	10.00	0	94.5	90	110			
Sulfate	71.2	3.00	75.00	0	94.9	90	110			

Sample ID	CCV1-160425	Batch ID:	R85439	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160425A	Analysis Date:	4/25/2016 1:36:48 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.0	1.00	10.00	0	100	90	110			
Fluoride	3.97	0.400	4.000	0	99.3	90	110			
Sulfate	29.7	3.00	30.00	0	98.8	90	110			

Sample ID	CCV2-160425	Batch ID:	R85439	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC4_160425A	Analysis Date:	4/25/2016 5:13:44 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.39	1.00	10.00	0	93.9	90	110			
Fluoride	3.70	0.400	4.000	0	92.6	90	110			
Sulfate	28.0	3.00	30.00	0	93.3	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160420A

The QC data in batch 74689 applies to the following samples: 1604175-01D, 1604175-02D, 1604175-03D, 1604175-04D, 1604175-05D, 1604175-06D, 1604175-07D, 1604175-08D, 1604175-09D, 1604175-10D, 1604175-11D, 1604175-12D, 1604175-13D, 1604175-14D, 1604175-15D, 1604175-16D, 1604175-17D

Sample ID 1604175-01D-DUP	Batch ID: 74689	TestNo: M4500-H+ B	Units: pH Units@17.6°C
SampType: DUP	Run ID: TITRATOR_160420A	Analysis Date: 4/20/2016 9:33:00 AM	Prep Date: 4/20/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.97	0	0	7.000				0.429	5	

Sample ID 1604176-01B-DUP	Batch ID: 74689	TestNo: M4500-H+ B	Units: pH Units@21.2°C
SampType: DUP	Run ID: TITRATOR_160420A	Analysis Date: 4/20/2016 10:21:00 AM	Prep Date: 4/20/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.84	0	0	7.860				0.255	5	

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160420A

Sample ID	ICV-160420	Batch ID:	R85330	TestNo:	M4500-H+ B	Units:	pH	Units@21.8°C			
SampType:	ICV	Run ID:	TITRATOR_160420A	Analysis Date:	4/20/2016 8:36:00 AM	Prep Date:	4/20/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	10.0	0	10.00	0	100	99	101			

Sample ID	CCV1-160420	Batch ID:	R85330	TestNo:	M4500-H+ B	Units:	pH	Units@21°C		
SampType:	CCV	Run ID:	TITRATOR_160420A	Analysis Date:	4/20/2016 9:52:00 AM	Prep Date:	4/20/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	7.04	0	7.000	0	101	97.1	102.9			

Sample ID	CCV2-160420	Batch ID:	R85330	TestNo:	M4500-H+ B	Units:	pH Units@21.5°C			
SampType:	CCV	Run ID:	TITRATOR_160420A	Analysis Date:	4/20/2016 10:23:00 AM	Prep Date:	4/20/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	7.05	0	7.000	0	101	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1604175
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160420A

The QC data in batch 74704 applies to the following samples: 1604175-01D, 1604175-02D, 1604175-03D, 1604175-04D, 1604175-05D, 1604175-06D, 1604175-07D, 1604175-08D, 1604175-09D, 1604175-10D, 1604175-11D, 1604175-12D, 1604175-13D, 1604175-14D, 1604175-15D, 1604175-16D, 1604175-17D

Sample ID	MB-74704	Batch ID:	74704	TestNo:	M2540C	Units:	mg/L			
SampType:	MBLK	Run ID:	WC_160420A	Analysis Date:	4/21/2016 8:40:00 AM	Prep Date:	4/20/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-74704			Batch ID:	74704		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS			Run ID:	WC_160420A		Analysis Date:	4/21/2016 8:40:00 AM		Prep Date:	4/20/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 754 10.0 745.6 0 101 90 113

Sample ID	1604202-01A-DUP			Batch ID:	74704		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP			Run ID:	WC_160420A		Analysis Date:	4/21/2016 8:40:00 AM		Prep Date:	4/20/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 13100 200 0 12900 1.54 5

Sample ID	1604202-03A-DUP			Batch ID:	74704		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP			Run ID:	WC_160420A		Analysis Date:	4/21/2016 8:40:00 AM		Prep Date:	4/20/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 23100 200 0 22160 4.07 5

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 NELAC certified

Case Narrative

Lab No: 20160374

This report contains the analytical results for the 17 sample(s) received under chain of custody by ESC Lab Sciences on 04/20/16 10:38:16. These samples are associated with your 1604175 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances

The following QC parameters are outside method control limits:

Ra-226 MS % Rec & MSD RPD SDG R1076

Sample -07 Ra-228 was confirmed.



Client : DHL Analytical, Inc.
 Client Project : 1604175
 Lab Number : 20160374
 Date Reported : 05/24/16
 Date Received : 04/20/16
 Page Number : 2 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160374-01
Client ID : FGD-2
Date Sampled : 04/14/16 08:15:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.198 +/- 1.19	2.22	pCi/l				
Radium-226 SM 7500 Ra B M*	0.198 +/- 0.149	0.196	pCi/l		04/25/16	04/27/16	AK
Radium-228 EPA 904*/9320*	-0.394 +/- 1.04	2.03	pCi/l		05/13/16	05/16/16	AE

Lab ID : 20160374-02
Client ID : FGD-3
Date Sampled : 04/14/16 09:05:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.639 +/- 1.00	1.63	pCi/l				
Radium-226 SM 7500 Ra B M*	0.096 +/- 0.172	0.276	pCi/l		04/25/16	04/27/16	AK
Radium-228 EPA 904*/9320*	0.543 +/- 0.823	1.35	pCi/l		05/13/16	05/16/16	AE

Lab ID : 20160374-03
Client ID : FGD-6
Date Sampled : 04/14/16 10:00:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	2.56 +/- 1.38	2.10	pCi/l				
Radium-226 SM 7500 Ra B M*	0.484 +/- 0.355	0.439	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	2.08 +/- 1.02	1.66	pCi/l		05/13/16	05/20/16	AE

Lab ID : 20160374-04
Client ID : FGD-4
Date Sampled : 04/14/16 10:50:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.868 +/- 1.04	1.39	pCi/l				
Radium-226 SM 7500 Ra B M*	0.560 +/- 0.223	0.184	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	0.31 +/- 0.814	1.21	pCi/l		05/13/16	05/20/16	AE



Client : DHL Analytical, Inc.
 Client Project : 1604175
 Lab Number : 20160374
 Date Reported : 05/24/16
 Date Received : 04/20/16
 Page Number : 3 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160374-05
Client ID : FGD-5
Date Sampled : 04/14/16 11:40:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	2.00 +/- 1.32	1.68	pCi/l				
Radium-226 SM 7500 Ra B M*	0.951 +/- 0.430	0.439	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	1.05 +/- 0.895	1.24	pCi/l		05/13/16	05/16/16	AE

Lab ID : 20160374-06
Client ID : FDG-1
Date Sampled : 04/14/16 12:35:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.354 +/- 1.10	1.72	pCi/l				
Radium-226 SM 7500 Ra B M*	0.024 +/- 0.256	0.439	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	0.330 +/- 0.844	1.28	pCi/l		05/13/16	05/16/16	AE

Lab ID : 20160374-07
Client ID : FGD-8
Date Sampled : 04/14/16 14:50:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	9.31 +/- 1.10	2.54	pCi/l				
Radium-226 SM 7500 Ra B M*	0.973 +/- 0.275	0.304	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	8.34 +/- 0.822	2.24	pCi/l		05/13/16	05/20/16	AE

Lab ID : 20160374-08
Client ID : FGD-12
Date Sampled : 04/14/16 15:40:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	2.02 +/- 1.11	1.27	pCi/l				
Radium-226 SM 7500 Ra B M*	0.560 +/- 0.330	0.329	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	1.46 +/- 0.777	0.944	pCi/l		05/13/16	05/16/16	AE



Client : DHL Analytical, Inc.
 Client Project : 1604175
 Lab Number : 20160374
 Date Reported : 05/24/16
 Date Received : 04/20/16
 Page Number : 4 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160374-09
Client ID : FGD-11
Date Sampled : 04/14/16 16:30:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	4.12 +/- 1.19	1.20	pCi/l				
Radium-226 SM 7500 Ra B M*	1.69 +/- 0.412	0.199	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	2.43 +/- 0.780	1.00	pCi/l		05/13/16	05/16/16	AE

Lab ID : 20160374-10
Client ID : MW-07
Date Sampled : 04/15/16 07:50:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.863 +/- 1.30	1.78	pCi/l				
Radium-226 SM 7500 Ra B M*	0.214 +/- 0.234	0.344	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	0.650 +/- 1.07	1.43	pCi/l		05/13/16	05/16/16	AE

Lab ID : 20160374-11
Client ID : AL-10
Date Sampled : 04/15/16 09:15:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	1.12 +/- 2.38	3.32	pCi/l				
Radium-226 SM 7500 Ra B M*	0.586 +/- 0.426	0.562	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	0.532 +/- 1.96	2.76	pCi/l		05/13/16	05/20/16	AE

Lab ID : 20160374-12
Client ID : MW-02
Date Sampled : 04/15/16 10:20:00
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.555 +/- 1.45	2.46	pCi/l				
Radium-226 SM 7500 Ra B M*	0.555 +/- 0.503	0.716	pCi/l		04/27/16	04/29/16	AK
Radium-228 EPA 904*/9320*	-0.263 +/- 0.946	1.74	pCi/l		05/13/16	05/16/16	AE



Client : DHL Analytical, Inc.
 Client Project : 1604175
 Lab Number : 20160374
 Date Reported : 05/24/16
 Date Received : 04/20/16
 Page Number : 5 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160374-13
Client ID : MW-09
Date Sampled : 04/15/16 11:20:00
Matrix : NPW

Radiochemical Analyses

Combined Radium		3.56 +/- 1.14	1.30	pCi/l			
Radium-226	SM 7500 Ra B M*	0.883 +/- 0.243	0.140	pCi/l	04/27/16	04/29/16	AK
Radium-228	EPA 904*/9320*	2.68 +/- 0.896	1.16	pCi/l	05/13/16	05/16/16	AE

Lab ID : 20160374-14
Client ID : MW-08
Date Sampled : 04/15/16 12:25:00
Matrix : NPW

Radiochemical Analyses

Combined Radium		3.57 +/- 1.29	1.90	pCi/l			
Radium-226	SM 7500 Ra B M*	0.537 +/- 0.191	0.197	pCi/l	04/27/16	04/29/16	AK
Radium-228	EPA 904*/9320*	3.03 +/- 1.10	1.70	pCi/l	05/13/16	05/20/16	AE

Lab ID : 20160374-15
Client ID : DUP-1
Date Sampled : 04/15/16 12:25:00
Matrix : NPW

Radiochemical Analyses

Combined Radium		3.05 +/- 1.130	1.39	pCi/l			
Radium-226	SM 7500 Ra B M*	0.973 +/- 0.269	0.157	pCi/l	04/27/16	04/29/16	AK
Radium-228	EPA 904*/9320*	2.07 +/- 0.861	1.23	pCi/l	05/13/16	05/16/16	AE

Lab ID : 20160374-16
Client ID : EB-1
Date Sampled : 04/15/16 08:25:00
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.412 +/- 1.32	1.77	pCi/l			
Radium-226	SM 7500 Ra B M*	0.412 +/- 0.178	0.177	pCi/l	04/27/16	04/29/16	AK
Radium-228	EPA 904*/9320*	-0.322 +/- 1.14	1.59	pCi/l	05/13/16	05/16/16	AE

Client : DHL Analytical, Inc.
Client Project : 1604175
Lab Number : 20160374
Date Reported : 05/24/16
Date Received : 04/20/16
Page Number : 6 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20160374-17							
Client ID : MW-05							
Date Sampled : 04/15/16 13:40:00							
Matrix : NPW							

Radiochemical Analyses

Combined Radium		3.83 +/- 1.21	1.29	pCi/l			
Radium-226	SM 7500 Ra B M*	1.10 +/- 0.265	0.137	pCi/l	04/27/16	04/29/16	AK
Radium-228	EPA 904*/9320*	2.73 +/- 0.947	1.15	pCi/l	05/13/16	05/16/16	AE

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Date
Radium-226	0.00	92.4		NC	0.695	97.7	71.4	30.9	05/03/16
Radium-228	-0.244	113.0		NC	0.871	126.0	130.0	2.7	05/16/16

Lab Approval: _____



DHL Analytical, Inc.

2300 Double Creek Drive

Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1604175

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Subcontractor:

ESC Laboratory

311 North Aspen

Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515

FAX:

Acct #: DHLRRTX

18-Apr-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests				
					E904.0	SM7500Ra-B M			
FGD-2	Aqueous	-01B	04/14/16 08:15 AM	500HDPEHNO3	1				
FGD-2	Aqueous	-01C	04/14/16 08:15 AM	500HDPEHNO3		1			
FGD-3	Aqueous	-02B	04/14/16 09:05 AM	500HDPEHNO3	1				
FGD-3	Aqueous	-02C	04/14/16 09:05 AM	500HDPEHNO3		1			
FGD-6	Aqueous	-03B	04/14/16 10:00 AM	500HDPEHNO3	1				
FGD-6	Aqueous	-03C	04/14/16 10:00 AM	500HDPEHNO3		1			
FGD-4	Aqueous	-04B	04/14/16 10:50 AM	500HDPEHNO3	1				
FGD-4	Aqueous	-04C	04/14/16 10:50 AM	500HDPEHNO3		1			
FGD-5	Aqueous	-05B	04/14/16 11:40 AM	500HDPEHNO3	1				
FGD-5	Aqueous	-05C	04/14/16 11:40 AM	500HDPEHNO3		1			
FGD-1	Aqueous	-06B	04/14/16 12:35 PM	500HDPEHNO3	1				
FGD-1	Aqueous	-06C	04/14/16 12:35 PM	500HDPEHNO3		1			
FGD-8	Aqueous	-07B	04/14/16 02:50 PM	500HDPEHNO3	1				
FGD-8	Aqueous	-07C	04/14/16 02:50 PM	500HDPEHNO3		1			
FGD-12	Aqueous	-08B	04/14/16 03:40 PM	500HDPEHNO3	1				
FGD-12	Aqueous	-08C	04/14/16 03:40 PM	500HDPEHNO3		1			
FGD-11	Aqueous	-09B	04/14/16 04:30 PM	500HDPEHNO3	1				
FGD-11	Aqueous	-09C	04/14/16 04:30 PM	500HDPEHNO3		1			

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: <u>[Signature]</u>	Date/Time: <u>4/18/16 17:30</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4/18/16 17:30</u>
Relinquished by: _____	Date/Time: _____	Received by: <u>[Signature]</u>	Date/Time: <u>4/20/16 10:38</u>

20160374

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1604175

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515
FAX:
Acct #: DHLRRTX

18-Apr-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests				
					E904.0	SM7500Ra-B M			
MW-07	Aqueous	-10B	04/15/16 07:50 AM	500HDPEHNO3	1				
MW-07	Aqueous	-10C	04/15/16 07:50 AM	500HDPEHNO3		1			
AL-10	Aqueous	-11B	04/15/16 09:15 AM	500HDPEHNO3	1				
AL-10	Aqueous	-11C	04/15/16 09:15 AM	500HDPEHNO3		1			
MW-02	Aqueous	-12B	04/15/16 10:20 AM	500HDPEHNO3	1				
MW-02	Aqueous	-12C	04/15/16 10:20 AM	500HDPEHNO3		1			
MW-09	Aqueous	-13B	04/15/16 11:20 AM	500HDPEHNO3	1				
MW-09	Aqueous	-13C	04/15/16 11:20 AM	500HDPEHNO3		1			
MW-08	Aqueous	-14B	04/15/16 12:25 PM	500HDPEHNO3	1				
MW-08	Aqueous	-14C	04/15/16 12:25 PM	500HDPEHNO3		1			
DUP-1	Aqueous	-15B	04/15/16 12:25 PM	500HDPEHNO3	1				
DUP-1	Aqueous	-15C	04/15/16 12:25 PM	500HDPEHNO3		1			
EB-1	Equip Blank	-16B	04/15/16 08:25 AM	500HDPEHNO3	1				
EB-1	Equip Blank	-16C	04/15/16 08:25 AM	500HDPEHNO3		1			
MW-05	Aqueous	-17B	04/15/16 01:40 PM	500HDPEHNO3	1				
MW-05	Aqueous	-17C	04/15/16 01:40 PM	500HDPEHNO3		1			

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

C830741

Relinquished by: [Signature] 4/18/16 17:30
Relinquished by: _____

Received by: [Signature] 4/18/16 17:30
Received by: [Signature] 4/20/16 10:38

20160374

SAMPLE LOGIN

Date Received: 04/20/16 10:38:16

Lab Number: 20160374

Due: 05/18/16

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20160374-01 B	FGD-2	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-01 A	FGD-2	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-02 A	FGD-3	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-02 B	FGD-3	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-03 A	FGD-6	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-03 B	FGD-6	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-04 B	FGD-4	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-04 A	FGD-4	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-05 A	FGD-5	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-05 B	FGD-5	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-06 A	FDG-1	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-06 B	FDG-1	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-07 A	FGD-8	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-07 B	FGD-8	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20160374-08 A	FGD-12	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-08 B	FGD-12	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-09 B	FGD-11	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-09 A	FGD-11	NPW	04/14/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-10 A	MW-07	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-10 B	MW-07	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-11 A	AL-10	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-11 B	AL-10	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-12 A	MW-02	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-12 B	MW-02	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-13 A	MW-09	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-13 B	MW-09	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-14 B	MW-08	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-14 A	MW-08	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-15 A	DUP-1	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-15 B	DUP-1	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160374-16 A	EB-1	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160374-16 B	EB-1	NPW	04/15/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes

Radium-226

Radium-228

SM 7500 Ra B M*

EPA 904*/9320*

20160374-17 B

MW-05

NPW

04/15/16

Plastic

500 ml

HNO₃, pH < 2

Yes

Yes

20160374-17 A

MW-05

NPW

04/15/16

Plastic

500 ml

HNO₃, pH < 2

Yes

Yes

Radium-226

Radium-228

SM 7500 Ra B M*

EPA 904*/9320*

CONTAINER INSPECTION

Coolers 2

Custody Seals Broken

NO

Temperature:

C

Ice

Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken No

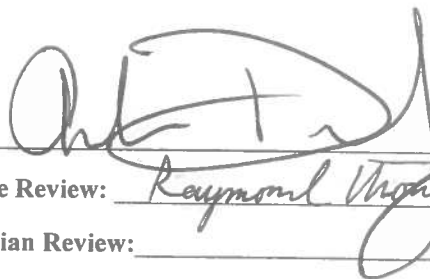
Chain of Custody Record ☒Labels in Tact ☒

+

Radiation Survey Complete ☐

Anomalies sample -10, "mw-07", customer has two labels, a hand written label with sample date "04/14/16" and a printed label (which makes coc) with "04/15/16" ^{04/20/16} _{ph}

Inspected By:



DATE

4/20/16

QA or Designee Review:



DATE

04/20/16

Sample Custodian Review:

DATE

Project Notes:



August 03, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Oak Grove

Order No.: 1606193

Dear Will Vienne:

DHL Analytical, Inc. received 17 sample(s) on 6/17/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16



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Subcontract Report 1606193 65

CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX 78664
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3446
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

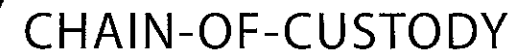
DATE: 6-16-16 PAGE 1 OF 2
PO #: 5164-D DHL WORK ORDER #: 1606193
PROJECT LOCATION OR NAME: OAK GROVE -
CLIENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

[illegible]

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<i>[Signature]</i>	6-16-16 1730	<i>Fedex</i>
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<i>Fedex</i>	6/17/16 10:00	<i>G. Horan</i>
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

TURN AROUND TIME
 RUSH ☐ CALL FIRST
 1 DAY ☐ CALL FIRST
 2 DAY ☐
 NORMAL ☒
 OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.3 THERM #: 5151-70
CUSTODY SEALS: ☐ BROKEN ☒ INTACT ☐ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED



DATE: 6-16-16	PAGE 2 OF 2
PO #: 5164-D	DHL WORK ORDER #: 1606193
PROJECT LOCATION OR NAME: OAK CROVE	
CLIENT PROJECT #: 5164-D	COLLECTOR: J. BRAYTON

[illegible]

John Dupont

From: Sara Taube [Sara.Taube@pbwfc.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

6

ORIGIN ID:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR
SUITE 4004
ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 16JUN16
ACTWGT: 34.90 LB
CAD: 6995323/SSF01704
DIMS: 21x14x11 IN

BILL THIRD PARTY

Part # 156297V 4634492 EXP 03/17

TO DHL

2300 DOUBLE CREEK DR

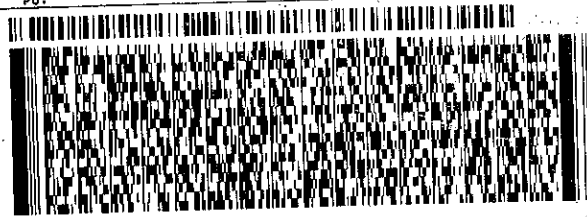
ROUND ROCK TX 78664

(512) 388-8222

REF:

DEPT:

INU:
PO:



FedEx
Express



4 of 5

MPS# 7833 7923 0484

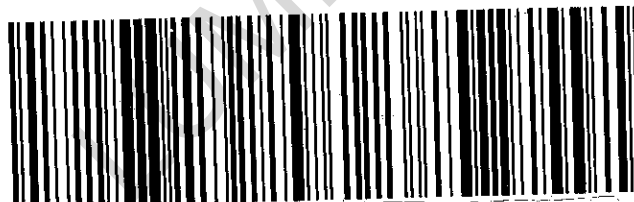
Mstr# 7833 7923 0451

0201

FRI - 17 JUN 10:3 A
PRIORITY OVERNIGHT

44 BSMA

78664
TX-US AUS



Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 6/17/2016

Work Order Number 1606193

Received by JT

Checklist completed by: [Signature] 6/17/2016
Signature Date

Reviewed by: [Initials] 6/17/2016
Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐ 5.3 °C 15.1, 15.1

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH<2 acceptable upon receipt? Yes ☒ No ☐ NA ☐ LOT # 8086

Adjusted? NO Checked by [Signature]

Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt? Yes ☐ No ☐ NA ☒ LOT #

Adjusted? _____ Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Lab Order: 1606193

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M.
Analyzed at ESC Lab Sciences.

LOG IN

The samples were received and log-in performed on 6/17/16. A total of 17 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 6/29/16 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.

TDS ANALYSIS

For TDS analysis performed on 6/21/16 (batch 75770) the sample and sample duplicate (1606193-05 & 1606193-05 DUP) had the RPD above control limits. This was due to the sample being silty. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Lab Order: 1606193

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1606193-01	FGD-3		06/14/16 11:00 AM	6/17/2016
1606193-02	FGD-4		06/14/16 11:55 AM	6/17/2016
1606193-03	FGD-6		06/14/16 12:55 PM	6/17/2016
1606193-04	FGD-2		06/14/16 01:50 PM	6/17/2016
1606193-05	FGD-8		06/14/16 03:00 PM	6/17/2016
1606193-06	FGD-1		06/15/16 03:55 PM	6/17/2016
1606193-07	FGD-11		06/15/16 10:05 AM	6/17/2016
1606193-08	FGD-12		06/15/16 11:05 AM	6/17/2016
1606193-09	FGD-5		06/15/16 12:00 PM	6/17/2016
1606193-10	MW-07		06/15/16 01:20 PM	6/17/2016
1606193-11	MW-05		06/15/16 02:15 PM	6/17/2016
1606193-12	MW-09		06/15/16 04:05 PM	6/17/2016
1606193-13	AL-10		06/16/16 08:35 AM	6/17/2016
1606193-14	MW-02		06/16/16 10:40 AM	6/17/2016
1606193-15	MW-08		06/16/16 12:50 PM	6/17/2016
1606193-16	DUP-1		06/16/16 12:50 PM	6/17/2016
1606193-17	EB-1		06/16/16 01:30 PM	6/17/2016

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1606193-01A	FGD-3	06/14/16 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-3	06/14/16 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-3	06/14/16 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-3	06/14/16 11:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/21/16 09:19 AM	75769
1606193-01D	FGD-3	06/14/16 11:00 AM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-3	06/14/16 11:00 AM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-3	06/14/16 11:00 AM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-3	06/14/16 11:00 AM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-02A	FGD-4	06/14/16 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-4	06/14/16 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-4	06/14/16 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-4	06/14/16 11:55 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/21/16 09:19 AM	75769
1606193-02D	FGD-4	06/14/16 11:55 AM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-4	06/14/16 11:55 AM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-4	06/14/16 11:55 AM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-4	06/14/16 11:55 AM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-03A	FGD-6	06/14/16 12:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-6	06/14/16 12:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-6	06/14/16 12:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-6	06/14/16 12:55 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/21/16 09:19 AM	75769
1606193-03D	FGD-6	06/14/16 12:55 PM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-6	06/14/16 12:55 PM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-6	06/14/16 12:55 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-6	06/14/16 12:55 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-04A	FGD-2	06/14/16 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-2	06/14/16 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-2	06/14/16 01:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-2	06/14/16 01:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/21/16 09:19 AM	75769

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1606193-04D	FGD-2	06/14/16 01:50 PM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-2	06/14/16 01:50 PM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-2	06/14/16 01:50 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-2	06/14/16 01:50 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-05A	FGD-8	06/14/16 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-8	06/14/16 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-8	06/14/16 03:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-8	06/14/16 03:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/21/16 09:19 AM	75769
1606193-05D	FGD-8	06/14/16 03:00 PM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-8	06/14/16 03:00 PM	Aqueous	E300	Anion Preparation	06/23/16 08:57 AM	75822
	FGD-8	06/14/16 03:00 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-8	06/14/16 03:00 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-06A	FGD-1	06/15/16 03:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-1	06/15/16 03:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-1	06/15/16 03:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-1	06/15/16 03:55 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/21/16 09:19 AM	75769
1606193-06D	FGD-1	06/15/16 03:55 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-1	06/15/16 03:55 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-1	06/15/16 03:55 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-07A	FGD-11	06/15/16 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-11	06/15/16 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-11	06/15/16 10:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-11	06/15/16 10:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-07D	FGD-11	06/15/16 10:05 AM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-11	06/15/16 10:05 AM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-11	06/15/16 10:05 AM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-11	06/15/16 10:05 AM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-08A	FGD-12	06/15/16 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1606193-08A	FGD-12	06/15/16 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-12	06/15/16 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-12	06/15/16 11:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-08D	FGD-12	06/15/16 11:05 AM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-12	06/15/16 11:05 AM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-12	06/15/16 11:05 AM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-09A	FGD-5	06/15/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-5	06/15/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-5	06/15/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-5	06/15/16 12:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-09D	FGD-5	06/15/16 12:00 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-5	06/15/16 12:00 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-5	06/15/16 12:00 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	FGD-5	06/15/16 12:00 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-10A	MW-07	06/15/16 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-07	06/15/16 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-07	06/15/16 01:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-07	06/15/16 01:20 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-10D	MW-07	06/15/16 01:20 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-07	06/15/16 01:20 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	MW-07	06/15/16 01:20 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-11A	MW-05	06/15/16 02:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-05	06/15/16 02:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-05	06/15/16 02:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-05	06/15/16 02:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-11D	MW-05	06/15/16 02:15 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-05	06/15/16 02:15 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-05	06/15/16 02:15 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1606193-11D	MW-05	06/15/16 02:15 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-12A	MW-09	06/15/16 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-09	06/15/16 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-09	06/15/16 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-09	06/15/16 04:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-12D	MW-09	06/15/16 04:05 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-09	06/15/16 04:05 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-09	06/15/16 04:05 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	MW-09	06/15/16 04:05 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-13A	AL-10	06/16/16 08:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	AL-10	06/16/16 08:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	AL-10	06/16/16 08:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	AL-10	06/16/16 08:35 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-13D	AL-10	06/16/16 08:35 AM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	AL-10	06/16/16 08:35 AM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	AL-10	06/16/16 08:35 AM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	AL-10	06/16/16 08:35 AM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-14A	MW-02	06/16/16 10:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-02	06/16/16 10:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-02	06/16/16 10:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-02	06/16/16 10:40 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-14D	MW-02	06/16/16 10:40 AM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-02	06/16/16 10:40 AM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-02	06/16/16 10:40 AM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 12:32 PM	75719
	MW-02	06/16/16 10:40 AM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-15A	MW-08	06/16/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-08	06/16/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	MW-08	06/16/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1606193-15A	MW-08	06/16/16 12:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-15D	MW-08	06/16/16 12:50 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-08	06/16/16 12:50 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	MW-08	06/16/16 12:50 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 02:34 PM	75721
	MW-08	06/16/16 12:50 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-16A	DUP-1	06/16/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	DUP-1	06/16/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	DUP-1	06/16/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	DUP-1	06/16/16 12:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-16D	DUP-1	06/16/16 12:50 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	DUP-1	06/16/16 12:50 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	DUP-1	06/16/16 12:50 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 02:34 PM	75721
	DUP-1	06/16/16 12:50 PM	Aqueous	M2540C	TDS Preparation	06/21/16 09:45 AM	75770
1606193-17A	EB-1	06/16/16 01:30 PM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	EB-1	06/16/16 01:30 PM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	EB-1	06/16/16 01:30 PM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	EB-1	06/16/16 01:30 PM	Equip Blank	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606193-17D	EB-1	06/16/16 01:30 PM	Equip Blank	E300	Anion Preparation	06/23/16 09:33 AM	75825
	EB-1	06/16/16 01:30 PM	Equip Blank	M4500-H+ B	pH Preparation	06/17/16 02:34 PM	75721
	EB-1	06/16/16 01:30 PM	Equip Blank	M2540C	TDS Preparation	06/22/16 01:19 PM	75802

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1606193-01A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	75769	1	06/23/16 01:25 PM	CETAC2_HG_160623A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:05 PM	ICP-MS4_160628C
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:09 PM	ICP-MS4_160629A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:44 PM	ICP-MS4_160629E
1606193-01D	FGD-3	Aqueous	E300	Anions by IC method - Water	75822	1	06/23/16 10:26 AM	IC2_160623A
	FGD-3	Aqueous	E300	Anions by IC method - Water	75822	10	06/23/16 12:50 PM	IC2_160623A
	FGD-3	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:11 PM	TITRATOR_160617A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-02A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	75769	1	06/23/16 01:28 PM	CETAC2_HG_160623A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:46 PM	ICP-MS4_160629E
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:07 PM	ICP-MS4_160628C
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:11 PM	ICP-MS4_160629A
1606193-02D	FGD-4	Aqueous	E300	Anions by IC method - Water	75822	1	06/23/16 10:40 AM	IC2_160623A
	FGD-4	Aqueous	E300	Anions by IC method - Water	75822	10	06/23/16 01:46 PM	IC2_160623A
	FGD-4	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:13 PM	TITRATOR_160617A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-03A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	75769	1	06/23/16 01:30 PM	CETAC2_HG_160623A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:48 PM	ICP-MS4_160629E
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:09 PM	ICP-MS4_160628C
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:13 PM	ICP-MS4_160629A
1606193-03D	FGD-6	Aqueous	E300	Anions by IC method - Water	75822	1	06/23/16 10:55 AM	IC2_160623A
	FGD-6	Aqueous	E300	Anions by IC method - Water	75822	10	06/23/16 02:01 PM	IC2_160623A
	FGD-6	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:14 PM	TITRATOR_160617A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-04A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	75769	1	06/23/16 01:32 PM	CETAC2_HG_160623A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:11 PM	ICP-MS4_160628C

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1606193-04A	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:15 PM	ICP-MS4_160629A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:50 PM	ICP-MS4_160629E
1606193-04D	FGD-2	Aqueous	E300	Anions by IC method - Water	75822	1	06/23/16 11:09 AM	IC2_160623A
	FGD-2	Aqueous	E300	Anions by IC method - Water	75822	10	06/23/16 02:16 PM	IC2_160623A
	FGD-2	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:18 PM	TITRATOR_160617A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-05A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	75769	1	06/23/16 01:34 PM	CETAC2_HG_160623A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:52 PM	ICP-MS4_160629E
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:13 PM	ICP-MS4_160628C
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	50	06/29/16 12:17 PM	ICP-MS4_160629A
1606193-05D	FGD-8	Aqueous	E300	Anions by IC method - Water	75822	1	06/23/16 11:24 AM	IC2_160623A
	FGD-8	Aqueous	E300	Anions by IC method - Water	75822	100	06/23/16 02:30 PM	IC2_160623A
	FGD-8	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:22 PM	TITRATOR_160617A
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-06A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	75769	1	06/23/16 01:37 PM	CETAC2_HG_160623A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:15 PM	ICP-MS4_160628C
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	5	06/29/16 12:19 PM	ICP-MS4_160629A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:54 PM	ICP-MS4_160629E
1606193-06D	FGD-1	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 11:05 AM	IC4_160623A
	FGD-1	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:25 PM	TITRATOR_160617A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-07A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:09 AM	CETAC2_HG_160628A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:56 PM	ICP-MS4_160629E
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:21 PM	ICP-MS4_160629A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:17 PM	ICP-MS4_160628C
1606193-07D	FGD-11	Aqueous	E300	Anions by IC method - Water	75825	10	06/23/16 03:15 PM	IC4_160623A

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1606193-07D	FGD-11	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 11:20 AM	IC4_160623A
	FGD-11	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:28 PM	TITRATOR_160617A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-08A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:21 AM	CETAC2_HG_160628A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	5	06/29/16 12:23 PM	ICP-MS4_160629A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:58 PM	ICP-MS4_160629E
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:19 PM	ICP-MS4_160628C
1606193-08D	FGD-12	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 11:35 AM	IC4_160623A
	FGD-12	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:31 PM	TITRATOR_160617A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-09A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:23 AM	CETAC2_HG_160628A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:25 PM	ICP-MS4_160629A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:21 PM	ICP-MS4_160628C
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:00 PM	ICP-MS4_160629E
1606193-09D	FGD-5	Aqueous	E300	Anions by IC method - Water	75825	10	06/23/16 03:30 PM	IC4_160623A
	FGD-5	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 11:50 AM	IC4_160623A
	FGD-5	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:34 PM	TITRATOR_160617A
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-10A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:25 AM	CETAC2_HG_160628A
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 05:38 PM	ICP-MS4_160629E
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:01 PM	ICP-MS4_160628C
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	5	06/29/16 12:05 PM	ICP-MS4_160629A
1606193-10D	MW-07	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 12:05 PM	IC4_160623A
	MW-07	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:37 PM	TITRATOR_160617A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-11A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:28 AM	CETAC2_HG_160628A

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1606193-11A	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:39 PM	ICP-MS4_160628C
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	5	06/29/16 12:46 PM	ICP-MS4_160629A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:25 PM	ICP-MS4_160629E
1606193-11D	MW-05	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 12:20 PM	IC4_160623A
	MW-05	Aqueous	E300	Anions by IC method - Water	75825	10	06/23/16 04:37 PM	IC4_160623A
	MW-05	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:40 PM	TITRATOR_160617A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-12A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:30 AM	CETAC2_HG_160628A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:41 PM	ICP-MS4_160628C
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:48 PM	ICP-MS4_160629A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:27 PM	ICP-MS4_160629E
1606193-12D	MW-09	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 12:35 PM	IC4_160623A
	MW-09	Aqueous	E300	Anions by IC method - Water	75825	10	06/23/16 04:52 PM	IC4_160623A
	MW-09	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:42 PM	TITRATOR_160617A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-13A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:32 AM	CETAC2_HG_160628A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:43 PM	ICP-MS4_160628C
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:50 PM	ICP-MS4_160629A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:29 PM	ICP-MS4_160629E
1606193-13D	AL-10	Aqueous	E300	Anions by IC method - Water	75825	10	06/23/16 05:07 PM	IC4_160623A
	AL-10	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 12:50 PM	IC4_160623A
	AL-10	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:56 PM	TITRATOR_160617A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-14A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:34 AM	CETAC2_HG_160628A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:45 PM	ICP-MS4_160628C
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:52 PM	ICP-MS4_160629A

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1606193-14A	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:31 PM	ICP-MS4_160629E
1606193-14D	MW-02	Aqueous	E300	Anions by IC method - Water	75825	10	06/23/16 06:37 PM	IC4_160623A
	MW-02	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 01:05 PM	IC4_160623A
	MW-02	Aqueous	M4500-H+ B	pH	75719	1	06/17/16 01:58 PM	TITRATOR_160617A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-15A	MW-08	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:37 AM	CETAC2_HG_160628A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:47 PM	ICP-MS4_160628C
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:54 PM	ICP-MS4_160629A
	MW-08	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:33 PM	ICP-MS4_160629E
1606193-15D	MW-08	Aqueous	E300	Anions by IC method - Water	75825	100	06/23/16 07:22 PM	IC4_160623A
	MW-08	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 01:20 PM	IC4_160623A
	MW-08	Aqueous	M4500-H+ B	pH	75721	1	06/17/16 02:51 PM	TITRATOR_160617B
	MW-08	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-16A	DUP-1	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:39 AM	CETAC2_HG_160628A
	DUP-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:49 PM	ICP-MS4_160628C
	DUP-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	10	06/29/16 12:56 PM	ICP-MS4_160629A
	DUP-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:35 PM	ICP-MS4_160629E
1606193-16D	DUP-1	Aqueous	E300	Anions by IC method - Water	75825	100	06/23/16 08:07 PM	IC4_160623A
	DUP-1	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 02:45 PM	IC4_160623A
	DUP-1	Aqueous	M4500-H+ B	pH	75721	1	06/17/16 02:54 PM	TITRATOR_160617B
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	75770	1	06/22/16 08:36 AM	WC_160621C
1606193-17A	EB-1	Equip Blank	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:46 AM	CETAC2_HG_160628A
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:51 PM	ICP-MS4_160628C
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 12:58 PM	ICP-MS4_160629A
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/29/16 06:37 PM	ICP-MS4_160629E
1606193-17D	EB-1	Equip Blank	E300	Anions by IC method - Water	75825	1	06/23/16 02:30 PM	IC4_160623A

Lab Order: 1606193
Client: Pastor, Behling & Wheeler
Project: Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1606193-17D	EB-1	Equip Blank	M4500-H+ B	pH	75721	1	06/17/16 02:57 PM	TITRATOR_160617B
	EB-1	Equip Blank	M2540C	Total Dissolved Solids	75802	1	06/23/16 08:49 AM	WC_160622D

LUMINANT

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-3
Lab ID: 1606193-01
Collection Date: 06/14/16 11:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: KL			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/23/16 01:25 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:05 PM
Arsenic	0.00205	0.00200	0.00500	J	mg/L	1	06/28/16 05:05 PM
Barium	0.0392	0.00300	0.0100		mg/L	1	06/28/16 05:05 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:05 PM
Boron	0.207	0.0100	0.0300		mg/L	1	06/29/16 05:44 PM
Cadmium	0.00156	0.000300	0.00100		mg/L	1	06/28/16 05:05 PM
Calcium	80.1	1.00	3.00		mg/L	10	06/29/16 12:09 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:05 PM
Cobalt	0.0261	0.00300	0.00500		mg/L	1	06/28/16 05:05 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:05 PM
Lithium	0.107	0.00500	0.0100		mg/L	1	06/28/16 05:05 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:05 PM
Selenium	0.0447	0.00200	0.00500		mg/L	1	06/28/16 05:05 PM
Thallium	0.00126	0.000500	0.00150	J	mg/L	1	06/28/16 05:05 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	267	3.00	10.0		mg/L	10	06/23/16 12:50 PM
Fluoride	0.173	0.100	0.400	J	mg/L	1	06/23/16 10:26 AM
Sulfate	338	10.0	30.0		mg/L	10	06/23/16 12:50 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.60	0	0		pH Units@16.1°C	1	06/17/16 01:11 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1440	50.0	50.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-4
Lab ID: 1606193-02
Collection Date: 06/14/16 11:55 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: KL			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/23/16 01:28 PM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:07 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:07 PM
Barium	0.128	0.00300	0.0100		mg/L	1	06/28/16 05:07 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:07 PM
Boron	0.0728	0.0100	0.0300		mg/L	1	06/29/16 05:46 PM
Cadmium	0.000561	0.000300	0.00100	J	mg/L	1	06/28/16 05:07 PM
Calcium	47.5	1.00	3.00		mg/L	10	06/29/16 12:11 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:07 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:07 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:07 PM
Lithium	0.0477	0.00500	0.0100		mg/L	1	06/28/16 05:07 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:07 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:07 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:07 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	210	3.00	10.0		mg/L	10	06/23/16 01:46 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/23/16 10:40 AM
Sulfate	37.9	1.00	3.00		mg/L	1	06/23/16 10:40 AM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.66	0	0		pH Units@17°C	1	06/17/16 01:13 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	689	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-6
Lab ID: 1606193-03
Collection Date: 06/14/16 12:55 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: KL			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/23/16 01:30 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:09 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:09 PM
Barium	0.160	0.00300	0.0100		mg/L	1	06/28/16 05:09 PM
Beryllium	0.000309	0.000300	0.00100	J	mg/L	1	06/28/16 05:09 PM
Boron	0.0955	0.0100	0.0300		mg/L	1	06/29/16 05:48 PM
Cadmium	0.000404	0.000300	0.00100	J	mg/L	1	06/28/16 05:09 PM
Calcium	33.9	1.00	3.00		mg/L	10	06/29/16 12:13 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:09 PM
Cobalt	0.00657	0.00300	0.00500		mg/L	1	06/28/16 05:09 PM
Lead	0.00132	0.000300	0.00100		mg/L	1	06/28/16 05:09 PM
Lithium	0.00920	0.00500	0.0100	J	mg/L	1	06/28/16 05:09 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:09 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:09 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:09 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	237	3.00	10.0		mg/L	10	06/23/16 02:01 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/23/16 10:55 AM
Sulfate	49.8	1.00	3.00		mg/L	1	06/23/16 10:55 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.95	0	0		pH Units@16.8°C	1	06/17/16 01:14 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	813	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-2
Lab ID: 1606193-04
Collection Date: 06/14/16 01:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: KL			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/23/16 01:32 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:11 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:11 PM
Barium	0.0910	0.00300	0.0100		mg/L	1	06/28/16 05:11 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:11 PM
Boron	0.0729	0.0100	0.0300		mg/L	1	06/29/16 05:50 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:11 PM
Calcium	26.8	1.00	3.00		mg/L	10	06/29/16 12:15 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:11 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:11 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:11 PM
Lithium	0.0243	0.00500	0.0100		mg/L	1	06/28/16 05:11 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:11 PM
Selenium	0.0189	0.00200	0.00500		mg/L	1	06/28/16 05:11 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:11 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	138	3.00	10.0		mg/L	10	06/23/16 02:16 PM
Fluoride	0.122	0.100	0.400	J	mg/L	1	06/23/16 11:09 AM
Sulfate	62.2	1.00	3.00		mg/L	1	06/23/16 11:09 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.89	0	0		pH Units@17.3°C	1	06/17/16 01:18 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	564	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-8
Lab ID: 1606193-05
Collection Date: 06/14/16 03:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: KL			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/23/16 01:34 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:13 PM
Arsenic	0.00639	0.00200	0.00500		mg/L	1	06/28/16 05:13 PM
Barium	0.792	0.00300	0.0100		mg/L	1	06/28/16 05:13 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:13 PM
Boron	0.0869	0.0100	0.0300		mg/L	1	06/29/16 05:52 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:13 PM
Calcium	336	5.00	15.0		mg/L	50	06/29/16 12:17 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:13 PM
Cobalt	0.0158	0.00300	0.00500		mg/L	1	06/28/16 05:13 PM
Lead	0.00137	0.000300	0.00100		mg/L	1	06/28/16 05:13 PM
Lithium	0.0150	0.00500	0.0100		mg/L	1	06/28/16 05:13 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:13 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:13 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:13 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	2070	30.0	100		mg/L	100	06/23/16 02:30 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/23/16 11:24 AM
Sulfate	476	100	300		mg/L	100	06/23/16 02:30 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.15	0	0		pH Units@17.3°C	1	06/17/16 01:22 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	6130	50.0	50.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-1
Lab ID: 1606193-06
Collection Date: 06/15/16 03:55 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: KL			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/23/16 01:37 PM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:15 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:15 PM
Barium	0.0276	0.00300	0.0100		mg/L	1	06/28/16 05:15 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:15 PM
Boron	0.0660	0.0100	0.0300		mg/L	1	06/29/16 05:54 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:15 PM
Calcium	12.0	0.500	1.50		mg/L	5	06/29/16 12:19 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:15 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:15 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:15 PM
Lithium	0.0321	0.00500	0.0100		mg/L	1	06/28/16 05:15 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:15 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:15 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:15 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	39.0	0.300	1.00		mg/L	1	06/23/16 11:05 AM
Fluoride	0.302	0.100	0.400	J	mg/L	1	06/23/16 11:05 AM
Sulfate	41.2	1.00	3.00		mg/L	1	06/23/16 11:05 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.48	0	0		pH Units@17.8°C	1	06/17/16 01:25 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	258	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-11
Lab ID: 1606193-07
Collection Date: 06/15/16 10:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:09 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:17 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:17 PM
Barium	0.216	0.00300	0.0100		mg/L	1	06/28/16 05:17 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:17 PM
Boron	0.0979	0.0100	0.0300		mg/L	1	06/29/16 05:56 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:17 PM
Calcium	55.1	1.00	3.00		mg/L	10	06/29/16 12:21 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:17 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:17 PM
Lead	0.000407	0.000300	0.00100	J	mg/L	1	06/28/16 05:17 PM
Lithium	0.0126	0.00500	0.0100		mg/L	1	06/28/16 05:17 PM
Molybdenum	0.00238	0.00200	0.00500	J	mg/L	1	06/28/16 05:17 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:17 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:17 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	356	3.00	10.0		mg/L	10	06/23/16 03:15 PM
Fluoride	0.331	0.100	0.400	J	mg/L	1	06/23/16 11:20 AM
Sulfate	32.4	1.00	3.00		mg/L	1	06/23/16 11:20 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.82	0	0		pH Units@17.9°C	1	06/17/16 01:28 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	900	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-12
Lab ID: 1606193-08
Collection Date: 06/15/16 11:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	0.000134	0.0000800	0.000200	J	mg/L	1	06/28/16 10:21 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:19 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:19 PM
Barium	0.107	0.00300	0.0100		mg/L	1	06/28/16 05:19 PM
Beryllium	0.000390	0.000300	0.00100	J	mg/L	1	06/28/16 05:19 PM
Boron	0.0711	0.0100	0.0300		mg/L	1	06/29/16 05:58 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:19 PM
Calcium	11.2	0.500	1.50		mg/L	5	06/29/16 12:23 PM
Chromium	0.00269	0.00200	0.00500	J	mg/L	1	06/28/16 05:19 PM
Cobalt	0.00323	0.00300	0.00500	J	mg/L	1	06/28/16 05:19 PM
Lead	0.00513	0.000300	0.00100		mg/L	1	06/28/16 05:19 PM
Lithium	0.0192	0.00500	0.0100		mg/L	1	06/28/16 05:19 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:19 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:19 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:19 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	19.5	0.300	1.00		mg/L	1	06/23/16 11:35 AM
Fluoride	0.101	0.100	0.400	J	mg/L	1	06/23/16 11:35 AM
Sulfate	13.4	1.00	3.00		mg/L	1	06/23/16 11:35 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.67	0	0		pH Units@18.7°C	1	06/17/16 01:31 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	253	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: FGD-5
Lab ID: 1606193-09
Collection Date: 06/15/16 12:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:23 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:21 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:21 PM
Barium	0.174	0.00300	0.0100		mg/L	1	06/28/16 05:21 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:21 PM
Boron	0.110	0.0100	0.0300		mg/L	1	06/29/16 06:00 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:21 PM
Calcium	88.9	1.00	3.00		mg/L	10	06/29/16 12:25 PM
Chromium	0.00599	0.00200	0.00500		mg/L	1	06/28/16 05:21 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:21 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:21 PM
Lithium	0.162	0.00500	0.0100		mg/L	1	06/28/16 05:21 PM
Molybdenum	0.0144	0.00200	0.00500		mg/L	1	06/28/16 05:21 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:21 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:21 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	368	3.00	10.0		mg/L	10	06/23/16 03:30 PM
Fluoride	0.284	0.100	0.400	J	mg/L	1	06/23/16 11:50 AM
Sulfate	55.1	1.00	3.00		mg/L	1	06/23/16 11:50 AM
PH							
M4500-H+ B				Analyst: BJT			
pH	7.26	0	0		pH Units@18.4°C	1	06/17/16 01:34 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	735	50.0	50.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: MW-07
Lab ID: 1606193-10
Collection Date: 06/15/16 01:20 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:25 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:01 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:01 PM
Barium	0.0467	0.00300	0.0100		mg/L	1	06/28/16 05:01 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:01 PM
Boron	0.0639	0.0100	0.0300		mg/L	1	06/29/16 05:38 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:01 PM
Calcium	10.5	0.500	1.50		mg/L	5	06/29/16 12:05 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:01 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:01 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:01 PM
Lithium	0.0151	0.00500	0.0100		mg/L	1	06/28/16 05:01 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:01 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:01 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:01 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	22.9	0.300	1.00		mg/L	1	06/23/16 12:05 PM
Fluoride	0.226	0.100	0.400	J	mg/L	1	06/23/16 12:05 PM
Sulfate	23.2	1.00	3.00		mg/L	1	06/23/16 12:05 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.85	0	0		pH Units@18.9°C	1	06/17/16 01:37 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	294	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: MW-05
Lab ID: 1606193-11
Collection Date: 06/15/16 02:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:28 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:39 PM
Arsenic	0.0207	0.00200	0.00500		mg/L	1	06/28/16 05:39 PM
Barium	0.127	0.00300	0.0100		mg/L	1	06/28/16 05:39 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:39 PM
Boron	0.0580	0.0100	0.0300		mg/L	1	06/29/16 06:25 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:39 PM
Calcium	14.2	0.500	1.50		mg/L	5	06/29/16 12:46 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:39 PM
Cobalt	0.00373	0.00300	0.00500	J	mg/L	1	06/28/16 05:39 PM
Lead	0.00146	0.000300	0.00100		mg/L	1	06/28/16 05:39 PM
Lithium	0.0433	0.00500	0.0100		mg/L	1	06/28/16 05:39 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:39 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:39 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:39 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	60.4	3.00	10.0		mg/L	10	06/23/16 04:37 PM
Fluoride	0.306	0.100	0.400	J	mg/L	1	06/23/16 12:20 PM
Sulfate	11.8	1.00	3.00		mg/L	1	06/23/16 12:20 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.69	0	0		pH Units@19.8°C	1	06/17/16 01:40 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	269	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: MW-09
Lab ID: 1606193-12
Collection Date: 06/15/16 04:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:30 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:41 PM
Arsenic	0.00524	0.00200	0.00500		mg/L	1	06/28/16 05:41 PM
Barium	0.144	0.00300	0.0100		mg/L	1	06/28/16 05:41 PM
Beryllium	0.000435	0.000300	0.00100	J	mg/L	1	06/28/16 05:41 PM
Boron	0.0778	0.0100	0.0300		mg/L	1	06/29/16 06:27 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:41 PM
Calcium	43.1	1.00	3.00		mg/L	10	06/29/16 12:48 PM
Chromium	0.00587	0.00200	0.00500		mg/L	1	06/28/16 05:41 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:41 PM
Lead	0.00200	0.000300	0.00100		mg/L	1	06/28/16 05:41 PM
Lithium	0.0634	0.00500	0.0100		mg/L	1	06/28/16 05:41 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:41 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:41 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:41 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	174	3.00	10.0		mg/L	10	06/23/16 04:52 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/23/16 12:35 PM
Sulfate	98.7	1.00	3.00		mg/L	1	06/23/16 12:35 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.25	0	0		pH Units@19.8°C	1	06/17/16 01:42 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	574	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: AL-10
Lab ID: 1606193-13
Collection Date: 06/16/16 08:35 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:32 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:43 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:43 PM
Barium	0.103	0.00300	0.0100		mg/L	1	06/28/16 05:43 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:43 PM
Boron	0.0915	0.0100	0.0300		mg/L	1	06/29/16 06:29 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:43 PM
Calcium	34.7	1.00	3.00		mg/L	10	06/29/16 12:50 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:43 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:43 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:43 PM
Lithium	0.00591	0.00500	0.0100	J	mg/L	1	06/28/16 05:43 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:43 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:43 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:43 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	66.7	3.00	10.0		mg/L	10	06/23/16 05:07 PM
Fluoride	0.155	0.100	0.400	J	mg/L	1	06/23/16 12:50 PM
Sulfate	23.5	1.00	3.00		mg/L	1	06/23/16 12:50 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	7.18	0	0		pH Units@17.7°C	1	06/17/16 01:56 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	436	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: MW-02
Lab ID: 1606193-14
Collection Date: 06/16/16 10:40 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:34 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:45 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:45 PM
Barium	0.117	0.00300	0.0100		mg/L	1	06/28/16 05:45 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:45 PM
Boron	0.106	0.0100	0.0300		mg/L	1	06/29/16 06:31 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:45 PM
Calcium	26.5	1.00	3.00		mg/L	10	06/29/16 12:52 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:45 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:45 PM
Lead	0.000790	0.000300	0.00100	J	mg/L	1	06/28/16 05:45 PM
Lithium	0.0684	0.00500	0.0100		mg/L	1	06/28/16 05:45 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:45 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:45 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:45 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	87.8	3.00	10.0		mg/L	10	06/23/16 06:37 PM
Fluoride	0.161	0.100	0.400	J	mg/L	1	06/23/16 01:05 PM
Sulfate	34.8	1.00	3.00		mg/L	1	06/23/16 01:05 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.82	0	0		pH Units@20.1°C	1	06/17/16 01:58 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	343	10.0	10.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: MW-08
Lab ID: 1606193-15
Collection Date: 06/16/16 12:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
		SW7470A				Analyst: AH	
Mercury	0.000173	0.0000800	0.000200	J	mg/L	1	06/28/16 10:37 AM
TRACE METALS: ICP-MS - WATER							
		SW6020A				Analyst: RO	
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:47 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:47 PM
Barium	0.229	0.00300	0.0100		mg/L	1	06/28/16 05:47 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:47 PM
Boron	0.0677	0.0100	0.0300		mg/L	1	06/29/16 06:33 PM
Cadmium	0.000457	0.000300	0.00100	J	mg/L	1	06/28/16 05:47 PM
Calcium	76.6	1.00	3.00		mg/L	10	06/29/16 12:54 PM
Chromium	0.0105	0.00200	0.00500		mg/L	1	06/28/16 05:47 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:47 PM
Lead	0.00216	0.000300	0.00100		mg/L	1	06/28/16 05:47 PM
Lithium	0.0492	0.00500	0.0100		mg/L	1	06/28/16 05:47 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:47 PM
Selenium	0.0154	0.00200	0.00500		mg/L	1	06/28/16 05:47 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:47 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: AV	
Chloride	520	30.0	100		mg/L	100	06/23/16 07:22 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/23/16 01:20 PM
Sulfate	83.6	1.00	3.00		mg/L	1	06/23/16 01:20 PM
PH							
		M4500-H+ B				Analyst: BJT	
pH	6.70	0	0		pH Units@17.7°C	1	06/17/16 02:51 PM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: AJH	
Total Dissolved Solids (Residue, Filterable)	1090	50.0	50.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: DUP-1
Lab ID: 1606193-16
Collection Date: 06/16/16 12:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	0.000191	0.0000800	0.000200	J	mg/L	1	06/28/16 10:39 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:49 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:49 PM
Barium	0.222	0.00300	0.0100		mg/L	1	06/28/16 05:49 PM
Beryllium	0.000329	0.000300	0.00100	J	mg/L	1	06/28/16 05:49 PM
Boron	0.0697	0.0100	0.0300		mg/L	1	06/29/16 06:35 PM
Cadmium	0.000351	0.000300	0.00100	J	mg/L	1	06/28/16 05:49 PM
Calcium	76.0	1.00	3.00		mg/L	10	06/29/16 12:56 PM
Chromium	0.0114	0.00200	0.00500		mg/L	1	06/28/16 05:49 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:49 PM
Lead	0.00210	0.000300	0.00100		mg/L	1	06/28/16 05:49 PM
Lithium	0.0507	0.00500	0.0100		mg/L	1	06/28/16 05:49 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:49 PM
Selenium	0.0149	0.00200	0.00500		mg/L	1	06/28/16 05:49 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:49 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	500	30.0	100		mg/L	100	06/23/16 08:07 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/23/16 02:45 PM
Sulfate	70.0	1.00	3.00		mg/L	1	06/23/16 02:45 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.79	0	0		pH Units@16.7°C	1	06/17/16 02:54 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1080	50.0	50.0		mg/L	1	06/22/16 08:36 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Aug-16

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove
Project No: 5164-D
Lab Order: 1606193

Client Sample ID: EB-1
Lab ID: 1606193-17
Collection Date: 06/16/16 01:30 PM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/28/16 10:46 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/28/16 05:51 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:51 PM
Barium	0.0191	0.00300	0.0100		mg/L	1	06/28/16 05:51 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:51 PM
Boron	0.0274	0.0100	0.0300	J	mg/L	1	06/29/16 06:37 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:51 PM
Calcium	1.03	0.100	0.300		mg/L	1	06/28/16 05:51 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:51 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/28/16 05:51 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:51 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	06/28/16 05:51 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:51 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/28/16 05:51 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/28/16 05:51 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	4.47	0.300	1.00		mg/L	1	06/23/16 02:30 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/23/16 02:30 PM
Sulfate	2.34	1.00	3.00	J	mg/L	1	06/23/16 02:30 PM
PH		M4500-H+ B		Analyst: BJT			
pH	7.16	0	0		pH Units@18°C	1	06/17/16 02:57 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	43.0	10.0	10.0		mg/L	1	06/23/16 08:49 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1606193

Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160623A

The QC data in batch 75769 applies to the following samples: 1606193-01A, 1606193-02A, 1606193-03A, 1606193-04A, 1606193-05A, 1606193-06A

Sample ID	MB-75769	Batch ID:	75769	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:33:39 PM	Prep Date:	6/21/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-75769	Batch ID:	75769	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:35:55 PM	Prep Date:	6/21/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00196 0.000200 0.00200 0 98.0 85 115

Sample ID	LCSD-75769	Batch ID:	75769	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:38:11 PM	Prep Date:	6/21/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00201 0.000200 0.00200 0 101 85 115 2.52 15

Sample ID	1606160-06A SD	Batch ID:	75769	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:42:44 PM	Prep Date:	6/21/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1606160-06A PDS	Batch ID:	75769	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:44:59 PM	Prep Date:	6/21/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00243 0.000200 0.00250 0 97.2 85 115

Sample ID	1606160-06A MS	Batch ID:	75769	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:47:15 PM	Prep Date:	6/21/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00206 0.000200 0.00200 0 103 80 120

Sample ID	1606160-06A MSD	Batch ID:	75769	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:49:30 PM	Prep Date:	6/21/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00205 0.000200 0.00200 0 103 80 120 0.487 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160623A

Sample ID	ICV-160623	Batch ID:	R86503	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 10:03:19 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00399	0.000200	0.00400	0	99.8	90	110			

Sample ID	CCV4-160623	Batch ID:	R86503	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 12:24:10 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00197	0.000200	0.00200	0	98.5	90	110			

Sample ID	CCV5-160623	Batch ID:	R86503	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 1:12:12 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00198	0.000200	0.00200	0	99.0	90	110			

Sample ID	CCV6-160623	Batch ID:	R86503	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160623A	Analysis Date:	6/23/2016 1:39:31 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00198	0.000200	0.00200	0	99.0	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- 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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160628A

The QC data in batch 75845 applies to the following samples: 1606193-07A, 1606193-08A, 1606193-09A, 1606193-10A, 1606193-11A, 1606193-12A, 1606193-13A, 1606193-14A, 1606193-15A, 1606193-16A, 1606193-17A

Sample ID	MB-75845	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:03:09 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-75845	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:05:25 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00205 0.000200 0.00200 0 103 85 115

Sample ID	LCSD-75845	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:07:41 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00202 0.000200 0.00200 0 101 85 115 1.47 15

Sample ID	1606193-07A SD	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:12:14 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1606193-07A PDS	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:14:29 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00238 0.000200 0.00250 0 95.2 85 115

Sample ID	1606193-07A MS	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:16:45 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00199 0.000200 0.00200 0 99.5 80 120

Sample ID	1606193-07A MSD	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:19:00 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00208 0.000200 0.00200 0 104 80 120 4.42 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160628A

Sample ID	ICV-160628	Batch ID:	R86598	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 9:58:36 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00396	0.000200	0.00400	0	99.0	90	110			

Sample ID	CCV1-160628	Batch ID:	R86598	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:41:42 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Sample ID	CCV2-160628	Batch ID:	R86598	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 11:06:44 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00200	0.000200	0.00200	0	100	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

The QC data in batch 75757 applies to the following samples: 1606193-01A, 1606193-02A, 1606193-03A, 1606193-04A, 1606193-05A, 1606193-06A, 1606193-07A, 1606193-08A, 1606193-09A, 1606193-10A, 1606193-11A, 1606193-12A, 1606193-13A, 1606193-14A, 1606193-15A, 1606193-16A, 1606193-17A

Sample ID	MB-75757		Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 4:52:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID	LCS-75757		Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 4:54:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.204	0.00250	0.200	0	102	80	120			
Arsenic	0.204	0.00500	0.200	0	102	80	120			
Barium	0.202	0.0100	0.200	0	101	80	120			
Beryllium	0.209	0.00100	0.200	0	105	80	120			
Cadmium	0.203	0.00100	0.200	0	102	80	120			
Calcium	4.95	0.300	5.00	0	99.0	80	120			
Chromium	0.207	0.00500	0.200	0	103	80	120			
Cobalt	0.211	0.00500	0.200	0	105	80	120			
Lead	0.205	0.00100	0.200	0	103	80	120			
Lithium	0.206	0.0100	0.200	0	103	80	120			
Molybdenum	0.199	0.00500	0.200	0	99.6	80	120			
Selenium	0.206	0.00500	0.200	0	103	80	120			
Thallium	0.208	0.00150	0.200	0	104	80	120			

Sample ID	LCSD-75757			Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD			Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 4:57:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.203	0.00250	0.200	0	101	80	120	0.683	15	
Arsenic	0.202	0.00500	0.200	0	101	80	120	1.01	15	
Barium	0.199	0.0100	0.200	0	99.3	80	120	1.64	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID: LCSD-75757	Batch ID: 75757	TestNo: SW6020A	Units: mg/L
SampType: LCSD	Run ID: ICP-MS4_160628C	Analysis Date: 6/28/2016 4:57:00 PM	Prep Date: 6/21/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.207	0.00100	0.200	0	103	80	120	1.12	15	
Cadmium	0.200	0.00100	0.200	0	99.9	80	120	1.87	15	
Calcium	4.84	0.300	5.00	0	96.9	80	120	2.17	15	
Chromium	0.202	0.00500	0.200	0	101	80	120	2.11	15	
Cobalt	0.210	0.00500	0.200	0	105	80	120	0.406	15	
Lead	0.205	0.00100	0.200	0	103	80	120	0.154	15	
Lithium	0.210	0.0100	0.200	0	105	80	120	2.16	15	
Molybdenum	0.197	0.00500	0.200	0	98.4	80	120	1.20	15	
Selenium	0.201	0.00500	0.200	0	101	80	120	2.08	15	
Thallium	0.208	0.00150	0.200	0	104	80	120	0.049	15	

Sample ID: 1606193-10A SD	Batch ID: 75757	TestNo: SW6020A	Units: mg/L
SampType: SD	Run ID: ICP-MS4_160628C	Analysis Date: 6/28/2016 5:03:00 PM	Prep Date: 6/21/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0460	0.0500	0	0.0467				1.35	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	<0.0250	0.0500	0	0.0151				0	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID: 1606193-10A PDS	Batch ID: 75757	TestNo: SW6020A	Units: mg/L
SampType: PDS	Run ID: ICP-MS4_160628C	Analysis Date: 6/28/2016 5:23:00 PM	Prep Date: 6/21/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.189	0.00250	0.200	0	94.3	80	120			
Arsenic	0.201	0.00500	0.200	0	100	80	120			
Barium	0.243	0.0100	0.200	0.0467	98.0	80	120			
Beryllium	0.204	0.00100	0.200	0	102	80	120			
Cadmium	0.194	0.00100	0.200	0	97.1	80	120			
Chromium	0.202	0.00500	0.200	0	101	80	120			
Cobalt	0.206	0.00500	0.200	0	103	80	120			
Lead	0.202	0.00100	0.200	0	101	80	120			
Lithium	0.215	0.0100	0.200	0.0151	100	80	120			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	1606193-10A PDS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:23:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.190	0.00500	0.200	0	95.0	80	120			
Selenium	0.202	0.00500	0.200	0	101	80	120			
Thallium	0.203	0.00150	0.200	0	101	80	120			

Sample ID	1606193-10A MS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:25:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.211	0.00250	0.200	0	105	80	120			
Arsenic	0.206	0.00500	0.200	0	103	80	120			
Barium	0.253	0.0100	0.200	0.0467	103	80	120			
Beryllium	0.208	0.00100	0.200	0	104	80	120			
Cadmium	0.201	0.00100	0.200	0	100	80	120			
Calcium	16.0	0.300	5.00	11.0	101	80	120			
Chromium	0.201	0.00500	0.200	0	101	80	120			
Cobalt	0.207	0.00500	0.200	0	104	80	120			
Lead	0.204	0.00100	0.200	0	102	80	120			
Lithium	0.224	0.0100	0.200	0.0151	104	80	120			
Molybdenum	0.199	0.00500	0.200	0	99.4	80	120			
Selenium	0.204	0.00500	0.200	0	102	80	120			
Thallium	0.207	0.00150	0.200	0	103	80	120			

Sample ID	1606193-10A MSD	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:27:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.203	0.00250	0.200	0	101	80	120	3.97	15	
Arsenic	0.203	0.00500	0.200	0	101	80	120	1.35	15	
Barium	0.246	0.0100	0.200	0.0467	99.9	80	120	2.64	15	
Beryllium	0.202	0.00100	0.200	0	101	80	120	2.97	15	
Cadmium	0.197	0.00100	0.200	0	98.4	80	120	1.87	15	
Calcium	15.9	0.300	5.00	11.0	99.2	80	120	0.672	15	
Chromium	0.198	0.00500	0.200	0	99.0	80	120	1.53	15	
Cobalt	0.206	0.00500	0.200	0	103	80	120	0.697	15	
Lead	0.203	0.00100	0.200	0	101	80	120	0.667	15	
Lithium	0.218	0.0100	0.200	0.0151	101	80	120	2.68	15	
Molybdenum	0.195	0.00500	0.200	0	97.5	80	120	1.93	15	
Selenium	0.201	0.00500	0.200	0	100	80	120	1.60	15	
Thallium	0.204	0.00150	0.200	0	102	80	120	1.11	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	ICV-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 11:22:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.104	0.00250	0.100	0	104	90	110			
Arsenic	0.100	0.00500	0.100	0	100	90	110			
Barium	0.100	0.0100	0.100	0	100	90	110			
Beryllium	0.0989	0.00100	0.100	0	98.9	90	110			
Cadmium	0.100	0.00100	0.100	0	100	90	110			
Calcium	2.43	0.300	2.50	0	97.1	90	110			
Chromium	0.106	0.00500	0.100	0	106	90	110			
Cobalt	0.105	0.00500	0.100	0	105	90	110			
Lead	0.103	0.00100	0.100	0	103	90	110			
Lithium	0.0977	0.0100	0.100	0	97.7	90	110			
Molybdenum	0.0983	0.00500	0.100	0	98.3	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			
Thallium	0.102	0.00150	0.100	0	102	90	110			

Sample ID	LCVL-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 11:33:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00196	0.00250	0.00200	0	98.2	70	130			
Arsenic	0.00504	0.00500	0.00500	0	101	70	130			
Barium	0.00488	0.0100	0.00500	0	97.6	70	130			
Beryllium	0.000760	0.00100	0.00100	0	76.0	70	130			
Cadmium	0.000973	0.00100	0.00100	0	97.3	70	130			
Calcium	0.102	0.300	0.100	0	102	70	130			
Chromium	0.00519	0.00500	0.00500	0	104	70	130			
Cobalt	0.00525	0.00500	0.00500	0	105	70	130			
Lead	0.00105	0.00100	0.00100	0	105	70	130			
Lithium	0.0109	0.0100	0.0100	0	109	70	130			
Molybdenum	0.00489	0.00500	0.00500	0	97.8	70	130			
Selenium	0.00549	0.00500	0.00500	0	110	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV7-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 4:35:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.206	0.00250	0.200	0	103	90	110			
Arsenic	0.204	0.00500	0.200	0	102	90	110			
Barium	0.203	0.0100	0.200	0	101	90	110			
Beryllium	0.207	0.00100	0.200	0	104	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	CCV7-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 4:35:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.92	0.300	5.00	0	98.3	90	110			
Chromium	0.203	0.00500	0.200	0	101	90	110			
Cobalt	0.210	0.00500	0.200	0	105	90	110			
Lead	0.203	0.00100	0.200	0	101	90	110			
Lithium	0.200	0.0100	0.200	0	99.9	90	110			
Molybdenum	0.200	0.00500	0.200	0	100	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.205	0.00150	0.200	0	102	90	110			

Sample ID	LCVL7-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 4:41:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00201	0.00250	0.00200	0	100	70	130			
Arsenic	0.00515	0.00500	0.00500	0	103	70	130			
Barium	0.00514	0.0100	0.00500	0	103	70	130			
Beryllium	0.000958	0.00100	0.00100	0	95.8	70	130			
Cadmium	0.00106	0.00100	0.00100	0	106	70	130			
Calcium	0.0991	0.300	0.100	0	99.1	70	130			
Chromium	0.00530	0.00500	0.00500	0	106	70	130			
Cobalt	0.00535	0.00500	0.00500	0	107	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Lithium	0.0110	0.0100	0.0100	0	110	70	130			
Molybdenum	0.00499	0.00500	0.00500	0	99.8	70	130			
Selenium	0.00556	0.00500	0.00500	0	111	70	130			
Thallium	0.00104	0.00150	0.00100	0	104	70	130			

Sample ID	CCV8-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:29:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.202	0.00250	0.200	0	101	90	110			
Arsenic	0.203	0.00500	0.200	0	101	90	110			
Barium	0.198	0.0100	0.200	0	99.0	90	110			
Beryllium	0.202	0.00100	0.200	0	101	90	110			
Cadmium	0.198	0.00100	0.200	0	99.2	90	110			
Calcium	4.89	0.300	5.00	0	97.9	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.209	0.00500	0.200	0	105	90	110			
Lead	0.202	0.00100	0.200	0	101	90	110			
Lithium	0.201	0.0100	0.200	0	101	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	CCV8-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:29:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.195	0.00500	0.200	0	97.4	90	110			
Selenium		0.202	0.00500	0.200	0	101	90	110			
Thallium		0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL8-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00232	0.00250	0.00200	0	116	70	130			
Arsenic	0.00530	0.00500	0.00500	0	106	70	130			
Barium	0.00521	0.0100	0.00500	0	104	70	130			
Beryllium	0.00112	0.00100	0.00100	0	112	70	130			
Cadmium	0.000991	0.00100	0.00100	0	99.1	70	130			
Calcium	0.106	0.300	0.100	0	106	70	130			
Chromium	0.00515	0.00500	0.00500	0	103	70	130			
Cobalt	0.00531	0.00500	0.00500	0	106	70	130			
Lead	0.00108	0.00100	0.00100	0	108	70	130			
Lithium	0.0102	0.0100	0.0100	0	102	70	130			
Molybdenum	0.00510	0.00500	0.00500	0	102	70	130			
Selenium	0.00519	0.00500	0.00500	0	104	70	130			
Thallium	0.00108	0.00150	0.00100	0	108	70	130			

Sample ID	CCV9-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:55:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	90	110			
Arsenic	0.206	0.00500	0.200	0	103	90	110			
Barium	0.200	0.0100	0.200	0	99.9	90	110			
Beryllium	0.195	0.00100	0.200	0	97.5	90	110			
Cadmium	0.200	0.00100	0.200	0	100	90	110			
Calcium	5.33	0.300	5.00	0	107	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Cobalt	0.209	0.00500	0.200	0	105	90	110			
Lead	0.205	0.00100	0.200	0	103	90	110			
Lithium	0.189	0.0100	0.200	0	94.6	90	110			
Molybdenum	0.198	0.00500	0.200	0	98.9	90	110			
Selenium	0.207	0.00500	0.200	0	103	90	110			
Thallium	0.207	0.00150	0.200	0	103	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	LCVL9-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00215	0.00250	0.00200	0	107	70	130			
Arsenic	0.00528	0.00500	0.00500	0	106	70	130			
Barium	0.00519	0.0100	0.00500	0	104	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Cadmium	0.00103	0.00100	0.00100	0	103	70	130			
Calcium	0.106	0.300	0.100	0	106	70	130			
Chromium	0.00515	0.00500	0.00500	0	103	70	130			
Cobalt	0.00533	0.00500	0.00500	0	107	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Lithium	0.00884	0.0100	0.0100	0	88.4	70	130			
Molybdenum	0.00515	0.00500	0.00500	0	103	70	130			
Selenium	0.00540	0.00500	0.00500	0	108	70	130			
Thallium	0.00106	0.00150	0.00100	0	106	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629A

The QC data in batch 75757 applies to the following samples: 1606193-01A, 1606193-02A, 1606193-03A, 1606193-04A, 1606193-05A, 1606193-06A, 1606193-07A, 1606193-08A, 1606193-09A, 1606193-10A, 1606193-11A, 1606193-12A, 1606193-13A, 1606193-14A, 1606193-15A, 1606193-16A, 1606193-17A

Sample ID 1606193-10A SD	Batch ID: 75757	TestNo: SW6020A	Units: mg/L
SampType: SD	Run ID: ICP-MS4_160629A	Analysis Date: 6/29/2016 12:07:00 PM	Prep Date: 6/21/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	10.4	7.50	0	10.5				0.592	10	

Sample ID 1606193-10A PDS	Batch ID: 75757	TestNo: SW6020A	Units: mg/L
SampType: PDS	Run ID: ICP-MS4_160629A	Analysis Date: 6/29/2016 12:27:00 PM	Prep Date: 6/21/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	33.0	1.50	25.0	10.5	90.1	80	120			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629A

Sample ID	ICV-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 11:25:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.28	0.300	2.50	0	91.2	90	110			

Sample ID	LCVL-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 11:36:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0990	0.300	0.100	0	99.0	70	130			

Sample ID	CCV1-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 12:29:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.68	0.300	5.00	0	93.5	90	110			

Sample ID	LCVL1-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 12:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.100	0.300	0.100	0	100	70	130			

Sample ID	CCV2-160629		Batch ID:	R86633		TestNo:	SW6020A		Units:	mg/L	
SampType:	CCV		Run ID:	ICP-MS4_160629A		Analysis Date:	6/29/2016 1:02:00 PM		Prep Date:		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium	4.70	0.300	5.00	0	94.1	90	110				

Sample ID	LCVL2-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 1:16:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0939	0.300	0.100	0	93.9	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629E

The QC data in batch 75757 applies to the following samples: 1606193-01A, 1606193-02A, 1606193-03A, 1606193-04A, 1606193-05A, 1606193-06A, 1606193-07A, 1606193-08A, 1606193-09A, 1606193-10A, 1606193-11A, 1606193-12A, 1606193-13A, 1606193-14A, 1606193-15A, 1606193-16A, 1606193-17A

Sample ID	MB-75757		Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160629E		Analysis Date:	6/29/2016 5:30:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID	LCS-75757			Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_160629E		Analysis Date:	6/29/2016 5:32:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron 0.196 0.0300 0.200 0 98.0 80 120

Sample ID	LCSD-75757			Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD			Run ID:	ICP-MS4_160629E		Analysis Date:	6/29/2016 5:34:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron 0.194 0.0300 0.200 0 96.8 80 120 1.17 15

Sample ID	1606193-10A SD		Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD		Run ID:	ICP-MS4_160629E		Analysis Date:	6/29/2016 5:40:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.0800 0.150 0 0.0639 22.4 10 R

Sample ID	1606193-10A PDS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:42:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.263 0.0300 0.200 0.0639 99.5 80 120

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629E

Sample ID	ICV2-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:12:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.105	0.0300	0.100	0	105	90	110			

Sample ID	ILCVL2-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:19:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0248	0.0300	0.0200	0	124	70	130			

Sample ID	CCV7-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 6:11:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.204	0.0300	0.200	0	102	90	110			

Sample ID	LCVL7-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 6:21:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0236	0.0300	0.0200	0	118	70	130			

Sample ID	CCV8-160629		Batch ID:	R86640		TestNo:	SW6020A		Units:	mg/L	
SampType:	CCV		Run ID:	ICP-MS4_160629E		Analysis Date:	6/29/2016 6:49:00 PM		Prep Date:		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Boron	0.207	0.0300	0.200	0	104	90	110				

Sample ID	LCVL8-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 6:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0231	0.0300	0.0200	0	116	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_160623A

The QC data in batch 75822 applies to the following samples: 1606193-01D, 1606193-02D, 1606193-03D, 1606193-04D, 1606193-05D

Sample ID	MB-75822	Batch ID:	75822	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 9:34:11 AM	Prep Date:	6/23/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-75822	Batch ID:	75822	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 9:48:47 AM	Prep Date:	6/23/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	9.79	1.00	10.00	0	97.9	90	110			
Fluoride	3.73	0.400	4.000	0	93.3	90	110			
Sulfate	29.7	3.00	30.00	0	98.9	90	110			

Sample ID	LCSD-75822	Batch ID:	75822	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 10:03:24 AM	Prep Date:	6/23/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	9.67	1.00	10.00	0	96.7	90	110	1.20	20	
Fluoride	3.79	0.400	4.000	0	94.8	90	110	1.55	20	
Sulfate	29.7	3.00	30.00	0	99.1	90	110	0.169	20	

Sample ID	1606193-05DMS	Batch ID:	75822	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 3:01:17 PM	Prep Date:	6/23/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	3870	100	2000	2071	89.8	90	110			
Fluoride	1960	40.0	2000	0	98.0	90	110			
Sulfate	2550	300	2000	476.5	104	90	110			

Sample ID	1606193-05DMSD	Batch ID:	75822	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 3:15:53 PM	Prep Date:	6/23/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	3900	100	2000	2071	91.4	90	110	0.859	20	
Fluoride	2000	40.0	2000	0	99.9	90	110	1.99	20	
Sulfate	2600	300	2000	476.5	106	90	110	1.87	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_160623A

Sample ID	ICV-160623	Batch ID:	R86510	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 8:57:03 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	23.6	1.00	25.00	0	94.5	90	110			
Fluoride	9.31	0.400	10.00	0	93.1	90	110			
Sulfate	73.4	3.00	75.00	0	97.8	90	110			

Sample ID	CCV1-160623	Batch ID:	R86510	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 1:05:33 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.63	1.00	10.00	0	96.3	90	110			
Fluoride	3.89	0.400	4.000	0	97.1	90	110			
Sulfate	29.8	3.00	30.00	0	99.3	90	110			

Sample ID	CCV2-160623	Batch ID:	R86510	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_160623A	Analysis Date:	6/23/2016 3:30:30 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.64	1.00	10.00	0	96.4	90	110			
Fluoride	3.95	0.400	4.000	0	98.8	90	110			
Sulfate	29.9	3.00	30.00	0	99.7	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160623A

The QC data in batch 75825 applies to the following samples: 1606193-06D, 1606193-07D, 1606193-08D, 1606193-09D, 1606193-10D, 1606193-11D, 1606193-12D, 1606193-13D, 1606193-14D, 1606193-15D, 1606193-16D, 1606193-17D

Sample ID	MB-75825	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 10:10:50 AM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-75825	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 10:25:50 AM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	3.86	0.400	4.000	0	96.5	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

Sample ID	LCSD-75825	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 10:40:50 AM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110	0.306	20	
Fluoride	3.92	0.400	4.000	0	98.0	90	110	1.64	20	
Sulfate	31.5	3.00	30.00	0	105	90	110	0.423	20	

Sample ID	1606193-14DMS	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 6:52:41 PM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	298	10.0	200.0	87.82	105	90	110			
Fluoride	204	4.00	200.0	0	102	90	110			
Sulfate	248	30.0	200.0	35.85	106	90	110			

Sample ID	1606193-14DMSD	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 7:07:41 PM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	297	10.0	200.0	87.82	105	90	110	0.387	20	
Fluoride	203	4.00	200.0	0	102	90	110	0.202	20	
Sulfate	248	30.0	200.0	35.85	106	90	110	0.092	20	

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160623A

Sample ID	1606193-15DMS	Batch ID:	75825	TestNo:	E300	Units:	mg/L		
SampType:	MS	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 7:37:41 PM	Prep Date:	6/23/2016		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride	2610	100	2000	519.7	105	90	110		
Fluoride	2030	40.0	2000	0	102	90	110		
Sulfate	2220	300	2000	103.0	106	90	110		

Sample ID	1606193-15DMSD	Batch ID:	75825	TestNo:	E300	Units:	mg/L		
SampType:	MSD	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 7:52:41 PM	Prep Date:	6/23/2016		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride	2620	100	2000	519.7	105	90	110	0.193	20
Fluoride	2040	40.0	2000	0	102	90	110	0.279	20
Sulfate	2220	300	2000	103.0	106	90	110	0.305	20

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160623A

Sample ID	ICV-160623	Batch ID:	R86527		TestNo:	E300		Units:	mg/L		
SampType:	ICV	Run ID:	IC4_160623A		Analysis Date:	6/23/2016 9:30:34 AM		Prep Date:			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		25.7	1.00	25.00	0	103	90	110			
Fluoride		9.88	0.400	10.00	0	98.8	90	110			
Sulfate		78.7	3.00	75.00	0	105	90	110			

Sample ID	CCV1-160623	Batch ID:	R86527	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 1:50:32 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.99	0.400	4.000	0	99.7	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID	CCV2-160623	Batch ID:	R86527	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 6:07:41 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	4.03	0.400	4.000	0	101	90	110			
Sulfate	31.7	3.00	30.00	0	106	90	110			

Sample ID	CCV3-160623	Batch ID:	R86527	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 8:37:41 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	4.02	0.400	4.000	0	101	90	110			
Sulfate	31.8	3.00	30.00	0	106	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160617A

The QC data in batch 75719 applies to the following samples: 1606193-01D, 1606193-02D, 1606193-03D, 1606193-04D, 1606193-05D, 1606193-06D, 1606193-07D, 1606193-08D, 1606193-09D, 1606193-10D, 1606193-11D, 1606193-12D, 1606193-13D, 1606193-14D

Sample ID	1606168-01D-DUP	Batch ID:	75719	TestNo:	M4500-H+ B	Units:	pH Units@18.1°C				
SampType:	DUP	Run ID:	TITRATOR_160617A	Analysis Date:	6/17/2016 1:00:00 PM	Prep Date:	6/17/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		6.26	0	0	6.290				0.478		5

Sample ID: 1606193-04D-DUP	Batch ID: 75719	TestNo: M4500-H+ B	Units: pH Units@17.3°C							
SampType: DUP	Run ID: TITRATOR_160617A	Analysis Date: 6/17/2016 1:20:00 PM	Prep Date: 6/17/2016							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.95	0	0	6.890				0.867	5	

LUMINANT

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160617A

Sample ID	ICV-160617	Batch ID:	R86391	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C				
SampType:	ICV	Run ID:	TITRATOR_160617A	Analysis Date:	6/17/2016 12:36:00 PM	Prep Date:	6/17/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		9.97	0	10.00	0	99.7	99	101			

Sample ID	CCV1-160617	Batch ID:	R86391	TestNo:	M4500-H+ B	Units:	pH Units@21.2°C				
SampType:	CCV	Run ID:	TITRATOR_160617A	Analysis Date:	6/17/2016 1:15:00 PM	Prep Date:	6/17/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		7.01	0	7.000	0	100	97.1	102.9			

Sample ID	CCV2-160617	Batch ID:	R86391	TestNo:	M4500-H+ B	Units:	pH Units@21.2°C				
SampType:	CCV	Run ID:	TITRATOR_160617A	Analysis Date:	6/17/2016 1:44:00 PM	Prep Date:	6/17/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		7.00	0	7.000	0	100	97.1	102.9			

Sample ID	CCV3-160617	Batch ID:	R86391	TestNo:	M4500-H+ B	Units:	pH Units@21.6°C				
SampType:	CCV	Run ID:	TITRATOR_160617A	Analysis Date:	6/17/2016 1:59:00 PM	Prep Date:	6/17/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		7.01	0	7.000	0	100	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160617B

The QC data in batch 75721 applies to the following samples: 1606193-15D, 1606193-16D, 1606193-17D

Sample ID	1606193-15D-DUP	Batch ID:	75721	TestNo:	M4500-H+ B	Units:	pH Units@17.9°C
SampType:	DUP	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 2:52:00 PM	Prep Date:	6/17/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.79	0	0	6.700				1.33	5	

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160617B

Sample ID	ICV-160617	Batch ID:	R86395	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C
SampType:	ICV	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 12:36:00 PM	Prep Date:	6/17/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 9.97 0 10.00 0 99.7 99 101

Sample ID	CCV3-160617	Batch ID:	R86395	TestNo:	M4500-H+ B	Units:	pH Units@21.6°C
SampType:	CCV	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 1:59:00 PM	Prep Date:	6/17/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 7.01 0 7.000 0 100 97.1 102.9

Sample ID	CCV4-160617	Batch ID:	R86395	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C
SampType:	CCV	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 3:00:00 PM	Prep Date:	6/17/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 7.01 0 7.000 0 100 97.1 102.9

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160621C

The QC data in batch 75770 applies to the following samples: 1606193-01D, 1606193-02D, 1606193-03D, 1606193-04D, 1606193-05D, 1606193-06D, 1606193-07D, 1606193-08D, 1606193-09D, 1606193-10D, 1606193-11D, 1606193-12D, 1606193-13D, 1606193-14D, 1606193-15D, 1606193-16D

Sample ID	MB-75770		Batch ID:	75770		TestNo:	M2540C		Units:	mg/L	
SampType:	MBLK		Run ID:	WC_160621C		Analysis Date:	6/22/2016 8:36:00 AM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-75770			Batch ID:	75770		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS			Run ID:	WC_160621C		Analysis Date:	6/22/2016 8:36:00 AM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 770 10.0 745.6 0 103 90 113

Sample ID	1606168-02D-DUP			Batch ID:	75770		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP			Run ID:	WC_160621C		Analysis Date:	6/22/2016 8:36:00 AM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 1800 50.0 0 1725 4.26 5

Sample ID	1606193-05D-DUP		Batch ID:	75770		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_160621C		Analysis Date:	6/22/2016 8:36:00 AM		Prep Date:	6/21/2016	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 3920 50.0 0 6135 44.1 5 R

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606193
Project: Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160622D

The QC data in batch 75802 applies to the following samples: 1606193-17D

Sample ID	MB-75802	Batch ID:	75802	TestNo:	M2540C	Units:	mg/L				
SampType:	MBLK	Run ID:	WC_160622D	Analysis Date:	6/23/2016 8:49:00 AM	Prep Date:	6/22/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-75802	Batch ID:	75802	TestNo:	M2540C	Units:	mg/L				
SampType:	LCS	Run ID:	WC_160622D	Analysis Date:	6/23/2016 8:49:00 AM	Prep Date:	6/22/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 773 10.0 745.6 0 104 90 113

Sample ID	1606194-01B-DUP	Batch ID:	75802	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_160622D	Analysis Date:	6/23/2016 8:49:00 AM	Prep Date:	6/22/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 6810 50.0 0 7110 4.31 5

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 NELAC certified

Case Narrative

Lab No: 20160589

This report contains the analytical results for the 17 sample(s) received under chain of custody by ESC Lab Sciences on 6/21/2016 1:05:08 PM. These samples are associated with your 1606193 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances



Client : DHL Analytical, Inc.
 Client Project : 1606193
 Lab Number : 20160589
 Date Reported : 08/01/16
 Date Received : 06/21/16
 Page Number : 2 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160589-01
Client ID : FGD-3
Date Sampled : 6/14/2016 11:00:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium	2.31 +/- 0.783	1.35	pCi/l				
Radium-226 SM 7500 Ra B M*	0.754 +/- 0.205	0.125	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	1.56 +/- 0.578	1.22	pCi/l		07/19/16	07/29/16	JR

Lab ID : 20160589-02
Client ID : FGD-4
Date Sampled : 6/14/2016 11:55:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium	1.35 +/- 0.964	1.13	pCi/l				
Radium-226 SM 7500 Ra B M*	0.437 +/- 0.172	0.151	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	0.909 +/- 0.792	0.975	pCi/l		07/19/16	07/25/16	JR

Lab ID : 20160589-03
Client ID : FGD-6
Date Sampled : 6/14/2016 12:55:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	3.47 +/- 1.40	1.55	pCi/l				
Radium-226 SM 7500 Ra B M*	1.31 +/- 0.395	0.273	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	2.16 +/- 1.00	1.28	pCi/l		07/19/16	07/25/16	JR

Lab ID : 20160589-04
Client ID : FGD-2
Date Sampled : 6/14/2016 1:50:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	1.94 +/- 1.01	1.25	pCi/l				
Radium-226 SM 7500 Ra B M*	0.275 +/- 0.126	0.096	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	1.66 +/- 0.885	1.15	pCi/l		07/19/16	07/25/16	JR



Client : DHL Analytical, Inc.
 Client Project : 1606193
 Lab Number : 20160589
 Date Reported : 08/01/16
 Date Received : 06/21/16
 Page Number : 3 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160589-05
Client ID : FGD-8
Date Sampled : 6/14/2016 3:00:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	4.23 +/- 1.33	2.48	pCi/l				
Radium-226 SM 7500 Ra B M*	1.93 +/- 0.700	0.611	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	2.30 +/- 0.628	1.87	pCi/l		07/19/16	07/29/16	JR

Lab ID : 20160589-06
Client ID : FGD-1
Date Sampled : 6/15/2016 3:55:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	1.70 +/- 0.878	1.31	pCi/l				
Radium-226 SM 7500 Ra B M*	0.039 +/- 0.153	0.258	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	1.66 +/- 0.725	1.05	pCi/l		07/19/16	07/25/16	JR

Lab ID : 20160589-07
Client ID : FGD-11
Date Sampled : 6/15/2016 10:05:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium	4.40 +/- 1.18	1.13	pCi/l				
Radium-226 SM 7500 Ra B M*	2.34 +/- 0.574	0.377	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	2.06 +/- 0.605	0.750	pCi/l		07/19/16	07/25/16	JR

Lab ID : 20160589-08
Client ID : FGD-12
Date Sampled : 6/15/2016 11:05:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium	4.07 +/- 1.30	1.33	pCi/l				
Radium-226 SM 7500 Ra B M*	2.01 +/- 0.634	0.515	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	2.06 +/- 0.662	0.817	pCi/l		07/19/16	07/25/16	JR



Client : DHL Analytical, Inc.
 Client Project : 1606193
 Lab Number : 20160589
 Date Reported : 08/01/16
 Date Received : 06/21/16
 Page Number : 4 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160589-09
Client ID : FGD-5
Date Sampled : 6/15/2016 12:00:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	1.68 +/- 1.19	1.49	pCi/l				
Radium-226 SM 7500 Ra B M*	0.429 +/- 0.250	0.308	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	1.25 +/- 0.944	1.18	pCi/l		07/19/16	07/25/16	JR

Lab ID : 20160589-10
Client ID : MW-07
Date Sampled : 6/15/2016 1:20:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.284 +/- 0.704	0.889	pCi/l				
Radium-226 SM 7500 Ra B M*	0.245 +/- 0.141	0.167	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	0.039 +/- 0.563	0.722	pCi/l		07/19/16	07/25/16	JR

Lab ID : 20160589-11
Client ID : MW-05
Date Sampled : 6/15/2016 2:15:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	1.76 +/- 0.984	1.19	pCi/l				
Radium-226 SM 7500 Ra B M*	0.679 +/- 0.208	0.203	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	1.08 +/- 0.776	0.985	pCi/l		07/20/16	07/26/16	JR

Lab ID : 20160589-12
Client ID : MW-09
Date Sampled : 6/15/2016 4:05:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	3.17 +/- 1.90	2.32	pCi/l				
Radium-226 SM 7500 Ra B M*	0.794 +/- 0.312	0.314	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	2.38 +/- 1.59	2.01	pCi/l		07/20/16	07/26/16	JR



Client : DHL Analytical, Inc.
 Client Project : 1606193
 Lab Number : 20160589
 Date Reported : 08/01/16
 Date Received : 06/21/16
 Page Number : 5 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160589-13
Client ID : AL-10
Date Sampled : 6/16/2016 8:35:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.527 +/- 0.830	0.955	pCi/l				
Radium-226 SM 7500 Ra B M*	0.527 +/- 0.238	0.195	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	-0.150 +/- 0.592	0.760	pCi/l		07/20/16	07/26/16	JR

Lab ID : 20160589-14
Client ID : MW-02
Date Sampled : 6/16/2016 10:40:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium	4.39 +/- 1.15	1.66	pCi/l				
Radium-226 SM 7500 Ra B M*	1.11 +/- 0.322	0.299	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	3.28 +/- 0.827	1.36	pCi/l		07/20/16	07/26/16	JR

Lab ID : 20160589-15
Client ID : MW-08
Date Sampled : 6/16/2016 12:50:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	2.88 +/- 1.24	1.25	pCi/l				
Radium-226 SM 7500 Ra B M*	1.15 +/- 0.365	0.202	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	1.73 +/- 0.870	1.05	pCi/l		07/20/16	07/26/16	JR

Lab ID : 20160589-16
Client ID : DUP-1
Date Sampled : 6/16/2016 12:50:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.866 +/- 1.34	1.65	pCi/l				
Radium-226 SM 7500 Ra B M*	0.793 +/- 0.308	0.282	pCi/l		06/29/16	07/01/16	AK
Radium-228 EPA 904*/9320*	0.073 +/- 1.03	1.37	pCi/l		07/20/16	07/26/16	JR



Client : DHL Analytical, Inc.
Client Project : 1606193
Lab Number : 20160589
Date Reported : 08/01/16
Date Received : 06/21/16
Page Number : 6 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20160589-17							
Client ID : EB-1							
Date Sampled : 6/16/2016 1:30:00 PM							
Matrix : NPW							

Radiochemical Analyses

Combined Radium		0.204 +/- 0.877	1.17	pCi/l			
Radium-226	SM 7500 Ra B M*	0.204 +/- 0.149	0.187	pCi/l	06/29/16	07/01/16	AK
Radium-228	EPA 904*/9320*	-0.064 +/- 0.728	0.983	pCi/l	07/20/16	07/26/16	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	RPD	Batch ID
Radium-226	0.008	100.0		36.7	0.745	92.3	87.7	4.8	R1105
Radium-228	-.196	105.0		NC	0.533	94.1	96.6	2.6	R3833
Radium-228	0.163	88.3		NC	0.469	96.2	99.8	3.6	R3832

Lab Approval: _____

DHL Analytical, Inc.

2300 Double Creek Drive

Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1606193

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Subcontractor:

ESC Laboratory

311 North Aspen

Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515

FAX:

Acct #: DHLRRTX

17-Jun-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E904.0	SM7500Ra-B M				
FGD-3	Aqueous	-01B	06/14/16 11:00 AM	500HDPEHNO3	1					
FGD-3	Aqueous	-01C	06/14/16 11:00 AM	500HDPEHNO3		1				
FGD-4	Aqueous	-02B	06/14/16 11:55 AM	500HDPEHNO3	1					
FGD-4	Aqueous	-02C	06/14/16 11:55 AM	500HDPEHNO3		1				
FGD-6	Aqueous	-03B	06/14/16 12:55 PM	500HDPEHNO3	1					
FGD-6	Aqueous	-03C	06/14/16 12:55 PM	500HDPEHNO3		1				
FGD-2	Aqueous	-04B	06/14/16 01:50 PM	500HDPEHNO3	1					
FGD-2	Aqueous	-04C	06/14/16 01:50 PM	500HDPEHNO3		1				
FGD-8	Aqueous	-05B	06/14/16 03:00 PM	500HDPEHNO3	1					
FGD-8	Aqueous	-05C	06/14/16 03:00 PM	500HDPEHNO3		1				
FGD-1	Aqueous	-06B	06/15/16 03:55 PM	500HDPEHNO3	1					
FGD-1	Aqueous	-06C	06/15/16 03:55 PM	500HDPEHNO3		1				
FGD-11	Aqueous	-07B	06/15/16 10:05 AM	500HDPEHNO3	1					
FGD-11	Aqueous	-07C	06/15/16 10:05 AM	500HDPEHNO3		1				
FGD-12	Aqueous	-08B	06/15/16 11:05 AM	500HDPEHNO3	1					
FGD-12	Aqueous	-08C	06/15/16 11:05 AM	500HDPEHNO3		1				
FGD-5	Aqueous	-09B	06/15/16 12:00 PM	500HDPEHNO3	1					
FGD-5	Aqueous	-09C	06/15/16 12:00 PM	500HDPEHNO3		1				

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: <u>Bank 6/17/16 1730</u>	Date/Time: <u>6/17/16 1730</u>	Received by: <u>Lone Star</u>	Date/Time: <u>6/17/16 1730</u>
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1606193

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515
FAX:
Acct #: DHLRRTX

17-Jun-16

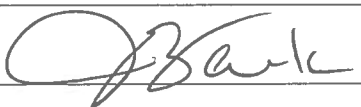
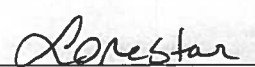
Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E904.0	SM7500Ra-B M				
MW-07	Aqueous	-10B	06/15/16 01:20 PM	500HDPEHNO3	1					
MW-07	Aqueous	-10C	06/15/16 01:20 PM	500HDPEHNO3		1				
MW-05	Aqueous	-11B	06/15/16 02:15 PM	500HDPEHNO3	1					
MW-05	Aqueous	-11C	06/15/16 02:15 PM	500HDPEHNO3		1				
MW-09	Aqueous	-12B	06/15/16 04:05 PM	500HDPEHNO3	1					
MW-09	Aqueous	-12C	06/15/16 04:05 PM	500HDPEHNO3		1				
AL-10	Aqueous	-13B	06/16/16 08:35 AM	500HDPEHNO3	1					
AL-10	Aqueous	-13C	06/16/16 08:35 AM	500HDPEHNO3		1				
MW-02	Aqueous	-14B	06/16/16 10:40 AM	500HDPEHNO3	1					
MW-02	Aqueous	-14C	06/16/16 10:40 AM	500HDPEHNO3		1				
MW-08	Aqueous	-15B	06/16/16 12:50 PM	500HDPEHNO3	1					
MW-08	Aqueous	-15C	06/16/16 12:50 PM	500HDPEHNO3		1				
DUP-1	Aqueous	-16B	06/16/16 12:50 PM	500HDPEHNO3	1					
DUP-1	Aqueous	-16C	06/16/16 12:50 PM	500HDPEHNO3		1				
EB-1	Equip Blank	-17B	06/16/16 01:30 PM	500HDPEHNO3	1					
EB-1	Equip Blank	-17C	06/16/16 01:30 PM	500HDPEHNO3		1				

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

LB43076

20160589

Relinquished by: 	Date/Time: 6/17/16 1730	Received by: 	Date/Time: 6/17/16 1730
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE LOGIN

Date Received: 6/21/2016 1:05:08

Lab Number: 20160589

Due: 7/19/2016

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20160589-01 B	FGD-3	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-01 A	FGD-3	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-02 A	FGD-4	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-02 B	FGD-4	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-03 A	FGD-6	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-03 B	FGD-6	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-04 B	FGD-2	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-04 A	FGD-2	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-05 A	FGD-8	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-05 B	FGD-8	NPW	06/14/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-06 A	FGD-1	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-06 B	FGD-1	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-07 A	FGD-11	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-07 B	FGD-11	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20160589-08 A	FGD-12	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-08 B	FGD-12	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-09 B	FGD-5	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-09 A	FGD-5	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-10 A	MW-07	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-10 B	MW-07	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-11 A	MW-05	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-11 B	MW-05	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-12 A	MW-09	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-12 B	MW-09	NPW	06/15/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-13 A	AL-10	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-13 B	AL-10	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-14 B	MW-02	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-14 A	MW-02	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-15 A	MW-08	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-15 B	MW-08	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160589-16 A	DUP-1	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160589-16 B	DUP-1	NPW	06/16/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes

Radium-226

Radium-228

SM 7500 Ra B M*

EPA 904*/9320*

20160589-17 B

EB-1

NPW

06/16/16

Plastic

500 ml

HNO₃, pH < 2

☐

Yes

Yes

20160589-17 A

EB-1

NPW

06/16/16

Plastic

500 ml

HNO₃, pH < 2

☐

Yes

Yes

Radium-226

SM 7500 Ra B M*

Radium-228

EPA 904*/9320*

CONTAINER INSPECTION

Coolers

Custody Seals Broken

☒

Temperature:

C

Ice

Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken

☒

Chain of Custody Record

☒

Labels in Tact

☒

Radiation Survey Complete

☒

Anomalies

Inspected By:

[Signature]

DATE

6/21/16

QA or Designee Review:

DATE

Sample Custodian Review:

[Signature]

DATE

6/21/16

Project Notes:



July 01, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Luminant - Oak Grove

Order No.: 1606194

Dear Will Vienne:

DHL Analytical, Inc. received 1 sample(s) on 6/17/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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: T104704211-16-16



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LUMINANT

ORIGIN ID:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR
SUITE 4004
ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 16JUN16
ACTWGT: 34.90 LB
CAD: 6895323/SSF01704
DIMS: 21x14x11 IN
BILL THIRD PARTY

Part # 156297V-43641106-EXP05/17...

TO DHL

2300 DOUBLE CREEK DR

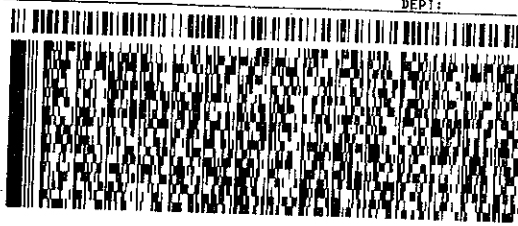
ROUND ROCK TX 78664

(512) 388-8222

INV:
PO:

REF:

DEPT:



FedEx
Express



4 of 5

MPS# 7833 7923 0484

Mstr# 7833 7923 0451

0201

FRI - 17 JUN 10:3 /A
PRIORITY OVERNIGHT

44 BSMA

78664
TX-US AUS



Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 6/17/2016

Work Order Number 1606194

Received by JT

Checklist completed by [Signature] 6/17/2016
Signature Date

Reviewed by [Initials] 6/17/2016
Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	5.1 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 8086
	Adjusted? <u>no</u>		Checked by <u>[Signature]</u>
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____		Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1606194

CASE NARRATIVE

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

Method SW6020A - Total and Dissolved Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 6/17/2016. A total of 1 sample was received and analyzed. The sample arrived in good condition and was properly packaged.

METALS ANALYSIS

For Metals Analysis, the recovery of Boron for the Matrix Spike and matrix Spike Duplicate (1606193-10 MS/MSD) was above the method control limits. These are flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated LCS. No further corrective action was taken.

For Metals Analysis, the RPD of Boron for the Serial Dilution (1606193-10 SD) was above the method control limit. This is flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated Post Digestion Spike. No further corrective action was taken.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1606194**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1606194-01	FGD-A-POND		06/16/16 01:15 PM	6/17/2016

LUMINANT

Lab Order: 1606194
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1606194-01A	FGD-A-POND	06/16/16 01:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-A-POND	06/16/16 01:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-A-POND	06/16/16 01:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/21/16 04:30 AM	75757
	FGD-A-POND	06/16/16 01:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
	FGD-A-POND	06/16/16 01:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	06/24/16 09:39 AM	75845
1606194-01B	FGD-A-POND	06/16/16 01:15 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-A-POND	06/16/16 01:15 PM	Aqueous	E300	Anion Preparation	06/23/16 09:33 AM	75825
	FGD-A-POND	06/16/16 01:15 PM	Aqueous	M4500-H+ B	pH Preparation	06/17/16 02:34 PM	75721
	FGD-A-POND	06/16/16 01:15 PM	Aqueous	M2540C	TDS Preparation	06/22/16 01:19 PM	75802

Lab Order: 1606194
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1606194-01A	FGD-A-POND	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 11:28 AM	CETAC2_HG_160628 A
	FGD-A-POND	Aqueous	SW7470A	Mercury Total: Aqueous	75845	1	06/28/16 10:48 AM	CETAC2_HG_160628 A
	FGD-A-POND	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	100	06/29/16 06:39 PM	ICP-MS4_160629E
	FGD-A-POND	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	100	06/29/16 01:00 PM	ICP-MS4_160629A
	FGD-A-POND	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	75757	1	06/28/16 05:53 PM	ICP-MS4_160628C
1606194-01B	FGD-A-POND	Aqueous	E300	Anions by IC method - Water	75825	100	06/23/16 05:22 PM	IC4_160623A
	FGD-A-POND	Aqueous	E300	Anions by IC method - Water	75825	1	06/23/16 03:00 PM	IC4_160623A
	FGD-A-POND	Aqueous	M4500-H+ B	pH	75721	1	06/17/16 02:58 PM	TITRATOR_160617B
	FGD-A-POND	Aqueous	M2540C	Total Dissolved Solids	75802	1	06/23/16 08:49 AM	WC_160622D

DHL Analytical, Inc.

Date: 01-Jul-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1606194

Client Sample ID: FGD-A-POND
Lab ID: 1606194-01
Collection Date: 06/16/16 01:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
		SW7470A					Analyst: AH
Mercury	0.00188	0.0000800	0.000200		mg/L	1	06/28/16 11:28 AM
TRACE METALS: ICP-MS - WATER							
		SW6020A					Analyst: RO
Antimony	0.00297	0.000800	0.00250		mg/L	1	06/28/16 05:53 PM
Arsenic	0.00438	0.00200	0.00500	J	mg/L	1	06/28/16 05:53 PM
Barium	0.144	0.00300	0.0100		mg/L	1	06/28/16 05:53 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:53 PM
Boron	88.7	1.00	3.00		mg/L	100	06/29/16 06:39 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/28/16 05:53 PM
Calcium	581	10.0	30.0		mg/L	100	06/29/16 01:00 PM
Chromium	0.0160	0.00200	0.00500		mg/L	1	06/28/16 05:53 PM
Cobalt	0.00458	0.00300	0.00500	J	mg/L	1	06/28/16 05:53 PM
Lead	0.00210	0.000300	0.00100		mg/L	1	06/28/16 05:53 PM
Lithium	0.156	0.00500	0.0100		mg/L	1	06/28/16 05:53 PM
Molybdenum	0.276	0.00200	0.00500		mg/L	1	06/28/16 05:53 PM
Selenium	1.10	0.00200	0.00500		mg/L	1	06/28/16 05:53 PM
Thallium	0.00128	0.000500	0.00150	J	mg/L	1	06/28/16 05:53 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: AV
Chloride	1190	30.0	100		mg/L	100	06/23/16 05:22 PM
Fluoride	7.29	0.100	0.400		mg/L	1	06/23/16 03:00 PM
Sulfate	3390	100	300		mg/L	100	06/23/16 05:22 PM
PH							
		M4500-H+ B					Analyst: BJT
pH	7.69	0	0		pH Units@16.3°C	1	06/17/16 02:58 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: AJH
Total Dissolved Solids (Residue, Filterable)	7110	50.0	50.0		mg/L	1	06/23/16 08:49 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1606194

Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160628A

The QC data in batch 75845 applies to the following samples: 1606194-01A

Sample ID	MB-75845	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:03:09 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-75845	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:05:25 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00205 0.000200 0.00200 0 103 85 115

Sample ID	LCSD-75845	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:07:41 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00202 0.000200 0.00200 0 101 85 115 1.47 15

Sample ID	1606193-07A SD	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:12:14 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1606193-07A PDS	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:14:29 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00238 0.000200 0.00250 0 95.2 85 115

Sample ID	1606193-07A MS	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:16:45 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00199 0.000200 0.00200 0 99.5 80 120

Sample ID	1606193-07A MSD	Batch ID:	75845	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:19:00 AM	Prep Date:	6/24/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00208 0.000200 0.00200 0 104 80 120 4.42 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160628A

Sample ID	ICV-160628	Batch ID:	R86598	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 9:58:36 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00396	0.000200	0.00400	0	99.0	90	110			

Sample ID	CCV1-160628	Batch ID:	R86598	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 10:41:42 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Sample ID	CCV2-160628	Batch ID:	R86598	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 11:06:44 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00200	0.000200	0.00200	0	100	90	110			

Sample ID	CCV3-160628	Batch ID:	R86598	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160628A	Analysis Date:	6/28/2016 11:33:05 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00201	0.000200	0.00200	0	101	90	110			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

The QC data in batch 75757 applies to the following samples: 1606194-01A

Sample ID	MB-75757		Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 4:52:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250
Arsenic	<0.00200	0.00500
Barium	<0.00300	0.0100
Beryllium	<0.000300	0.00100
Cadmium	<0.000300	0.00100
Calcium	<0.100	0.300
Chromium	<0.00200	0.00500
Cobalt	<0.00300	0.00500
Lead	<0.000300	0.00100
Lithium	<0.00500	0.0100
Molybdenum	<0.00200	0.00500
Selenium	<0.00200	0.00500
Thallium	<0.000500	0.00150

Sample ID	LCS-75757			Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 4:54:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.204	0.00250	0.200	0	102	80	120
Arsenic	0.204	0.00500	0.200	0	102	80	120
Barium	0.202	0.0100	0.200	0	101	80	120
Beryllium	0.209	0.00100	0.200	0	105	80	120
Cadmium	0.203	0.00100	0.200	0	102	80	120
Calcium	4.95	0.300	5.00	0	99.0	80	120
Chromium	0.207	0.00500	0.200	0	103	80	120
Cobalt	0.211	0.00500	0.200	0	105	80	120
Lead	0.205	0.00100	0.200	0	103	80	120
Lithium	0.206	0.0100	0.200	0	103	80	120
Molybdenum	0.199	0.00500	0.200	0	99.6	80	120
Selenium	0.206	0.00500	0.200	0	103	80	120
Thallium	0.208	0.00150	0.200	0	104	80	120

Sample ID	LCSD-75757			Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD			Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 4:57:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.203	0.00250	0.200	0	101	80	120	0.683	15
Arsenic	0.202	0.00500	0.200	0	101	80	120	1.01	15
Barium	0.199	0.0100	0.200	0	99.3	80	120	1.64	15
Beryllium	0.207	0.00100	0.200	0	103	80	120	1.12	15

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	LCSD-75757		Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD		Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 4:57:00 PM		Prep Date:	6/21/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.200	0.00100	0.200	0	99.9	80	120	1.87	15	
Calcium	4.84	0.300	5.00	0	96.9	80	120	2.17	15	
Chromium	0.202	0.00500	0.200	0	101	80	120	2.11	15	
Cobalt	0.210	0.00500	0.200	0	105	80	120	0.406	15	
Lead	0.205	0.00100	0.200	0	103	80	120	0.154	15	
Lithium	0.210	0.0100	0.200	0	105	80	120	2.16	15	
Molybdenum	0.197	0.00500	0.200	0	98.4	80	120	1.20	15	
Selenium	0.201	0.00500	0.200	0	101	80	120	2.08	15	
Thallium	0.208	0.00150	0.200	0	104	80	120	0.049	15	

Sample ID	1606193-10A SD	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L				
SampType:	SD	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:03:00 PM	Prep Date:	6/21/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0460	0.0500	0	0.0467				1.35	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	<0.0250	0.0500	0	0.0151				0	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1606193-10A PDS			Batch ID:	75757		TestNo:	SW6020A		Units:	mg/L		
SampType:	PDS			Run ID:	ICP-MS4_160628C		Analysis Date:	6/28/2016 5:23:00 PM		Prep Date:	6/21/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.189	0.00250	0.200	0	94.3	80	120			
Arsenic	0.201	0.00500	0.200	0	100	80	120			
Barium	0.243	0.0100	0.200	0.0467	98.0	80	120			
Beryllium	0.204	0.00100	0.200	0	102	80	120			
Cadmium	0.194	0.00100	0.200	0	97.1	80	120			
Chromium	0.202	0.00500	0.200	0	101	80	120			
Cobalt	0.206	0.00500	0.200	0	103	80	120			
Lead	0.202	0.00100	0.200	0	101	80	120			
Lithium	0.215	0.0100	0.200	0.0151	100	80	120			
Molybdenum	0.190	0.00500	0.200	0	95.0	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	1606193-10A PDS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:23:00 PM	Prep Date:	6/21/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		0.202	0.00500	0.200	0	101	80	120			
Thallium		0.203	0.00150	0.200	0	101	80	120			

Sample ID	1606193-10A MS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:25:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.211	0.00250	0.200	0	105	80	120			
Arsenic	0.206	0.00500	0.200	0	103	80	120			
Barium	0.253	0.0100	0.200	0.0467	103	80	120			
Beryllium	0.208	0.00100	0.200	0	104	80	120			
Cadmium	0.201	0.00100	0.200	0	100	80	120			
Calcium	16.0	0.300	5.00	11.0	101	80	120			
Chromium	0.201	0.00500	0.200	0	101	80	120			
Cobalt	0.207	0.00500	0.200	0	104	80	120			
Lead	0.204	0.00100	0.200	0	102	80	120			
Lithium	0.224	0.0100	0.200	0.0151	104	80	120			
Molybdenum	0.199	0.00500	0.200	0	99.4	80	120			
Selenium	0.204	0.00500	0.200	0	102	80	120			
Thallium	0.207	0.00150	0.200	0	103	80	120			

Sample ID	1606193-10A MSD	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:27:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.203	0.00250	0.200	0	101	80	120	3.97	15	
Arsenic	0.203	0.00500	0.200	0	101	80	120	1.35	15	
Barium	0.246	0.0100	0.200	0.0467	99.9	80	120	2.64	15	
Beryllium	0.202	0.00100	0.200	0	101	80	120	2.97	15	
Cadmium	0.197	0.00100	0.200	0	98.4	80	120	1.87	15	
Calcium	15.9	0.300	5.00	11.0	99.2	80	120	0.672	15	
Chromium	0.198	0.00500	0.200	0	99.0	80	120	1.53	15	
Cobalt	0.206	0.00500	0.200	0	103	80	120	0.697	15	
Lead	0.203	0.00100	0.200	0	101	80	120	0.667	15	
Lithium	0.218	0.0100	0.200	0.0151	101	80	120	2.68	15	
Molybdenum	0.195	0.00500	0.200	0	97.5	80	120	1.93	15	
Selenium	0.201	0.00500	0.200	0	100	80	120	1.60	15	
Thallium	0.204	0.00150	0.200	0	102	80	120	1.11	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	ICV-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 11:22:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.104	0.00250	0.100	0	104	90	110			
Arsenic	0.100	0.00500	0.100	0	100	90	110			
Barium	0.100	0.0100	0.100	0	100	90	110			
Beryllium	0.0989	0.00100	0.100	0	98.9	90	110			
Cadmium	0.100	0.00100	0.100	0	100	90	110			
Calcium	2.43	0.300	2.50	0	97.1	90	110			
Chromium	0.106	0.00500	0.100	0	106	90	110			
Cobalt	0.105	0.00500	0.100	0	105	90	110			
Lead	0.103	0.00100	0.100	0	103	90	110			
Lithium	0.0977	0.0100	0.100	0	97.7	90	110			
Molybdenum	0.0983	0.00500	0.100	0	98.3	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			
Thallium	0.102	0.00150	0.100	0	102	90	110			

Sample ID	LCVL-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 11:33:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00196	0.00250	0.00200	0	98.2	70	130			
Arsenic	0.00504	0.00500	0.00500	0	101	70	130			
Barium	0.00488	0.0100	0.00500	0	97.6	70	130			
Beryllium	0.000760	0.00100	0.00100	0	76.0	70	130			
Cadmium	0.000973	0.00100	0.00100	0	97.3	70	130			
Calcium	0.102	0.300	0.100	0	102	70	130			
Chromium	0.00519	0.00500	0.00500	0	104	70	130			
Cobalt	0.00525	0.00500	0.00500	0	105	70	130			
Lead	0.00105	0.00100	0.00100	0	105	70	130			
Lithium	0.0109	0.0100	0.0100	0	109	70	130			
Molybdenum	0.00489	0.00500	0.00500	0	97.8	70	130			
Selenium	0.00549	0.00500	0.00500	0	110	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV7-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 4:35:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.206	0.00250	0.200	0	103	90	110			
Arsenic	0.204	0.00500	0.200	0	102	90	110			
Barium	0.203	0.0100	0.200	0	101	90	110			
Beryllium	0.207	0.00100	0.200	0	104	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	CCV7-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 4:35:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.92	0.300	5.00	0	98.3	90	110			
Chromium	0.203	0.00500	0.200	0	101	90	110			
Cobalt	0.210	0.00500	0.200	0	105	90	110			
Lead	0.203	0.00100	0.200	0	101	90	110			
Lithium	0.200	0.0100	0.200	0	99.9	90	110			
Molybdenum	0.200	0.00500	0.200	0	100	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.205	0.00150	0.200	0	102	90	110			

Sample ID	LCVL7-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 4:41:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00201	0.00250	0.00200	0	100	70	130			
Arsenic	0.00515	0.00500	0.00500	0	103	70	130			
Barium	0.00514	0.0100	0.00500	0	103	70	130			
Beryllium	0.000958	0.00100	0.00100	0	95.8	70	130			
Cadmium	0.00106	0.00100	0.00100	0	106	70	130			
Calcium	0.0991	0.300	0.100	0	99.1	70	130			
Chromium	0.00530	0.00500	0.00500	0	106	70	130			
Cobalt	0.00535	0.00500	0.00500	0	107	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Lithium	0.0110	0.0100	0.0100	0	110	70	130			
Molybdenum	0.00499	0.00500	0.00500	0	99.8	70	130			
Selenium	0.00556	0.00500	0.00500	0	111	70	130			
Thallium	0.00104	0.00150	0.00100	0	104	70	130			

Sample ID	CCV8-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:29:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.202	0.00250	0.200	0	101	90	110			
Arsenic	0.203	0.00500	0.200	0	101	90	110			
Barium	0.198	0.0100	0.200	0	99.0	90	110			
Beryllium	0.202	0.00100	0.200	0	101	90	110			
Cadmium	0.198	0.00100	0.200	0	99.2	90	110			
Calcium	4.89	0.300	5.00	0	97.9	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.209	0.00500	0.200	0	105	90	110			
Lead	0.202	0.00100	0.200	0	101	90	110			
Lithium	0.201	0.0100	0.200	0	101	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	CCV8-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:29:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.195	0.00500	0.200	0	97.4	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL8-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00232	0.00250	0.00200	0	116	70	130			
Arsenic	0.00530	0.00500	0.00500	0	106	70	130			
Barium	0.00521	0.0100	0.00500	0	104	70	130			
Beryllium	0.00112	0.00100	0.00100	0	112	70	130			
Cadmium	0.000991	0.00100	0.00100	0	99.1	70	130			
Calcium	0.106	0.300	0.100	0	106	70	130			
Chromium	0.00515	0.00500	0.00500	0	103	70	130			
Cobalt	0.00531	0.00500	0.00500	0	106	70	130			
Lead	0.00108	0.00100	0.00100	0	108	70	130			
Lithium	0.0102	0.0100	0.0100	0	102	70	130			
Molybdenum	0.00510	0.00500	0.00500	0	102	70	130			
Selenium	0.00519	0.00500	0.00500	0	104	70	130			
Thallium	0.00108	0.00150	0.00100	0	108	70	130			

Sample ID	CCV9-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:55:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	90	110			
Arsenic	0.206	0.00500	0.200	0	103	90	110			
Barium	0.200	0.0100	0.200	0	99.9	90	110			
Beryllium	0.195	0.00100	0.200	0	97.5	90	110			
Cadmium	0.200	0.00100	0.200	0	100	90	110			
Calcium	5.33	0.300	5.00	0	107	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Cobalt	0.209	0.00500	0.200	0	105	90	110			
Lead	0.205	0.00100	0.200	0	103	90	110			
Lithium	0.189	0.0100	0.200	0	94.6	90	110			
Molybdenum	0.198	0.00500	0.200	0	98.9	90	110			
Selenium	0.207	0.00500	0.200	0	103	90	110			
Thallium	0.207	0.00150	0.200	0	103	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160628C

Sample ID	LCVL9-160628	Batch ID:	R86596	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160628C	Analysis Date:	6/28/2016 5:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00215	0.00250	0.00200	0	107	70	130			
Arsenic	0.00528	0.00500	0.00500	0	106	70	130			
Barium	0.00519	0.0100	0.00500	0	104	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Cadmium	0.00103	0.00100	0.00100	0	103	70	130			
Calcium	0.106	0.300	0.100	0	106	70	130			
Chromium	0.00515	0.00500	0.00500	0	103	70	130			
Cobalt	0.00533	0.00500	0.00500	0	107	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Lithium	0.00884	0.0100	0.0100	0	88.4	70	130			
Molybdenum	0.00515	0.00500	0.00500	0	103	70	130			
Selenium	0.00540	0.00500	0.00500	0	108	70	130			
Thallium	0.00106	0.00150	0.00100	0	106	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629A

The QC data in batch 75757 applies to the following samples: 1606194-01A

Sample ID	1606193-10A SD	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 12:07:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	10.4	7.50	0	10.5				0.592	10

Sample ID	1606193-10A PDS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 12:27:00 PM	Prep Date:	6/21/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	33.0	1.50	25.0	10.5	90.1	80	120

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629A

Sample ID	ICV-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 11:25:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.28	0.300	2.50	0	91.2	90	110			

Sample ID	LCVL-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 11:36:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		0.0990	0.300	0.100	0	99.0	70	130			

Sample ID	CCV1-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 12:29:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		4.68	0.300	5.00	0	93.5	90	110			

Sample ID	LCVL1-160629	Batch ID:	R86633	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160629A	Analysis Date:	6/29/2016 12:33:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		0.100	0.300	0.100	0	100	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629E

The QC data in batch 75757 applies to the following samples: 1606194-01A

Sample ID	MB-75757	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L				
SampType:	MBLK	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:30:00 PM	Prep Date:	6/21/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	<0.0100	0.0300									

Sample ID	LCS-75757	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCS	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:32:00 PM	Prep Date:	6/21/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.196	0.0300	0.200	0	98.0	80	120				

Sample ID	LCSD-75757	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:34:00 PM	Prep Date:	6/21/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.194	0.0300	0.200	0	96.8	80	120	1.17	15		

Sample ID	1606193-10A SD	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L				
SampType:	SD	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:40:00 PM	Prep Date:	6/21/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0800	0.150	0	0.0639					22.4	10	R

Sample ID	1606193-10A PDS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:42:00 PM	Prep Date:	6/21/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.263	0.0300	0.200	0.0639	99.5	80	120				

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160629E

Sample ID	ICV2-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:12:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.105	0.0300	0.100	0	105	90	110

Sample ID	ILCVL2-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 5:19:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.0248	0.0300	0.0200	0	124	70	130

Sample ID	CCV7-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 6:11:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.204	0.0300	0.200	0	102	90	110

Sample ID	LCVL7-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 6:21:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.0236	0.0300	0.0200	0	118	70	130

Sample ID	CCV8-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 6:49:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.207	0.0300	0.200	0	104	90	110

Sample ID	LCVL8-160629	Batch ID:	R86640	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160629E	Analysis Date:	6/29/2016 6:59:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.0231	0.0300	0.0200	0	116	70	130

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160630A

The QC data in batch 75757 applies to the following samples: 1606194-01A

Sample ID	1606193-10A MS	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L
SampType:	MS	Run ID:	ICP-MS4_160630A	Analysis Date:	6/30/2016 12:28:00 PM	Prep Date:	6/21/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Boron	0.327	0.150	0.200	0	163	80	120			S

Sample ID	1606193-10A MSD	Batch ID:	75757	TestNo:	SW6020A	Units:	mg/L
SampType:	MSD	Run ID:	ICP-MS4_160630A	Analysis Date:	6/30/2016 12:30:00 PM	Prep Date:	6/21/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Boron	0.294	0.150	0.200	0	147	80	120	10.6	15	S

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160630A

Sample ID	ICV-160630	Batch ID:	R86654	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS4_160630A	Analysis Date:	6/30/2016 11:20:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.104	0.0300	0.100	0	104	90	110			

Sample ID	LCVL-160630	Batch ID:	R86654	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160630A	Analysis Date:	6/30/2016 11:39:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0249	0.0300	0.0200	0	125	70	130			

Sample ID	CCV1-160630	Batch ID:	R86654	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160630A	Analysis Date:	6/30/2016 12:36:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.209	0.0300	0.200	0	104	90	110			

Sample ID	LCVL1-160630	Batch ID:	R86654	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160630A	Analysis Date:	6/30/2016 12:42:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0236	0.0300	0.0200	0	118	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160623A

The QC data in batch 75825 applies to the following samples: 1606194-01B

Sample ID	MB-75825	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 10:10:50 AM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-75825	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 10:25:50 AM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	3.86	0.400	4.000	0	96.5	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

Sample ID	LCSD-75825	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 10:40:50 AM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110	0.306	20	
Fluoride	3.92	0.400	4.000	0	98.0	90	110	1.64	20	
Sulfate	31.5	3.00	30.00	0	105	90	110	0.423	20	

Sample ID	1606193-14DMS	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 6:52:41 PM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	298	10.0	200.0	87.82	105	90	110			
Fluoride	204	4.00	200.0	0	102	90	110			
Sulfate	248	30.0	200.0	35.85	106	90	110			

Sample ID	1606193-14DMSD	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 7:07:41 PM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	297	10.0	200.0	87.82	105	90	110	0.387	20	
Fluoride	203	4.00	200.0	0	102	90	110	0.202	20	
Sulfate	248	30.0	200.0	35.85	106	90	110	0.092	20	

Sample ID	1606193-15DMS	Batch ID:	75825	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 7:37:41 PM	Prep Date:	6/23/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160623A

Sample ID	1606193-15DMS	Batch ID:	75825	TestNo:	E300	Units:	mg/L		
SampType:	MS	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 7:37:41 PM	Prep Date:	6/23/2016		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride	2610	100	2000	519.7	105	90	110		
Fluoride	2030	40.0	2000	0	102	90	110		
Sulfate	2220	300	2000	103.0	106	90	110		

Sample ID	1606193-15DMSD	Batch ID:	75825	TestNo:	E300	Units:	mg/L		
SampType:	MSD	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 7:52:41 PM	Prep Date:	6/23/2016		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Chloride	2620	100	2000	519.7	105	90	110	0.193	20
Fluoride	2040	40.0	2000	0	102	90	110	0.279	20
Sulfate	2220	300	2000	103.0	106	90	110	0.305	20

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160623A

Sample ID	ICV-160623	Batch ID:	R86527	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 9:30:34 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.7	1.00	25.00	0	103	90	110			
Fluoride	9.88	0.400	10.00	0	98.8	90	110			
Sulfate	78.7	3.00	75.00	0	105	90	110			

Sample ID	CCV1-160623	Batch ID:	R86527	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 1:50:32 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.99	0.400	4.000	0	99.7	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID	CCV2-160623	Batch ID:	R86527	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 6:07:41 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	4.03	0.400	4.000	0	101	90	110			
Sulfate	31.7	3.00	30.00	0	106	90	110			

Sample ID	CCV3-160623	Batch ID:	R86527	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160623A	Analysis Date:	6/23/2016 8:37:41 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	4.02	0.400	4.000	0	101	90	110			
Sulfate	31.8	3.00	30.00	0	106	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160617B

The QC data in batch 75721 applies to the following samples: 1606194-01B

Sample ID	1606193-15D-DUP	Batch ID:	75721	TestNo:	M4500-H+ B	Units:	pH Units@17.9°C
SampType:	DUP	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 2:52:00 PM	Prep Date:	6/17/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.79	0	0	6.700		1.33 5

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160617B

Sample ID	ICV-160617	Batch ID:	R86395	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C			
SampType:	ICV	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 12:36:00 PM	Prep Date:	6/17/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	9.97	0	10.00	0	99.7	99	101			

Sample ID	CCV3-160617	Batch ID:	R86395	TestNo:	M4500-H+ B	Units:	pH Units@21.6°C			
SampType:	CCV	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 1:59:00 PM	Prep Date:	6/17/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	7.01	0	7.000	0	100	97.1	102.9			

Sample ID	CCV4-160617	Batch ID:	R86395	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C			
SampType:	CCV	Run ID:	TITRATOR_160617B	Analysis Date:	6/17/2016 3:00:00 PM	Prep Date:	6/17/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	7.01	0	7.000	0	100	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1606194
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160622D

The QC data in batch 75802 applies to the following samples: 1606194-01B

Sample ID	MB-75802	Batch ID:	75802	TestNo:	M2540C	Units:	mg/L				
SampType:	MBLK	Run ID:	WC_160622D	Analysis Date:	6/23/2016 8:49:00 AM	Prep Date:	6/22/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-75802	Batch ID:	75802	TestNo:	M2540C	Units:	mg/L				
SampType:	LCS	Run ID:	WC_160622D	Analysis Date:	6/23/2016 8:49:00 AM	Prep Date:	6/22/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 773 10.0 745.6 0 104 90 113

Sample ID	1606194-01B-DUP	Batch ID:	75802	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_160622D	Analysis Date:	6/23/2016 8:49:00 AM	Prep Date:	6/22/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 6810 50.0 0 7110 4.31 5

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 NELAC certified



September 26, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Luminant - Oak Grove

Order No.: 1608276

Dear Will Vienne:

DHL Analytical, Inc. received 16 sample(s) on 8/27/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16



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DATE: 8-26-16 PAGE 1 OF 2
PO #: 5164-D DHL WORK ORDER #: 1608276
PROJECT LOCATION OR NAME: LUMINANT- OAK GROVE
CLIENT PROJECT #: 5164-D COLLECTOR: J. BEATON

[illegible]

CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX 78664
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3446
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

DATE: 8-26-16 PAGE 2 OF 2
PO #: 5164-D DHL WORK ORDER #: 1608276
PROJECT LOCATION OR NAME: LUMINANT- DAK GROVE
CLIENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

[illegible]

John Dupont

From: Sara Taube [Sara.Taube@pbwllc.com]
Sent: Wednesday, July 22, 2015 12:06 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 8/27/2016

Work Order Number 1608276

Received by JB

Checklist completed by:

Signature

8/29/2016

Date

Reviewed by

Initials

8/29/2016

Date

Carrier name FedEx 1day

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐ 1.8 °C

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH<2 acceptable upon receipt? Yes ☒ No ☐ NA ☐ LOT # 8086

Adjusted? no Checked by [Signature]

Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt? Yes ☐ No ☐ NA ☒ LOT #

Adjusted? _____ Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1608276

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M.
Analyzed at ESC Lab Sciences.

LOG IN

The samples were received and log-in performed on 8/22/16. A total of 16 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 9/6/16 and 9/9/16 (batches 77018 & 77092) the RPDs for the serial dilutions were above control limits for Boron. These are flagged accordingly in the QC summary report. The PDSs were within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 9/8/16 (batch 77092) the PDS recovery was slightly below control limits for Calcium. This is flagged accordingly. The serial dilution was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1608276**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1608276-01	FGD-2		08/24/16 10:20 AM	8/27/2016
1608276-02	FGD-3		08/24/16 11:15 AM	8/27/2016
1608276-03	FGD-4		08/24/16 12:00 PM	8/27/2016
1608276-04	FGD-6		08/24/16 12:50 PM	8/27/2016
1608276-05	FGD-5		08/24/16 01:40 PM	8/27/2016
1608276-06	FGD-1		08/24/16 02:30 PM	8/27/2016
1608276-07	MW-07		08/24/16 03:20 PM	8/27/2016
1608276-08	MW-05		08/24/16 04:20 PM	8/27/2016
1608276-09	DUP-01		08/24/16 04:20 PM	8/27/2016
1608276-10	EB-1		08/24/16 04:40 PM	8/27/2016
1608276-11	FGD-8		08/24/16 05:35 PM	8/27/2016
1608276-12	AL-10		08/25/16 08:50 AM	8/27/2016
1608276-13	MW-02		08/25/16 10:00 AM	8/27/2016
1608276-14	MW-09		08/25/16 11:05 AM	8/27/2016
1608276-15	FGD-11		08/25/16 12:05 PM	8/27/2016
1608276-16	FGD-12		08/25/16 01:05 PM	8/27/2016

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1608276-01A	FGD-2	08/24/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-2	08/24/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-2	08/24/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-2	08/24/16 10:20 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-01D	FGD-2	08/24/16 10:20 AM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-2	08/24/16 10:20 AM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-2	08/24/16 10:20 AM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	FGD-2	08/24/16 10:20 AM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-02A	FGD-3	08/24/16 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-3	08/24/16 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-3	08/24/16 11:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-3	08/24/16 11:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-02D	FGD-3	08/24/16 11:15 AM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-3	08/24/16 11:15 AM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-3	08/24/16 11:15 AM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	FGD-3	08/24/16 11:15 AM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-03A	FGD-4	08/24/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-4	08/24/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-4	08/24/16 12:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-4	08/24/16 12:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-03D	FGD-4	08/24/16 12:00 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-4	08/24/16 12:00 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-4	08/24/16 12:00 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	FGD-4	08/24/16 12:00 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-04A	FGD-6	08/24/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-6	08/24/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-6	08/24/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-6	08/24/16 12:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1608276-04D	FGD-6	08/24/16 12:50 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-6	08/24/16 12:50 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-6	08/24/16 12:50 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	FGD-6	08/24/16 12:50 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-05A	FGD-5	08/24/16 01:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-5	08/24/16 01:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-5	08/24/16 01:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-5	08/24/16 01:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-05D	FGD-5	08/24/16 01:40 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-5	08/24/16 01:40 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-5	08/24/16 01:40 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	FGD-5	08/24/16 01:40 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-06A	FGD-1	08/24/16 02:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-1	08/24/16 02:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-1	08/24/16 02:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-1	08/24/16 02:30 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-06D	FGD-1	08/24/16 02:30 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	FGD-1	08/24/16 02:30 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	FGD-1	08/24/16 02:30 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-07A	MW-07	08/24/16 03:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-07	08/24/16 03:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-07	08/24/16 03:20 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-07D	MW-07	08/24/16 03:20 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	MW-07	08/24/16 03:20 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	MW-07	08/24/16 03:20 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-08A	MW-05	08/24/16 04:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-05	08/24/16 04:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-05	08/24/16 04:20 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1608276-08D	MW-05	08/24/16 04:20 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	MW-05	08/24/16 04:20 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	MW-05	08/24/16 04:20 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	MW-05	08/24/16 04:20 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-09A	DUP-01	08/24/16 04:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	DUP-01	08/24/16 04:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	DUP-01	08/24/16 04:20 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-09D	DUP-01	08/24/16 04:20 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	DUP-01	08/24/16 04:20 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	DUP-01	08/24/16 04:20 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	DUP-01	08/24/16 04:20 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-10A	EB-1	08/24/16 04:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	EB-1	08/24/16 04:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	EB-1	08/24/16 04:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-10D	EB-1	08/24/16 04:40 PM	Aqueous	E300	Anion Preparation	08/29/16 10:44 AM	77006
	EB-1	08/24/16 04:40 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	EB-1	08/24/16 04:40 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-11A	FGD-8	08/24/16 05:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	FGD-8	08/24/16 05:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	FGD-8	08/24/16 05:35 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-11D	FGD-8	08/24/16 05:35 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-8	08/24/16 05:35 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-8	08/24/16 05:35 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	FGD-8	08/24/16 05:35 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-12A	AL-10	08/25/16 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	AL-10	08/25/16 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	AL-10	08/25/16 08:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	AL-10	08/25/16 08:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1608276-12D	AL-10	08/25/16 08:50 AM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	AL-10	08/25/16 08:50 AM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	AL-10	08/25/16 08:50 AM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	AL-10	08/25/16 08:50 AM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-13A	MW-02	08/25/16 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-02	08/25/16 10:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-02	08/25/16 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-13D	MW-02	08/25/16 10:00 AM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	MW-02	08/25/16 10:00 AM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 08:49 AM	77040
	MW-02	08/25/16 10:00 AM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-14A	MW-09	08/25/16 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-09	08/25/16 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-09	08/25/16 11:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	MW-09	08/25/16 11:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-14D	MW-09	08/25/16 11:05 AM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	MW-09	08/25/16 11:05 AM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	MW-09	08/25/16 11:05 AM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 01:16 PM	77050
	MW-09	08/25/16 11:05 AM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-15A	FGD-11	08/25/16 12:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	FGD-11	08/25/16 12:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	FGD-11	08/25/16 12:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	FGD-11	08/25/16 12:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608276-15D	FGD-11	08/25/16 12:05 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-11	08/25/16 12:05 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-11	08/25/16 12:05 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 01:16 PM	77050
	FGD-11	08/25/16 12:05 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055
1608276-16A	FGD-12	08/25/16 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	FGD-12	08/25/16 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1608276-16A	FGD-12	08/25/16 01:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/06/16 09:14 AM	77092
	FGD-12	08/25/16 01:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	09/02/16 10:32 AM	77077
1608276-16D	FGD-12	08/25/16 01:05 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-12	08/25/16 01:05 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-12	08/25/16 01:05 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 01:16 PM	77050
	FGD-12	08/25/16 01:05 PM	Aqueous	M2540C	TDS Preparation	08/31/16 03:45 PM	77055

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1608276-01A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:20 AM	CETAC2_HG_160831 B
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	10	09/02/16 05:26 PM	ICP-MS3_160902A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/02/16 07:01 PM	ICP-MS3_160902A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/06/16 01:09 PM	ICP-MS4_160906B
1608276-01D	FGD-2	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 12:41 PM	IC4_160829A
	FGD-2	Aqueous	E300	Anions by IC method - Water	77006	10	08/29/16 06:04 PM	IC4_160829A
	FGD-2	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 10:25 AM	TITRATOR_160831A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-02A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:22 AM	CETAC2_HG_160831 B
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	10	09/02/16 05:32 PM	ICP-MS3_160902A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/02/16 07:07 PM	ICP-MS3_160902A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/06/16 01:12 PM	ICP-MS4_160906B
1608276-02D	FGD-3	Aqueous	E300	Anions by IC method - Water	77006	10	08/29/16 06:19 PM	IC4_160829A
	FGD-3	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 12:56 PM	IC4_160829A
	FGD-3	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:06 AM	TITRATOR_160831A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-03A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:25 AM	CETAC2_HG_160831 B
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	10	09/02/16 05:38 PM	ICP-MS3_160902A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/02/16 07:13 PM	ICP-MS3_160902A
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/06/16 01:15 PM	ICP-MS4_160906B
1608276-03D	FGD-4	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 03:08 PM	IC4_160829A
	FGD-4	Aqueous	E300	Anions by IC method - Water	77006	10	08/29/16 06:34 PM	IC4_160829A
	FGD-4	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:07 AM	TITRATOR_160831A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-04A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:27 AM	CETAC2_HG_160831 B
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	10	09/02/16 05:44 PM	ICP-MS3_160902A

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1608276-04A	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/02/16 08:32 PM	ICP-MS3_160902A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/06/16 01:18 PM	ICP-MS4_160906B
1608276-04D	FGD-6	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 03:23 PM	IC4_160829A
	FGD-6	Aqueous	E300	Anions by IC method - Water	77006	10	08/29/16 06:49 PM	IC4_160829A
	FGD-6	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:10 AM	TITRATOR_160831A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-05A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:29 AM	CETAC2_HG_160831 B
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	10	09/02/16 05:50 PM	ICP-MS3_160902A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/02/16 08:38 PM	ICP-MS3_160902A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/06/16 01:21 PM	ICP-MS4_160906B
1608276-05D	FGD-5	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 03:38 PM	IC4_160829A
	FGD-5	Aqueous	E300	Anions by IC method - Water	77006	10	08/29/16 07:04 PM	IC4_160829A
	FGD-5	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:13 AM	TITRATOR_160831A
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-06A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:31 AM	CETAC2_HG_160831 B
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/06/16 03:11 PM	ICP-MS4_160906B
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/02/16 05:02 PM	ICP-MS3_160902A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	5	09/06/16 02:06 PM	ICP-MS4_160906B
1608276-06D	FGD-1	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 03:53 PM	IC4_160829A
	FGD-1	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:16 AM	TITRATOR_160831A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-07A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:43 AM	CETAC2_HG_160831 B
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 06:58 PM	ICP-MS4_160908B
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 01:50 PM	ICP-MS4_160909A
1608276-07D	MW-07	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 04:08 PM	IC4_160829A
	MW-07	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:17 AM	TITRATOR_160831A

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1608276-07D	MW-07	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-08A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:45 AM	CETAC2_HG_160831B
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:04 PM	ICP-MS4_160908B
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:26 PM	ICP-MS4_160909B
1608276-08D	MW-05	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 04:23 PM	IC4_160829A
	MW-05	Aqueous	E300	Anions by IC method - Water	77006	10	08/29/16 08:04 PM	IC4_160829A
	MW-05	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:20 AM	TITRATOR_160831A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-09A	DUP-01	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:47 AM	CETAC2_HG_160831B
	DUP-01	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:07 PM	ICP-MS4_160908B
	DUP-01	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:29 PM	ICP-MS4_160909B
1608276-09D	DUP-01	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 04:38 PM	IC4_160829A
	DUP-01	Aqueous	E300	Anions by IC method - Water	77006	10	08/29/16 08:19 PM	IC4_160829A
	DUP-01	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:22 AM	TITRATOR_160831A
	DUP-01	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-10A	EB-1	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:54 AM	CETAC2_HG_160831B
	EB-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:10 PM	ICP-MS4_160908B
	EB-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:32 PM	ICP-MS4_160909B
1608276-10D	EB-1	Aqueous	E300	Anions by IC method - Water	77006	1	08/29/16 04:53 PM	IC4_160829A
	EB-1	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:24 AM	TITRATOR_160831A
	EB-1	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-11A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:56 AM	CETAC2_HG_160831B
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:35 PM	ICP-MS4_160909B
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:13 PM	ICP-MS4_160908B
1608276-11D	FGD-8	Aqueous	E300	Anions by IC method - Water	77028	1	08/30/16 11:25 AM	IC4_160830A
	FGD-8	Aqueous	E300	Anions by IC method - Water	77028	10	08/30/16 03:07 PM	IC4_160830A

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1608276-11D	FGD-8	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 11:26 AM	TITRATOR_160831A
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-12A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 10:59 AM	CETAC2_HG_160831B
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:16 PM	ICP-MS4_160908B
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	10	09/09/16 02:05 PM	ICP-MS4_160909A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:38 PM	ICP-MS4_160909B
1608276-12D	AL-10	Aqueous	E300	Anions by IC method - Water	77028	1	08/30/16 11:40 AM	IC4_160830A
	AL-10	Aqueous	E300	Anions by IC method - Water	77028	100	08/30/16 03:52 PM	IC4_160830A
	AL-10	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 01:06 PM	TITRATOR_160831A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-13A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 11:01 AM	CETAC2_HG_160831B
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:41 PM	ICP-MS4_160909B
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:19 PM	ICP-MS4_160908B
1608276-13D	MW-02	Aqueous	E300	Anions by IC method - Water	77028	1	08/30/16 11:55 AM	IC4_160830A
	MW-02	Aqueous	M4500-H+ B	pH	77040	1	08/31/16 01:07 PM	TITRATOR_160831A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-14A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 11:03 AM	CETAC2_HG_160831B
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:22 PM	ICP-MS4_160908B
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	10	09/09/16 02:08 PM	ICP-MS4_160909A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:44 PM	ICP-MS4_160909B
1608276-14D	MW-09	Aqueous	E300	Anions by IC method - Water	77028	1	08/30/16 12:10 PM	IC4_160830A
	MW-09	Aqueous	E300	Anions by IC method - Water	77028	10	08/30/16 04:07 PM	IC4_160830A
	MW-09	Aqueous	M4500-H+ B	pH	77050	1	08/31/16 01:44 PM	TITRATOR_160831A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-15A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 11:06 AM	CETAC2_HG_160831B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:47 PM	ICP-MS4_160909B

Lab Order: 1608276
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1608276-15A	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:25 PM	ICP-MS4_160908B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	50	09/09/16 02:11 PM	ICP-MS4_160909A
1608276-15D	FGD-11	Aqueous	E300	Anions by IC method - Water	77028	1	08/30/16 12:25 PM	IC4_160830A
	FGD-11	Aqueous	E300	Anions by IC method - Water	77028	100	08/30/16 04:22 PM	IC4_160830A
	FGD-11	Aqueous	M4500-H+ B	pH	77050	1	08/31/16 01:49 PM	TITRATOR_160831A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A
1608276-16A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	77077	1	09/06/16 10:45 AM	CETAC2_HG_160906 C
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/08/16 07:28 PM	ICP-MS4_160908B
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	10	09/09/16 02:14 PM	ICP-MS4_160909A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77092	1	09/09/16 03:50 PM	ICP-MS4_160909B
1608276-16D	FGD-12	Aqueous	E300	Anions by IC method - Water	77028	1	08/30/16 12:40 PM	IC4_160830A
	FGD-12	Aqueous	E300	Anions by IC method - Water	77028	10	08/30/16 04:37 PM	IC4_160830A
	FGD-12	Aqueous	M4500-H+ B	pH	77050	1	08/31/16 01:51 PM	TITRATOR_160831A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	77055	1	09/01/16 08:46 AM	WC_160831A

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-2
Lab ID: 1608276-01
Collection Date: 08/24/16 10:20 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:20 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/02/16 07:01 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:01 PM
Barium	0.144	0.00300	0.0100		mg/L	1	09/02/16 07:01 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 07:01 PM
Boron	0.219	0.0100	0.0300		mg/L	1	09/06/16 01:09 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 07:01 PM
Calcium	79.9	1.00	3.00		mg/L	10	09/02/16 05:26 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:01 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/02/16 07:01 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 07:01 PM
Lithium	0.0190	0.00500	0.0100		mg/L	1	09/02/16 07:01 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:01 PM
Selenium	0.0185	0.00200	0.00500		mg/L	1	09/02/16 07:01 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/02/16 07:01 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	421	3.00	10.0		mg/L	10	08/29/16 06:04 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/29/16 12:41 PM
Sulfate	158	10.0	30.0		mg/L	10	08/29/16 06:04 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.85	0	0		pH Units@16.3°C	1	08/31/16 10:25 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1060	50.0	50.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-3
Lab ID: 1608276-02
Collection Date: 08/24/16 11:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:22 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/02/16 07:07 PM
Arsenic	0.00221	0.00200	0.00500	J	mg/L	1	09/02/16 07:07 PM
Barium	0.0387	0.00300	0.0100		mg/L	1	09/02/16 07:07 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 07:07 PM
Boron	0.112	0.0100	0.0300		mg/L	1	09/06/16 01:12 PM
Cadmium	0.00146	0.000300	0.00100		mg/L	1	09/02/16 07:07 PM
Calcium	90.4	1.00	3.00		mg/L	10	09/02/16 05:32 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:07 PM
Cobalt	0.0232	0.00300	0.00500		mg/L	1	09/02/16 07:07 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 07:07 PM
Lithium	0.0974	0.00500	0.0100		mg/L	1	09/02/16 07:07 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:07 PM
Selenium	0.0272	0.00200	0.00500		mg/L	1	09/02/16 07:07 PM
Thallium	0.00123	0.000500	0.00150	J	mg/L	1	09/02/16 07:07 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	279	3.00	10.0		mg/L	10	08/29/16 06:19 PM
Fluoride	0.463	0.100	0.400		mg/L	1	08/29/16 12:56 PM
Sulfate	357	10.0	30.0		mg/L	10	08/29/16 06:19 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.83	0	0		pH Units@19.2°C	1	08/31/16 11:06 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1490	50.0	50.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-4
Lab ID: 1608276-03
Collection Date: 08/24/16 12:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:25 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/02/16 07:13 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:13 PM
Barium	0.111	0.00300	0.0100		mg/L	1	09/02/16 07:13 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 07:13 PM
Boron	0.343	0.0100	0.0300		mg/L	1	09/06/16 01:15 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 07:13 PM
Calcium	52.5	1.00	3.00		mg/L	10	09/02/16 05:38 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:13 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/02/16 07:13 PM
Lead	0.000578	0.000300	0.00100	J	mg/L	1	09/02/16 07:13 PM
Lithium	0.0383	0.00500	0.0100		mg/L	1	09/02/16 07:13 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:13 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 07:13 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/02/16 07:13 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	208	3.00	10.0		mg/L	10	08/29/16 06:34 PM
Fluoride	0.148	0.100	0.400	J	mg/L	1	08/29/16 03:08 PM
Sulfate	53.3	1.00	3.00		mg/L	1	08/29/16 03:08 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.97	0	0		pH Units@19.5°C	1	08/31/16 11:07 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	704	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-6
Lab ID: 1608276-04
Collection Date: 08/24/16 12:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:27 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/02/16 08:32 PM
Arsenic	0.00725	0.00200	0.00500		mg/L	1	09/02/16 08:32 PM
Barium	0.127	0.00300	0.0100		mg/L	1	09/02/16 08:32 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 08:32 PM
Boron	0.0355	0.0100	0.0300		mg/L	1	09/06/16 01:18 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 08:32 PM
Calcium	35.6	1.00	3.00		mg/L	10	09/02/16 05:44 PM
Chromium	0.00334	0.00200	0.00500	J	mg/L	1	09/02/16 08:32 PM
Cobalt	0.00399	0.00300	0.00500	J	mg/L	1	09/02/16 08:32 PM
Lead	0.000656	0.000300	0.00100	J	mg/L	1	09/02/16 08:32 PM
Lithium	0.00885	0.00500	0.0100	J	mg/L	1	09/02/16 08:32 PM
Molybdenum	0.00244	0.00200	0.00500	J	mg/L	1	09/02/16 08:32 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 08:32 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/02/16 08:32 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	285	3.00	10.0		mg/L	10	08/29/16 06:49 PM
Fluoride	0.147	0.100	0.400	J	mg/L	1	08/29/16 03:23 PM
Sulfate	64.7	1.00	3.00		mg/L	1	08/29/16 03:23 PM
PH		M4500-H+ B		Analyst: BJT			
pH	7.16	0	0		pH Units@19.9°C	1	08/31/16 11:10 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	750	50.0	50.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-5
Lab ID: 1608276-05
Collection Date: 08/24/16 01:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:29 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/02/16 08:38 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 08:38 PM
Barium	0.173	0.00300	0.0100		mg/L	1	09/02/16 08:38 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 08:38 PM
Boron	0.0394	0.0100	0.0300		mg/L	1	09/06/16 01:21 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 08:38 PM
Calcium	102	1.00	3.00		mg/L	10	09/02/16 05:50 PM
Chromium	0.0189	0.00200	0.00500		mg/L	1	09/02/16 08:38 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/02/16 08:38 PM
Lead	0.000450	0.000300	0.00100	J	mg/L	1	09/02/16 08:38 PM
Lithium	0.145	0.00500	0.0100		mg/L	1	09/02/16 08:38 PM
Molybdenum	0.00814	0.00200	0.00500		mg/L	1	09/02/16 08:38 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 08:38 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/02/16 08:38 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	372	3.00	10.0		mg/L	10	08/29/16 07:04 PM
Fluoride	0.168	0.100	0.400	J	mg/L	1	08/29/16 03:38 PM
Sulfate	58.8	1.00	3.00		mg/L	1	08/29/16 03:38 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	7.17	0	0		pH Units@19.7°C	1	08/31/16 11:13 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	770	50.0	50.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-1
Lab ID: 1608276-06
Collection Date: 08/24/16 02:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:31 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/02/16 05:02 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 05:02 PM
Barium	0.0294	0.00300	0.0100		mg/L	1	09/02/16 05:02 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 05:02 PM
Boron	0.0601	0.0100	0.0300		mg/L	1	09/06/16 03:11 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 05:02 PM
Calcium	13.5	0.100	0.300		mg/L	1	09/02/16 05:02 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 05:02 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/02/16 05:02 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 05:02 PM
Lithium	0.0330	0.00500	0.0100		mg/L	1	09/02/16 05:02 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 05:02 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 05:02 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/02/16 05:02 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	42.1	0.300	1.00		mg/L	1	08/29/16 03:53 PM
Fluoride	0.225	0.100	0.400	J	mg/L	1	08/29/16 03:53 PM
Sulfate	46.6	1.00	3.00		mg/L	1	08/29/16 03:53 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.68	0	0		pH Units@19.3°C	1	08/31/16 11:16 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	193	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: MW-07
Lab ID: 1608276-07
Collection Date: 08/24/16 03:20 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:43 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 01:50 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 06:58 PM
Barium	0.0438	0.00300	0.0100		mg/L	1	09/08/16 06:58 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 06:58 PM
Boron	0.0691	0.0100	0.0300		mg/L	1	09/09/16 01:50 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 06:58 PM
Calcium	9.58	0.100	0.300		mg/L	1	09/08/16 06:58 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 06:58 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/08/16 06:58 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 06:58 PM
Lithium	0.0124	0.00500	0.0100		mg/L	1	09/08/16 06:58 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 06:58 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 06:58 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 06:58 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	20.4	0.300	1.00		mg/L	1	08/29/16 04:08 PM
Fluoride	0.159	0.100	0.400	J	mg/L	1	08/29/16 04:08 PM
Sulfate	21.8	1.00	3.00		mg/L	1	08/29/16 04:08 PM
PH		M4500-H+ B		Analyst: BJT			
pH	7.02	0	0		pH Units@19°C	1	08/31/16 11:17 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	290	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: MW-05
Lab ID: 1608276-08
Collection Date: 08/24/16 04:20 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:45 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:26 PM
Arsenic	0.00799	0.00200	0.00500		mg/L	1	09/08/16 07:04 PM
Barium	0.0624	0.00300	0.0100		mg/L	1	09/08/16 07:04 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:04 PM
Boron	0.0877	0.0100	0.0300		mg/L	1	09/09/16 03:26 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:04 PM
Calcium	13.1	0.100	0.300		mg/L	1	09/08/16 07:04 PM
Chromium	0.00233	0.00200	0.00500	J	mg/L	1	09/08/16 07:04 PM
Cobalt	0.00312	0.00300	0.00500	J	mg/L	1	09/08/16 07:04 PM
Lead	0.00111	0.000300	0.00100		mg/L	1	09/08/16 07:04 PM
Lithium	0.0375	0.00500	0.0100		mg/L	1	09/08/16 07:04 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:04 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:04 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:04 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	63.0	3.00	10.0		mg/L	10	08/29/16 08:04 PM
Fluoride	0.262	0.100	0.400	J	mg/L	1	08/29/16 04:23 PM
Sulfate	11.8	1.00	3.00		mg/L	1	08/29/16 04:23 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.84	0	0		pH Units@19.1°C	1	08/31/16 11:20 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	287	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: DUP-01
Lab ID: 1608276-09
Collection Date: 08/24/16 04:20 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:47 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:29 PM
Arsenic	0.00872	0.00200	0.00500		mg/L	1	09/08/16 07:07 PM
Barium	0.0672	0.00300	0.0100		mg/L	1	09/08/16 07:07 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:07 PM
Boron	0.116	0.0100	0.0300		mg/L	1	09/09/16 03:29 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:07 PM
Calcium	13.5	0.100	0.300		mg/L	1	09/08/16 07:07 PM
Chromium	0.00277	0.00200	0.00500	J	mg/L	1	09/08/16 07:07 PM
Cobalt	0.00318	0.00300	0.00500	J	mg/L	1	09/08/16 07:07 PM
Lead	0.00140	0.000300	0.00100		mg/L	1	09/08/16 07:07 PM
Lithium	0.0369	0.00500	0.0100		mg/L	1	09/08/16 07:07 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:07 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:07 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:07 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	62.2	3.00	10.0		mg/L	10	08/29/16 08:19 PM
Fluoride	0.265	0.100	0.400	J	mg/L	1	08/29/16 04:38 PM
Sulfate	11.7	1.00	3.00		mg/L	1	08/29/16 04:38 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.82	0	0		pH Units@19.3°C	1	08/31/16 11:22 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	277	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: EB-1
Lab ID: 1608276-10
Collection Date: 08/24/16 04:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:54 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:32 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:10 PM
Barium	<0.00300	0.00300	0.0100		mg/L	1	09/08/16 07:10 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:10 PM
Boron	0.113	0.0100	0.0300		mg/L	1	09/09/16 03:32 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:10 PM
Calcium	5.55	0.100	0.300		mg/L	1	09/08/16 07:10 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:10 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/08/16 07:10 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:10 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	09/08/16 07:10 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:10 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:10 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:10 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	11.6	0.300	1.00		mg/L	1	08/29/16 04:53 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/29/16 04:53 PM
Sulfate	24.8	1.00	3.00		mg/L	1	08/29/16 04:53 PM
PH		M4500-H+ B		Analyst: BJT			
pH	7.23	0	0		pH Units@19.4°C	1	08/31/16 11:24 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	<10.0	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-8
Lab ID: 1608276-11
Collection Date: 08/24/16 05:35 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:56 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:35 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:13 PM
Barium	0.102	0.00300	0.0100		mg/L	1	09/08/16 07:13 PM
Beryllium	0.000417	0.000300	0.00100	J	mg/L	1	09/08/16 07:13 PM
Boron	0.119	0.0100	0.0300		mg/L	1	09/09/16 03:35 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:13 PM
Calcium	21.1	0.100	0.300		mg/L	1	09/08/16 07:13 PM
Chromium	0.0107	0.00200	0.00500		mg/L	1	09/08/16 07:13 PM
Cobalt	0.0150	0.00300	0.00500		mg/L	1	09/08/16 07:13 PM
Lead	0.00381	0.000300	0.00100		mg/L	1	09/08/16 07:13 PM
Lithium	0.0265	0.00500	0.0100		mg/L	1	09/08/16 07:13 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:13 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:13 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:13 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	107	3.00	10.0		mg/L	10	08/30/16 03:07 PM
Fluoride	0.186	0.100	0.400	J	mg/L	1	08/30/16 11:25 AM
Sulfate	41.6	1.00	3.00		mg/L	1	08/30/16 11:25 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.81	0	0		pH Units@20.1°C	1	08/31/16 11:26 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	400	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: AL-10
Lab ID: 1608276-12
Collection Date: 08/25/16 08:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 10:59 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:38 PM
Arsenic	0.00364	0.00200	0.00500	J	mg/L	1	09/08/16 07:16 PM
Barium	0.306	0.00300	0.0100		mg/L	1	09/08/16 07:16 PM
Beryllium	0.000436	0.000300	0.00100	J	mg/L	1	09/08/16 07:16 PM
Boron	0.105	0.0100	0.0300		mg/L	1	09/09/16 03:38 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:16 PM
Calcium	87.5	1.00	3.00		mg/L	10	09/09/16 02:05 PM
Chromium	0.00842	0.00200	0.00500		mg/L	1	09/08/16 07:16 PM
Cobalt	0.00314	0.00300	0.00500	J	mg/L	1	09/08/16 07:16 PM
Lead	0.00285	0.000300	0.00100		mg/L	1	09/08/16 07:16 PM
Lithium	0.0337	0.00500	0.0100		mg/L	1	09/08/16 07:16 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:16 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:16 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:16 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	444	30.0	100		mg/L	100	08/30/16 03:52 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/30/16 11:40 AM
Sulfate	96.3	1.00	3.00		mg/L	1	08/30/16 11:40 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.74	0	0		pH Units@17.4°C	1	08/31/16 01:06 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1120	50.0	50.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: MW-02
Lab ID: 1608276-13
Collection Date: 08/25/16 10:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 11:01 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:41 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:19 PM
Barium	0.0415	0.00300	0.0100		mg/L	1	09/08/16 07:19 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:19 PM
Boron	0.0492	0.0100	0.0300		mg/L	1	09/09/16 03:41 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:19 PM
Calcium	12.9	0.100	0.300		mg/L	1	09/08/16 07:19 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:19 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/08/16 07:19 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:19 PM
Lithium	0.0113	0.00500	0.0100		mg/L	1	09/08/16 07:19 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:19 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:19 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:19 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	21.9	0.300	1.00		mg/L	1	08/30/16 11:55 AM
Fluoride	0.164	0.100	0.400	J	mg/L	1	08/30/16 11:55 AM
Sulfate	22.4	1.00	3.00		mg/L	1	08/30/16 11:55 AM
PH		M4500-H+ B		Analyst: BJT			
pH	7.16	0	0		pH Units@17.1°C	1	08/31/16 01:07 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	163	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: MW-09
Lab ID: 1608276-14
Collection Date: 08/25/16 11:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 11:03 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:44 PM
Arsenic	0.00411	0.00200	0.00500	J	mg/L	1	09/08/16 07:22 PM
Barium	0.133	0.00300	0.0100		mg/L	1	09/08/16 07:22 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:22 PM
Boron	0.0829	0.0100	0.0300		mg/L	1	09/09/16 03:44 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:22 PM
Calcium	45.6	1.00	3.00		mg/L	10	09/09/16 02:08 PM
Chromium	0.00673	0.00200	0.00500		mg/L	1	09/08/16 07:22 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/08/16 07:22 PM
Lead	0.00178	0.000300	0.00100		mg/L	1	09/08/16 07:22 PM
Lithium	0.0569	0.00500	0.0100		mg/L	1	09/08/16 07:22 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:22 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:22 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:22 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	195	3.00	10.0		mg/L	10	08/30/16 04:07 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/30/16 12:10 PM
Sulfate	116	1.00	3.00		mg/L	1	08/30/16 12:10 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.31	0	0		pH Units@17.7°C	1	08/31/16 01:44 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	715	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-11
Lab ID: 1608276-15
Collection Date: 08/25/16 12:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/16 11:06 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:47 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:25 PM
Barium	0.439	0.00300	0.0100		mg/L	1	09/08/16 07:25 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:25 PM
Boron	0.103	0.0100	0.0300		mg/L	1	09/09/16 03:47 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:25 PM
Calcium	154	5.00	15.0		mg/L	50	09/09/16 02:11 PM
Chromium	0.00465	0.00200	0.00500	J	mg/L	1	09/08/16 07:25 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/08/16 07:25 PM
Lead	0.00179	0.000300	0.00100		mg/L	1	09/08/16 07:25 PM
Lithium	0.0110	0.00500	0.0100		mg/L	1	09/08/16 07:25 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:25 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:25 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:25 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	759	30.0	100		mg/L	100	08/30/16 04:22 PM
Fluoride	0.128	0.100	0.400	J	mg/L	1	08/30/16 12:25 PM
Sulfate	68.8	1.00	3.00		mg/L	1	08/30/16 12:25 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.95	0	0		pH Units@18.1°C	1	08/31/16 01:49 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1960	50.0	50.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 26-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608276

Client Sample ID: FGD-12
Lab ID: 1608276-16
Collection Date: 08/25/16 01:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	09/06/16 10:45 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	09/09/16 03:50 PM
Arsenic	0.00451	0.00200	0.00500	J	mg/L	1	09/08/16 07:28 PM
Barium	0.262	0.00300	0.0100		mg/L	1	09/08/16 07:28 PM
Beryllium	0.000629	0.000300	0.00100	J	mg/L	1	09/08/16 07:28 PM
Boron	0.0858	0.0100	0.0300		mg/L	1	09/09/16 03:50 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	09/08/16 07:28 PM
Calcium	52.8	1.00	3.00		mg/L	10	09/09/16 02:14 PM
Chromium	0.0135	0.00200	0.00500		mg/L	1	09/08/16 07:28 PM
Cobalt	0.00412	0.00300	0.00500	J	mg/L	1	09/08/16 07:28 PM
Lead	0.00842	0.000300	0.00100		mg/L	1	09/08/16 07:28 PM
Lithium	0.0204	0.00500	0.0100		mg/L	1	09/08/16 07:28 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:28 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	09/08/16 07:28 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	09/08/16 07:28 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	296	3.00	10.0		mg/L	10	08/30/16 04:37 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/30/16 12:40 PM
Sulfate	33.8	1.00	3.00		mg/L	1	08/30/16 12:40 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.91	0	0		pH Units@18°C	1	08/31/16 01:51 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	817	10.0	10.0		mg/L	1	09/01/16 08:46 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1608276

Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160831B

The QC data in batch 77030 applies to the following samples: 1608276-01A, 1608276-02A, 1608276-03A, 1608276-04A, 1608276-05A, 1608276-06A, 1608276-07A, 1608276-08A, 1608276-09A, 1608276-10A, 1608276-11A, 1608276-12A, 1608276-13A, 1608276-14A, 1608276-15A

Sample ID	MB-77030	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:09:17 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-77030	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:13:49 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00194 0.000200 0.00200 0 97.0 85 115

Sample ID	LCSD-77030	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:16:05 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00195 0.000200 0.00200 0 97.5 85 115 0.514 15

Sample ID	1608276-06A SD	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:34:12 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1608276-06A PDS	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:36:28 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00235 0.000200 0.00250 0 94.0 85 115

Sample ID	1608276-06A MS	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:38:44 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00197 0.000200 0.00200 0 98.5 80 120

Sample ID	1608276-06A MSD	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:41:00 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00201 0.000200 0.00200 0 101 80 120 2.01 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160831B

Sample ID	ICV-160831	Batch ID:	R87892	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:04:43 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00388	0.000200	0.00400	0	97.0	90	110			

Sample ID	CCV1-160831	Batch ID:	R87892	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:50:06 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00191	0.000200	0.00200	0	95.5	90	110			

Sample ID	CCV2-160831	Batch ID:	R87892	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 11:17:25 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00194	0.000200	0.00200	0	97.0	90	110			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160906C

The QC data in batch 77077 applies to the following samples: 1608276-16A

Sample ID	MB-77077	Batch ID:	77077	TestNo:	SW7470A	Units:	mg/L				
SampType:	MBLK	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:36:46 AM	Prep Date:	9/2/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-77077	Batch ID:	77077	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCS	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:41:17 AM	Prep Date:	9/2/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00198 0.000200 0.00200 0 99.0 85 115

Sample ID	LCSD-77077	Batch ID:	77077	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCSD	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:43:33 AM	Prep Date:	9/2/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00202 0.000200 0.00200 0 101 85 115 2.00 15

Sample ID	1608276-16A SD	Batch ID:	77077	TestNo:	SW7470A	Units:	mg/L				
SampType:	SD	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:48:05 AM	Prep Date:	9/2/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1608276-16A PDS	Batch ID:	77077	TestNo:	SW7470A	Units:	mg/L				
SampType:	PDS	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:50:21 AM	Prep Date:	9/2/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00236 0.000200 0.00250 0 94.4 85 115

Sample ID	1608276-16A MS	Batch ID:	77077	TestNo:	SW7470A	Units:	mg/L				
SampType:	MS	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:52:37 AM	Prep Date:	9/2/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00199 0.000200 0.00200 0 99.5 80 120

Sample ID	1608276-16A MSD	Batch ID:	77077	TestNo:	SW7470A	Units:	mg/L				
SampType:	MSD	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:54:53 AM	Prep Date:	9/2/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00197 0.000200 0.00200 0 98.5 80 120 1.01 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160906C

Sample ID	ICV-160906	Batch ID:	R87963	TestNo:	SW7470A	Units:	mg/L			
SampType:	ICV	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 10:11:48 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00390	0.000200	0.00400	0	97.5	90	110			

Sample ID	CCV1-160906	Batch ID:	R87963	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160906C	Analysis Date:	9/6/2016 11:01:43 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00193	0.000200	0.00200	0	96.5	90	110			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

The QC data in batch 77018 applies to the following samples: 1608276-01A, 1608276-02A, 1608276-03A, 1608276-04A, 1608276-05A, 1608276-06A

Sample ID MB-77018	Batch ID: 77018	TestNo: SW6020A	Units: mg/L
SampType: MBLK	Run ID: ICP-MS3_160902A	Analysis Date: 9/2/2016 4:38:00 PM	Prep Date: 8/30/2016

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

Sample ID LCS-77018	Batch ID: 77018	TestNo: SW6020A	Units: mg/L
SampType: LCS	Run ID: ICP-MS3_160902A	Analysis Date: 9/2/2016 4:44:00 PM	Prep Date: 8/30/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.4	80	120			
Arsenic	0.202	0.00500	0.200	0	101	80	120			
Barium	0.189	0.0100	0.200	0	94.3	80	120			
Beryllium	0.197	0.00100	0.200	0	98.4	80	120			
Cadmium	0.192	0.00100	0.200	0	96.0	80	120			
Calcium	5.00	0.300	5.00	0	100	80	120			
Chromium	0.196	0.00500	0.200	0	98.2	80	120			
Cobalt	0.197	0.00500	0.200	0	98.3	80	120			
Lead	0.189	0.00100	0.200	0	94.7	80	120			
Lithium	0.203	0.0100	0.200	0	101	80	120			
Molybdenum	0.188	0.00500	0.200	0	93.8	80	120			
Selenium	0.196	0.00500	0.200	0	97.8	80	120			
Thallium	0.199	0.00150	0.200	0	99.5	80	120			

Sample ID LCSD-77018	Batch ID: 77018	TestNo: SW6020A	Units: mg/L
SampType: LCSD	Run ID: ICP-MS3_160902A	Analysis Date: 9/2/2016 4:50:00 PM	Prep Date: 8/30/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.4	80	120	1.01	15	
Arsenic	0.204	0.00500	0.200	0	102	80	120	0.987	15	
Barium	0.192	0.0100	0.200	0	96.0	80	120	1.73	15	
Beryllium	0.199	0.00100	0.200	0	99.5	80	120	1.11	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	LCSD-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:50:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.196	0.00100	0.200	0	98.2	80	120	2.21	15	
Calcium	5.09	0.300	5.00	0	102	80	120	1.74	15	
Chromium	0.195	0.00500	0.200	0	97.4	80	120	0.716	15	
Cobalt	0.196	0.00500	0.200	0	98.2	80	120	0.102	15	
Lead	0.192	0.00100	0.200	0	95.9	80	120	1.26	15	
Lithium	0.202	0.0100	0.200	0	101	80	120	0.396	15	
Molybdenum	0.192	0.00500	0.200	0	95.8	80	120	2.06	15	
Selenium	0.201	0.00500	0.200	0	100	80	120	2.47	15	
Thallium	0.202	0.00150	0.200	0	101	80	120	1.74	15	

Sample ID	1608276-06A SD			Batch ID:	77018		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS3_160902A		Analysis Date:	9/2/2016 5:08:00 PM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0292	0.0500	0	0.0294				0.683	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Calcium	13.4	1.50	0	13.5				0.260	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	0.0353	0.0500	0	0.0330				6.50	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1608276-06A PDS			Batch ID:	77018		TestNo:	SW6020A		Units:	mg/L	
SampType:	PDS			Run ID:	ICP-MS3_160902A		Analysis Date:	9/2/2016 6:08:00 PM		Prep Date:	8/30/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.197	0.00250	0.200	0	98.6	80	120			
Arsenic	0.202	0.00500	0.200	0	101	80	120			
Barium	0.223	0.0100	0.200	0.0294	96.9	80	120			
Beryllium	0.194	0.00100	0.200	0	97.2	80	120			
Cadmium	0.192	0.00100	0.200	0	96.2	80	120			
Calcium	17.6	0.300	5.00	13.5	81.6	80	120			
Chromium	0.201	0.00500	0.200	0	101	80	120			
Cobalt	0.194	0.00500	0.200	0	97.0	80	120			
Lead	0.192	0.00100	0.200	0	95.8	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	1608276-06A PDS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:08:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.216	0.0100	0.200	0.0330	91.4	80	120			
Molybdenum	0.188	0.00500	0.200	0	94.2	80	120			
Selenium	0.193	0.00500	0.200	0	96.6	80	120			
Thallium	0.204	0.00150	0.200	0	102	80	120			

Sample ID	1608276-06A MS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:14:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	80	120			
Arsenic	0.201	0.00500	0.200	0	101	80	120			
Barium	0.220	0.0100	0.200	0.0294	95.4	80	120			
Beryllium	0.188	0.00100	0.200	0	94.2	80	120			
Cadmium	0.191	0.00100	0.200	0	95.3	80	120			
Calcium	18.3	0.300	5.00	13.5	96.8	80	120			
Chromium	0.190	0.00500	0.200	0	94.8	80	120			
Cobalt	0.189	0.00500	0.200	0	94.4	80	120			
Lead	0.187	0.00100	0.200	0	93.6	80	120			
Lithium	0.224	0.0100	0.200	0.0330	95.3	80	120			
Molybdenum	0.191	0.00500	0.200	0	95.6	80	120			
Selenium	0.192	0.00500	0.200	0	96.2	80	120			
Thallium	0.199	0.00150	0.200	0	99.6	80	120			

Sample ID	1608276-06A MSD	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:20:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.4	80	120	1.61	15	
Arsenic	0.199	0.00500	0.200	0	99.6	80	120	0.999	15	
Barium	0.218	0.0100	0.200	0.0294	94.3	80	120	1.00	15	
Beryllium	0.188	0.00100	0.200	0	94.0	80	120	0.266	15	
Cadmium	0.190	0.00100	0.200	0	95.0	80	120	0.368	15	
Calcium	18.3	0.300	5.00	13.5	96.4	80	120	0.109	15	
Chromium	0.190	0.00500	0.200	0	95.0	80	120	0.158	15	
Cobalt	0.190	0.00500	0.200	0	95.2	80	120	0.844	15	
Lead	0.188	0.00100	0.200	0	93.9	80	120	0.320	15	
Lithium	0.224	0.0100	0.200	0.0330	95.3	80	120	0	15	
Molybdenum	0.189	0.00500	0.200	0	94.7	80	120	0.894	15	
Selenium	0.194	0.00500	0.200	0	97.0	80	120	0.932	15	
Thallium	0.198	0.00150	0.200	0	99.2	80	120	0.352	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	ICV1-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 12:27:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.103	0.00250	0.100	0	103	90	110			
Arsenic	0.101	0.00500	0.100	0	101	90	110			
Barium	0.0984	0.0100	0.100	0	98.4	90	110			
Beryllium	0.103	0.00100	0.100	0	103	90	110			
Cadmium	0.0980	0.00100	0.100	0	98.0	90	110			
Calcium	2.50	0.300	2.50	0	100	90	110			
Chromium	0.106	0.00500	0.100	0	106	90	110			
Cobalt	0.104	0.00500	0.100	0	104	90	110			
Lead	0.0985	0.00100	0.100	0	98.5	90	110			
Lithium	0.105	0.0100	0.100	0	105	90	110			
Molybdenum	0.0949	0.00500	0.100	0	94.9	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0976	0.00150	0.100	0	97.6	90	110			

Sample ID	ILCVL-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 12:39:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00207	0.00250	0.00200	0	104	70	130			
Arsenic	0.00510	0.00500	0.00500	0	102	70	130			
Barium	0.00500	0.0100	0.00500	0	99.9	70	130			
Beryllium	0.00110	0.00100	0.00100	0	110	70	130			
Cadmium	0.00103	0.00100	0.00100	0	103	70	130			
Calcium	0.0938	0.300	0.100	0	93.8	70	130			
Chromium	0.00537	0.00500	0.00500	0	107	70	130			
Cobalt	0.00521	0.00500	0.00500	0	104	70	130			
Lead	0.00103	0.00100	0.00100	0	103	70	130			
Lithium	0.0103	0.0100	0.0100	0	103	70	130			
Molybdenum	0.00494	0.00500	0.00500	0	98.8	70	130			
Selenium	0.00516	0.00500	0.00500	0	103	70	130			
Thallium	0.00109	0.00150	0.00100	0	109	70	130			

Sample ID	CCV2-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:14:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.201	0.00250	0.200	0	100	90	110			
Arsenic	0.206	0.00500	0.200	0	103	90	110			
Barium	0.196	0.0100	0.200	0	97.8	90	110			
Beryllium	0.202	0.00100	0.200	0	101	90	110			
Cadmium	0.196	0.00100	0.200	0	98.2	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	CCV2-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:14:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.31	0.300	5.00	0	106	90	110			
Chromium	0.199	0.00500	0.200	0	99.5	90	110			
Cobalt	0.199	0.00500	0.200	0	99.4	90	110			
Lead	0.196	0.00100	0.200	0	98.2	90	110			
Lithium	0.208	0.0100	0.200	0	104	90	110			
Molybdenum	0.194	0.00500	0.200	0	96.8	90	110			
Selenium	0.200	0.00500	0.200	0	99.9	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL2-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:26:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00228	0.00250	0.00200	0	114	70	130			
Arsenic	0.00545	0.00500	0.00500	0	109	70	130			
Barium	0.00498	0.0100	0.00500	0	99.6	70	130			
Beryllium	0.00112	0.00100	0.00100	0	112	70	130			
Cadmium	0.00108	0.00100	0.00100	0	108	70	130			
Calcium	0.0878	0.300	0.100	0	87.8	70	130			
Chromium	0.00524	0.00500	0.00500	0	105	70	130			
Cobalt	0.00508	0.00500	0.00500	0	102	70	130			
Lead	0.00109	0.00100	0.00100	0	109	70	130			
Lithium	0.00965	0.0100	0.0100	0	96.5	70	130			
Molybdenum	0.00496	0.00500	0.00500	0	99.2	70	130			
Selenium	0.00496	0.00500	0.00500	0	99.1	70	130			
Thallium	0.00117	0.00150	0.00100	0	117	70	130			

Sample ID	CCV3-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:31:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.207	0.00250	0.200	0	104	90	110			
Arsenic	0.212	0.00500	0.200	0	106	90	110			
Barium	0.197	0.0100	0.200	0	98.6	90	110			
Beryllium	0.200	0.00100	0.200	0	100	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Calcium	5.30	0.300	5.00	0	106	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Cobalt	0.200	0.00500	0.200	0	100	90	110			
Lead	0.200	0.00100	0.200	0	100	90	110			
Lithium	0.201	0.0100	0.200	0	100	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	CCV3-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:31:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.199	0.00500	0.200	0	99.4	90	110			
Selenium	0.205	0.00500	0.200	0	103	90	110			
Thallium	0.208	0.00150	0.200	0	104	90	110			

Sample ID	LCVL3-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:49:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00225	0.00250	0.00200	0	113	70	130			
Arsenic	0.00527	0.00500	0.00500	0	105	70	130			
Barium	0.00501	0.0100	0.00500	0	100	70	130			
Beryllium	0.00108	0.00100	0.00100	0	108	70	130			
Cadmium	0.00105	0.00100	0.00100	0	105	70	130			
Calcium	0.0851	0.300	0.100	0	85.1	70	130			
Chromium	0.00508	0.00500	0.00500	0	102	70	130			
Cobalt	0.00504	0.00500	0.00500	0	101	70	130			
Lead	0.00105	0.00100	0.00100	0	105	70	130			
Lithium	0.00969	0.0100	0.0100	0	96.9	70	130			
Molybdenum	0.00491	0.00500	0.00500	0	98.2	70	130			
Selenium	0.00516	0.00500	0.00500	0	103	70	130			
Thallium	0.00111	0.00150	0.00100	0	111	70	130			

Sample ID	CCV4-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 8:02:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.206	0.00250	0.200	0	103	90	110			
Arsenic	0.208	0.00500	0.200	0	104	90	110			
Barium	0.198	0.0100	0.200	0	98.8	90	110			
Beryllium	0.204	0.00100	0.200	0	102	90	110			
Cadmium	0.201	0.00100	0.200	0	100	90	110			
Chromium	0.198	0.00500	0.200	0	99.1	90	110			
Cobalt	0.199	0.00500	0.200	0	99.7	90	110			
Lead	0.196	0.00100	0.200	0	98.0	90	110			
Lithium	0.212	0.0100	0.200	0	106	90	110			
Molybdenum	0.198	0.00500	0.200	0	98.8	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.208	0.00150	0.200	0	104	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	LCVL4-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 8:20:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Arsenic	0.00521	0.00500	0.00500	0	104	70	130			
Barium	0.00504	0.0100	0.00500	0	101	70	130			
Beryllium	0.00109	0.00100	0.00100	0	109	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Chromium	0.00508	0.00500	0.00500	0	102	70	130			
Cobalt	0.00502	0.00500	0.00500	0	100	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Lithium	0.0101	0.0100	0.0100	0	101	70	130			
Molybdenum	0.00487	0.00500	0.00500	0	97.4	70	130			
Selenium	0.00562	0.00500	0.00500	0	112	70	130			
Thallium	0.00103	0.00150	0.00100	0	103	70	130			

Sample ID	CCV5-160902			Batch ID:	R87956		TestNo:	SW6020A		Units:	mg/L	
SampType:	CCV			Run ID:	ICP-MS3_160902A		Analysis Date:	9/2/2016 9:32:00 PM		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.210	0.00250	0.200	0	105	90	110			
Arsenic	0.213	0.00500	0.200	0	107	90	110			
Barium	0.198	0.0100	0.200	0	99.0	90	110			
Beryllium	0.200	0.00100	0.200	0	100	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.199	0.00500	0.200	0	99.4	90	110			
Lead	0.199	0.00100	0.200	0	99.7	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			
Molybdenum	0.204	0.00500	0.200	0	102	90	110			
Selenium	0.203	0.00500	0.200	0	102	90	110			
Thallium	0.211	0.00150	0.200	0	105	90	110			

Sample ID	LCVL5-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 9:50:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00205	0.00250	0.00200	0	102	70	130			
Arsenic	0.00532	0.00500	0.00500	0	106	70	130			
Barium	0.00497	0.0100	0.00500	0	99.5	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Chromium	0.00505	0.00500	0.00500	0	101	70	130			
Cobalt	0.00491	0.00500	0.00500	0	98.2	70	130			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	LCVL5-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 9:50:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.000982	0.00100	0.00100	0	98.2	70	130			
Lithium	0.00953	0.0100	0.0100	0	95.3	70	130			
Molybdenum	0.00485	0.00500	0.00500	0	97.0	70	130			
Selenium	0.00514	0.00500	0.00500	0	103	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160906B

The QC data in batch 77018 applies to the following samples: 1608276-01A, 1608276-02A, 1608276-03A, 1608276-04A, 1608276-05A, 1608276-06A

Sample ID	MB-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	MBLK	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 2:28:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID	LCS-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCS	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 2:31:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.189 0.0300 0.200 0 94.5 80 120

Sample ID	LCSD-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 2:34:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.188 0.0300 0.200 0 94.0 80 120 0.514 15

Sample ID	1608276-06A SD	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	SD	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:14:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.0778 0.150 0 0.0602 25.6 10 R

Sample ID	1608276-06A PDS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:56:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.267 0.0300 0.200 0.0601 103 80 120

Sample ID	1608276-06A MS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	MS	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:59:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.271 0.0300 0.200 0.0601 105 80 120

Sample ID	1608276-06A MSD	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	MSD	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 4:02:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.269 0.0300 0.200 0.0601 104 80 120 0.591 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160906B

Sample ID	ICV-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 12:51:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.0949	0.0300	0.100	0	94.9	90	110

Sample ID	LCVL-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 12:57:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.0203	0.0300	0.0200	0	101	70	130

Sample ID	CCV1-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 1:24:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.199	0.0300	0.200	0	99.5	90	110

Sample ID	LCVL1-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 1:30:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.0241	0.0300	0.0200	0	120	70	130

Sample ID	CCV2-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 2:59:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.201	0.0300	0.200	0	101	90	110

Sample ID	LCVL2-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:05:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.0219	0.0300	0.0200	0	109	70	130

Sample ID	CCV3-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 4:11:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Boron	0.207	0.0300	0.200	0	103	90	110

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160906B

Sample ID	LCVL3-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 4:31:00 PM	Prep Date:	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
Boron		0.0240	0.0300	0.0200	0	120	70 130

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

The QC data in batch 77092 applies to the following samples: 1608276-07A, 1608276-08A, 1608276-09A, 1608276-10A, 1608276-11A, 1608276-12A, 1608276-13A, 1608276-14A, 1608276-15A, 1608276-16A

Sample ID	MB-77092		Batch ID:	77092		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160908B		Analysis Date:	9/8/2016 4:41:00 PM		Prep Date:	9/6/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID	LCS-77092		Batch ID:	77092		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_160908B		Analysis Date:	9/8/2016 4:44:00 PM		Prep Date:	9/6/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.201	0.00250	0.200	0	100	80	120			
Arsenic	0.198	0.00500	0.200	0	99.1	80	120			
Barium	0.192	0.0100	0.200	0	96.0	80	120			
Beryllium	0.190	0.00100	0.200	0	95.1	80	120			
Cadmium	0.197	0.00100	0.200	0	98.5	80	120			
Calcium	4.48	0.300	5.00	0	89.6	80	120			
Chromium	0.201	0.00500	0.200	0	101	80	120			
Cobalt	0.200	0.00500	0.200	0	100	80	120			
Lead	0.194	0.00100	0.200	0	97.2	80	120			
Lithium	0.197	0.0100	0.200	0	98.4	80	120			
Molybdenum	0.194	0.00500	0.200	0	97.0	80	120			
Selenium	0.187	0.00500	0.200	0	93.5	80	120			
Thallium	0.191	0.00150	0.200	0	95.4	80	120			

Sample ID	LCSD-77092	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 4:47:00 PM	Prep Date:	9/6/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.203	0.00250	0.200	0	102	80	120	1.06	15	
Arsenic	0.198	0.00500	0.200	0	99.1	80	120	0.031	15	
Barium	0.191	0.0100	0.200	0	95.6	80	120	0.456	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

Sample ID	LCSD-77092	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 4:47:00 PM	Prep Date:	9/6/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.193	0.00100	0.200	0	96.7	80	120	1.69	15
Cadmium	0.196	0.00100	0.200	0	97.9	80	120	0.575	15
Calcium	4.49	0.300	5.00	0	89.7	80	120	0.140	15
Chromium	0.200	0.00500	0.200	0	100	80	120	0.313	15
Cobalt	0.202	0.00500	0.200	0	101	80	120	0.702	15
Lead	0.193	0.00100	0.200	0	96.6	80	120	0.672	15
Lithium	0.194	0.0100	0.200	0	97.0	80	120	1.47	15
Molybdenum	0.192	0.00500	0.200	0	96.2	80	120	0.733	15
Selenium	0.190	0.00500	0.200	0	95.0	80	120	1.64	15
Thallium	0.189	0.00150	0.200	0	94.7	80	120	0.744	15

Sample ID	1608276-07A MS			Batch ID:	77092		TestNo:	SW6020A		Units:	mg/L	
SampType:	MS			Run ID:	ICP-MS4_160908B		Analysis Date:	9/8/2016 5:26:00 PM		Prep Date:	9/6/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.207	0.00250	0.200	0	103	80	120		
Arsenic	0.199	0.00500	0.200	0	99.4	80	120		
Barium	0.236	0.0100	0.200	0.0438	96.1	80	120		
Beryllium	0.190	0.00100	0.200	0	94.9	80	120		
Cadmium	0.195	0.00100	0.200	0	97.6	80	120		
Calcium	13.9	0.300	5.00	9.58	85.6	80	120		
Chromium	0.196	0.00500	0.200	0	98.1	80	120		
Cobalt	0.197	0.00500	0.200	0	98.4	80	120		
Lead	0.190	0.00100	0.200	0	95.1	80	120		
Lithium	0.208	0.0100	0.200	0.0124	97.7	80	120		
Molybdenum	0.193	0.00500	0.200	0	96.5	80	120		
Selenium	0.192	0.00500	0.200	0	96.1	80	120		
Thallium	0.187	0.00150	0.200	0	93.4	80	120		

Sample ID	1608276-07A MSD			Batch ID:	77092		TestNo:	SW6020A		Units:	mg/L	
SampType:	MSD			Run ID:	ICP-MS4_160908B		Analysis Date:	9/8/2016 5:29:00 PM		Prep Date:	9/6/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.205	0.00250	0.200	0	102	80	120	0.936	15
Arsenic	0.199	0.00500	0.200	0	99.6	80	120	0.232	15
Barium	0.237	0.0100	0.200	0.0438	96.5	80	120	0.330	15
Beryllium	0.188	0.00100	0.200	0	93.8	80	120	1.09	15
Cadmium	0.194	0.00100	0.200	0	97.0	80	120	0.612	15
Calcium	14.1	0.300	5.00	9.58	90.2	80	120	1.64	15
Chromium	0.197	0.00500	0.200	0	98.5	80	120	0.429	15
Cobalt	0.198	0.00500	0.200	0	98.9	80	120	0.561	15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

Sample ID	1608276-07A MSD	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 5:29:00 PM	Prep Date:	9/6/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Lead	0.190	0.00100	0.200	0	94.9	80	120	0.288	15	
Lithium	0.198	0.0100	0.200	0.0124	92.8	80	120	4.85	15	
Molybdenum	0.193	0.00500	0.200	0	96.4	80	120	0.031	15	
Selenium	0.189	0.00500	0.200	0	94.7	80	120	1.41	15	
Thallium	0.185	0.00150	0.200	0	92.7	80	120	0.743	15	

Sample ID	1608276-07A SD			Batch ID:	77092		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_160908B		Analysis Date:	9/8/2016 7:01:00 PM		Prep Date:	9/6/2016	
Analyte		Result	RL	SPK value	Ref Val		%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0434	0.0500	0	0.0438				0.967	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Calcium	9.68	1.50	0	9.58				1.10	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	<0.0250	0.0500	0	0.0124				0	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1608276-07A PDS		Batch ID:	77092		TestNo:	SW6020A		Units:	mg/L		
SampType:	PDS		Run ID:	ICP-MS4_160908B		Analysis Date:	9/8/2016 7:31:00 PM		Prep Date:	9/6/2016		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.199	0.00500	0.200	0	99.4	80	120			
Barium	0.231	0.0100	0.200	0.0438	93.6	80	120			
Beryllium	0.182	0.00100	0.200	0	91.0	80	120			
Cadmium	0.192	0.00100	0.200	0	96.0	80	120			
Calcium	13.3	0.300	5.00	9.58	73.8	80	120			S
Chromium	0.203	0.00500	0.200	0	101	80	120			
Cobalt	0.196	0.00500	0.200	0	98.1	80	120			
Lead	0.189	0.00100	0.200	0	94.6	80	120			
Lithium	0.187	0.0100	0.200	0.0124	87.2	80	120			
Molybdenum	0.185	0.00500	0.200	0	92.5	80	120			
Selenium	0.183	0.00500	0.200	0	91.6	80	120			
Thallium	0.184	0.00150	0.200	0	92.0	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

Sample ID	ICV-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 1:31:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.104	0.00250	0.100	0	104	90	110			
Arsenic	0.100	0.00500	0.100	0	100	90	110			
Barium	0.0974	0.0100	0.100	0	97.4	90	110			
Beryllium	0.0983	0.00100	0.100	0	98.3	90	110			
Cadmium	0.0980	0.00100	0.100	0	98.0	90	110			
Calcium	2.28	0.300	2.50	0	91.3	90	110			
Chromium	0.104	0.00500	0.100	0	104	90	110			
Cobalt	0.105	0.00500	0.100	0	105	90	110			
Lead	0.0982	0.00100	0.100	0	98.2	90	110			
Lithium	0.0964	0.0100	0.100	0	96.4	90	110			
Molybdenum	0.0930	0.00500	0.100	0	93.0	90	110			
Selenium	0.0989	0.00500	0.100	0	98.9	90	110			
Thallium	0.0956	0.00150	0.100	0	95.6	90	110			

Sample ID	LCVL-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 1:37:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00197	0.00250	0.00200	0	98.6	70	130			
Arsenic	0.00509	0.00500	0.00500	0	102	70	130			
Barium	0.00493	0.0100	0.00500	0	98.6	70	130			
Beryllium	0.000866	0.00100	0.00100	0	86.6	70	130			
Cadmium	0.000951	0.00100	0.00100	0	95.1	70	130			
Calcium	0.0943	0.300	0.100	0	94.3	70	130			
Chromium	0.00509	0.00500	0.00500	0	102	70	130			
Cobalt	0.00528	0.00500	0.00500	0	106	70	130			
Lead	0.000986	0.00100	0.00100	0	98.6	70	130			
Lithium	0.00952	0.0100	0.0100	0	95.2	70	130			
Molybdenum	0.00510	0.00500	0.00500	0	102	70	130			
Selenium	0.00520	0.00500	0.00500	0	104	70	130			
Thallium	0.000983	0.00150	0.00100	0	98.3	70	130			

Sample ID	CCV2-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 3:55:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.209	0.00250	0.200	0	104	90	110			
Arsenic	0.203	0.00500	0.200	0	102	90	110			
Barium	0.197	0.0100	0.200	0	98.4	90	110			
Beryllium	0.196	0.00100	0.200	0	97.8	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

Sample ID	CCV2-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 3:55:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.62	0.300	5.00	0	92.3	90	110			
Chromium	0.207	0.00500	0.200	0	104	90	110			
Cobalt	0.208	0.00500	0.200	0	104	90	110			
Lead	0.204	0.00100	0.200	0	102	90	110			
Lithium	0.198	0.0100	0.200	0	98.8	90	110			
Molybdenum	0.200	0.00500	0.200	0	99.8	90	110			
Selenium	0.193	0.00500	0.200	0	96.6	90	110			
Thallium	0.201	0.00150	0.200	0	100	90	110			

Sample ID	LCVL2-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 4:35:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00197	0.00250	0.00200	0	98.2	70	130			
Arsenic	0.00515	0.00500	0.00500	0	103	70	130			
Barium	0.00513	0.0100	0.00500	0	103	70	130			
Beryllium	0.000989	0.00100	0.00100	0	98.9	70	130			
Cadmium	0.000990	0.00100	0.00100	0	99.0	70	130			
Calcium	0.0886	0.300	0.100	0	88.6	70	130			
Chromium	0.00535	0.00500	0.00500	0	107	70	130			
Cobalt	0.00534	0.00500	0.00500	0	107	70	130			
Lead	0.000957	0.00100	0.00100	0	95.7	70	130			
Lithium	0.0102	0.0100	0.0100	0	102	70	130			
Molybdenum	0.00485	0.00500	0.00500	0	97.0	70	130			
Selenium	0.00524	0.00500	0.00500	0	105	70	130			
Thallium	0.000996	0.00150	0.00100	0	99.6	70	130			

Sample ID	CCV3-140402			Batch ID:	R88020		TestNo:	SW6020A		Units:	mg/L		
SampType:	CCV			Run ID:	ICP-MS4_160908B		Analysis Date:	9/8/2016 5:32:00 PM		Prep Date:			
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.216	0.00250	0.200	0	108	90	110			
Arsenic	0.209	0.00500	0.200	0	104	90	110			
Barium	0.203	0.0100	0.200	0	102	90	110			
Beryllium	0.196	0.00100	0.200	0	98.1	90	110			
Cadmium	0.208	0.00100	0.200	0	104	90	110			
Calcium	4.75	0.300	5.00	0	94.9	90	110			
Chromium	0.212	0.00500	0.200	0	106	90	110			
Cobalt	0.211	0.00500	0.200	0	105	90	110			
Lead	0.206	0.00100	0.200	0	103	90	110			
Lithium	0.200	0.0100	0.200	0	100	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

Sample ID	CCV3-140402	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 5:32:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.205	0.00500	0.200	0	103	90	110			
Selenium		0.200	0.00500	0.200	0	100	90	110			
Thallium		0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL3-140402	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 5:38:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony		0.00234	0.00250	0.00200	0	117	70	130			
Arsenic		0.00529	0.00500	0.00500	0	106	70	130			
Barium		0.00504	0.0100	0.00500	0	101	70	130			
Beryllium		0.00104	0.00100	0.00100	0	104	70	130			
Cadmium		0.00108	0.00100	0.00100	0	108	70	130			
Calcium		0.0904	0.300	0.100	0	90.4	70	130			
Chromium		0.00530	0.00500	0.00500	0	106	70	130			
Cobalt		0.00531	0.00500	0.00500	0	106	70	130			
Lead		0.00101	0.00100	0.00100	0	101	70	130			
Lithium		0.00954	0.0100	0.0100	0	95.4	70	130			
Molybdenum		0.00497	0.00500	0.00500	0	99.3	70	130			
Selenium		0.00545	0.00500	0.00500	0	109	70	130			
Thallium		0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV4-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 6:46:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.211	0.00500	0.200	0	106	90	110			
Barium	0.199	0.0100	0.200	0	99.5	90	110			
Beryllium	0.191	0.00100	0.200	0	95.5	90	110			
Cadmium	0.206	0.00100	0.200	0	103	90	110			
Calcium	4.63	0.300	5.00	0	92.6	90	110			
Chromium	0.213	0.00500	0.200	0	107	90	110			
Cobalt	0.209	0.00500	0.200	0	105	90	110			
Lead	0.204	0.00100	0.200	0	102	90	110			
Lithium	0.189	0.0100	0.200	0	94.3	90	110			
Molybdenum	0.203	0.00500	0.200	0	102	90	110			
Selenium	0.197	0.00500	0.200	0	98.5	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

Sample ID	LCVL4-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 6:52:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00526	0.00500	0.00500	0	105	70	130			
Barium	0.00498	0.0100	0.00500	0	99.6	70	130			
Beryllium	0.000988	0.00100	0.00100	0	98.8	70	130			
Cadmium	0.000987	0.00100	0.00100	0	98.7	70	130			
Calcium	0.0876	0.300	0.100	0	87.6	70	130			
Chromium	0.00516	0.00500	0.00500	0	103	70	130			
Cobalt	0.00521	0.00500	0.00500	0	104	70	130			
Lead	0.000936	0.00100	0.00100	0	93.6	70	130			
Lithium	0.00993	0.0100	0.0100	0	99.3	70	130			
Molybdenum	0.00486	0.00500	0.00500	0	97.2	70	130			
Selenium	0.00522	0.00500	0.00500	0	104	70	130			
Thallium	0.000971	0.00150	0.00100	0	97.1	70	130			

Sample ID	CCV5-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 7:34:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.211	0.00500	0.200	0	106	90	110			
Barium	0.202	0.0100	0.200	0	101	90	110			
Beryllium	0.192	0.00100	0.200	0	96.1	90	110			
Cadmium	0.209	0.00100	0.200	0	105	90	110			
Calcium	4.57	0.300	5.00	0	91.3	90	110			
Chromium	0.210	0.00500	0.200	0	105	90	110			
Cobalt	0.209	0.00500	0.200	0	104	90	110			
Lead	0.202	0.00100	0.200	0	101	90	110			
Lithium	0.190	0.0100	0.200	0	94.8	90	110			
Molybdenum	0.206	0.00500	0.200	0	103	90	110			
Selenium	0.196	0.00500	0.200	0	97.8	90	110			
Thallium	0.198	0.00150	0.200	0	99.2	90	110			

Sample ID	LCVL5-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 7:40:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00542	0.00500	0.00500	0	108	70	130			
Barium	0.00492	0.0100	0.00500	0	98.5	70	130			
Beryllium	0.000973	0.00100	0.00100	0	97.3	70	130			
Cadmium	0.000983	0.00100	0.00100	0	98.3	70	130			
Calcium	0.0902	0.300	0.100	0	90.2	70	130			
Chromium	0.00538	0.00500	0.00500	0	108	70	130			
Cobalt	0.00524	0.00500	0.00500	0	105	70	130			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160908B

Sample ID	LCVL5-160908	Batch ID:	R88020	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160908B	Analysis Date:	9/8/2016 7:40:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.000939	0.00100	0.00100	0	93.9	70	130			
Lithium	0.00876	0.0100	0.0100	0	87.6	70	130			
Molybdenum	0.00496	0.00500	0.00500	0	99.2	70	130			
Selenium	0.00517	0.00500	0.00500	0	103	70	130			
Thallium	0.000989	0.00150	0.00100	0	98.9	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160909A

The QC data in batch 77092 applies to the following samples: 1608276-07A, 1608276-08A, 1608276-09A, 1608276-10A, 1608276-11A, 1608276-12A, 1608276-13A, 1608276-14A, 1608276-15A, 1608276-16A

Sample ID	MB-77092	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 1:38:00 PM	Prep Date:	9/6/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	<0.0100	0.0300								

Sample ID	LCS-77092	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCS	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 1:41:00 PM	Prep Date:	9/6/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.183	0.0300	0.200	0	91.6	80	120			

Sample ID	LCSD-77092	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 1:44:00 PM	Prep Date:	9/6/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.195	0.0300	0.200	0	97.6	80	120	6.39	15	

Sample ID	1608276-07A SD	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 1:53:00 PM	Prep Date:	9/6/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Antimony	<0.00400	0.0125	0	0					0	10
Boron	0.105	0.150	0	0.0690					41.1	10 R

Sample ID	1608276-07A PDS	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 2:17:00 PM	Prep Date:	9/6/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Antimony	0.186	0.00250	0.200	0	92.9	80	120			
Boron	0.242	0.0300	0.200	0.0691	86.5	80	120			

Sample ID	1608276-07A MS	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 2:20:00 PM	Prep Date:	9/6/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.257	0.0300	0.200	0.0691	94.0	80	120			

Sample ID	1608276-07A MSD	Batch ID:	77092	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 2:23:00 PM	Prep Date:	9/6/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.257	0.0300	0.200	0.0691	94.1	80	120	0.078	15	

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160909A

Sample ID	ICV-160909	Batch ID:	R88038	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 1:23:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.105	0.00250	0.100	0	105	90	110			
Boron	0.0999	0.0300	0.100	0	99.9	90	110			

Sample ID	LCVL-160909	Batch ID:	R88038	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 1:29:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Boron	0.0209	0.0300	0.0200	0	104	70	130			

Sample ID	CCV1-160909	Batch ID:	R88038	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 2:43:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.194	0.00250	0.200	0	96.9	90	110			
Boron	0.195	0.0300	0.200	0	97.4	90	110			

Sample ID	LCVL1-160909	Batch ID:	R88038	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160909A	Analysis Date:	9/9/2016 3:00:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Boron	0.0244	0.0300	0.0200	0	122	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160909B

Sample ID	ICV-160909	Batch ID:	R88044	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160909B	Analysis Date:	9/9/2016 1:23:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.105	0.00250	0.100	0	105	90	110			
Boron	0.0999	0.0300	0.100	0	99.9	90	110			

Sample ID	LCVL-160909	Batch ID:	R88044	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160909B	Analysis Date:	9/9/2016 1:29:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Boron	0.0209	0.0300	0.0200	0	104	70	130			

Sample ID	CCV1-160909	Batch ID:	R88044	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160909B	Analysis Date:	9/9/2016 2:43:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.194	0.00250	0.200	0	96.9	90	110			
Boron	0.195	0.0300	0.200	0	97.4	90	110			

Sample ID	LCVL1-160909	Batch ID:	R88044	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160909B	Analysis Date:	9/9/2016 3:00:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Boron	0.0244	0.0300	0.0200	0	122	70	130			

Sample ID	CCV2-160909	Batch ID:	R88044	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160909B	Analysis Date:	9/9/2016 3:53:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.195	0.00250	0.200	0	97.6	90	110			
Boron	0.202	0.0300	0.200	0	101	90	110			

Sample ID	LCVL2-160909	Batch ID:	R88044	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160909B	Analysis Date:	9/9/2016 3:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00208	0.00250	0.00200	0	104	70	130			
Boron	0.0250	0.0300	0.0200	0	125	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160829A

The QC data in batch 77006 applies to the following samples: 1608276-01D, 1608276-02D, 1608276-03D, 1608276-04D, 1608276-05D, 1608276-06D, 1608276-07D, 1608276-08D, 1608276-09D, 1608276-10D

Sample ID	MB-77006	Batch ID:	77006	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 11:32:48 AM	Prep Date:	8/29/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-77006	Batch ID:	77006	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 11:47:48 AM	Prep Date:	8/29/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110			
Fluoride	3.83	0.400	4.000	0	95.9	90	110			
Sulfate	31.1	3.00	30.00	0	104	90	110			

Sample ID	LCSD-77006	Batch ID:	77006	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 12:02:48 PM	Prep Date:	8/29/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110	0.056	20	
Fluoride	3.78	0.400	4.000	0	94.5	90	110	1.44	20	
Sulfate	31.2	3.00	30.00	0	104	90	110	0.208	20	

Sample ID	1608276-07DMS	Batch ID:	77006	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 7:34:11 PM	Prep Date:	8/29/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	40.0	1.00	20.00	20.44	97.6	90	110			
Fluoride	20.0	0.400	20.00	0.1585	99.1	90	110			
Sulfate	43.0	3.00	20.00	21.84	106	90	110			

Sample ID	1608276-07DMSD	Batch ID:	77006	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 7:49:11 PM	Prep Date:	8/29/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	40.1	1.00	20.00	20.44	98.2	90	110	0.299	20	
Fluoride	20.1	0.400	20.00	0.1585	99.6	90	110	0.539	20	
Sulfate	43.1	3.00	20.00	21.84	106	90	110	0.327	20	

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160829A

Sample ID	ICV-160829	Batch ID:	R87861	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 10:15:38 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.0	1.00	25.00	0	104	90	110			
Fluoride	9.38	0.400	10.00	0	93.8	90	110			
Sulfate	80.5	3.00	75.00	0	107	90	110			

Sample ID	CCV1-160829	Batch ID:	R87861	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 5:23:12 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.87	0.400	4.000	0	96.6	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	CCV2-160829	Batch ID:	R87861	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160829A	Analysis Date:	8/29/2016 8:49:11 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.92	0.400	4.000	0	98.1	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160830A

The QC data in batch 77028 applies to the following samples: 1608276-11D, 1608276-12D, 1608276-13D, 1608276-14D, 1608276-15D, 1608276-16D

Sample ID	MB-77028	Batch ID:	77028	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 10:36:06 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-77028	Batch ID:	77028	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 10:51:06 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110			
Fluoride	3.82	0.400	4.000	0	95.4	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	LCSD-77028	Batch ID:	77028	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 11:06:06 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110	0.161	20	
Fluoride	3.75	0.400	4.000	0	93.8	90	110	1.68	20	
Sulfate	31.6	3.00	30.00	0	105	90	110	0.128	20	

Sample ID	1608276-11DMS	Batch ID:	77028	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 3:22:20 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	309	10.0	200.0	106.8	101	90	110			
Fluoride	193	4.00	200.0	0	96.7	90	110			
Sulfate	256	30.0	200.0	40.70	108	90	110			

Sample ID	1608276-11DMSD	Batch ID:	77028	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 3:37:20 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	310	10.0	200.0	106.8	102	90	110	0.409	20	
Fluoride	194	4.00	200.0	0	97.1	90	110	0.452	20	
Sulfate	258	30.0	200.0	40.70	108	90	110	0.558	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160830A

Sample ID	ICV-160830	Batch ID:	R87889	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 9:57:10 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.5	1.00	25.00	0	106	90	110			
Fluoride	9.51	0.400	10.00	0	95.1	90	110			
Sulfate	81.9	3.00	75.00	0	109	90	110			

Sample ID	CCV1-160830	Batch ID:	R87889	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 2:14:39 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.84	0.400	4.000	0	96.1	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	CCV2-160830	Batch ID:	R87889	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 5:22:20 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.85	0.400	4.000	0	96.2	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160831A

The QC data in batch 77040 applies to the following samples: 1608276-01D, 1608276-02D, 1608276-03D, 1608276-04D, 1608276-05D, 1608276-06D, 1608276-07D, 1608276-08D, 1608276-09D, 1608276-10D, 1608276-11D, 1608276-12D, 1608276-13D

Sample ID	1608241-01D-DUP	Batch ID:	77040	TestNo:	M4500-H+ B	Units:	pH Units@21.6°C
SampType:	DUP	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 10:05:00 AM	Prep Date:	8/31/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		7.22	0	0	7.200		0.277 5

Sample ID	1608241-02D-DUP	Batch ID:	77040	TestNo:	M4500-H+ B	Units:	pH Units@21.5°C
SampType:	DUP	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 10:10:00 AM	Prep Date:	8/31/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		7.31	0	0	7.260		0.686 5

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160831A

The QC data in batch 77050 applies to the following samples: 1608276-14D, 1608276-15D, 1608276-16D

Sample ID	1608276-14D-DUP	Batch ID:	77050	TestNo:	M4500-H+ B	Units:	pH Units@18.2°C
SampType:	DUP	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 1:47:00 PM	Prep Date:	8/31/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.30	0	0	6.310				0.159	5	

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160831A

Sample ID	ICV-160831	Batch ID:	R87906	TestNo:	M4500-H+ B	Units:	pH Units@21.9°C
SampType:	ICV	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 8:53:00 AM	Prep Date:	8/31/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 9.94 0 10.00 0 99.4 99 101

Sample ID	CCV1-160831	Batch ID:	R87906	TestNo:	M4500-H+ B	Units:	pH Units@21.1°C
SampType:	CCV	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 10:26:00 AM	Prep Date:	8/31/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV2-160831	Batch ID:	R87906	TestNo:	M4500-H+ B	Units:	pH Units@21.1°C
SampType:	CCV	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 10:59:00 AM	Prep Date:	8/31/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV3-160831	Batch ID:	R87906	TestNo:	M4500-H+ B	Units:	pH Units@21.4°C
SampType:	CCV	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 11:28:00 AM	Prep Date:	8/31/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV4-160831	Batch ID:	R87906	TestNo:	M4500-H+ B	Units:	pH Units@22°C
SampType:	CCV	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 1:08:00 PM	Prep Date:	8/31/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV5-160831	Batch ID:	R87906	TestNo:	M4500-H+ B	Units:	pH Units@21.6°C
SampType:	CCV	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 2:02:00 PM	Prep Date:	8/31/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH 6.98 0 7.000 0 99.7 97.1 102.9

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608276
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160831A

The QC data in batch 77055 applies to the following samples: 1608276-01D, 1608276-02D, 1608276-03D, 1608276-04D, 1608276-05D, 1608276-06D, 1608276-07D, 1608276-08D, 1608276-09D, 1608276-10D, 1608276-11D, 1608276-12D, 1608276-13D, 1608276-14D, 1608276-15D, 1608276-16D

Sample ID	MB-77055	Batch ID:	77055	TestNo:	M2540C	Units:	mg/L			
SampType:	MBLK	Run ID:	WC_160831A	Analysis Date:	9/1/2016 8:46:00 AM	Prep Date:	8/31/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-77055			Batch ID:	77055		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS			Run ID:	WC_160831A		Analysis Date:	9/1/2016 8:46:00 AM		Prep Date:	8/31/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 748 10.0 745.6 0 100 90 113

Sample ID	1608276-01D-DUP			Batch ID:	77055		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP			Run ID:	WC_160831A		Analysis Date:	9/1/2016 8:46:00 AM		Prep Date:	8/31/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Total Dissolved Solids (Residue, Filtera 1020 50.0 0 1065 4.32 5

Sample ID	1608276-12D-DUP		Batch ID:	77055		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_160831A		Analysis Date:	9/1/2016 8:46:00 AM		Prep Date:	8/31/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 1170 50.0 0 1115 4.39 5

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 NELAC certified

Case Narrative

Lab No: 20160843

This report contains the analytical results for the 16 sample(s) received under chain of custody by ESC Lab Sciences on 8/31/2016 10:45:00 AM. These samples are associated with your 1608276 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances



Client : DHL Analytical, Inc.
Client Project : 1608276
Lab Number : 20160843
Date Reported : 09/26/16
Date Received : 08/31/16
Page Number : 2 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160843-01

Client ID : FGD-2

Date Sampled : 8/24/2016 10:20:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		3.24 +/- 1.44	0.803	pCi/l			
Radium-226	SM 7500 Ra B M*	2.47 +/- 0.611	0.299	pCi/l	09/06/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.769 +/- 0.829	0.504	pCi/l	09/16/16	09/21/16	JR

Lab ID : 20160843-02

Client ID : FGD-3

Date Sampled : 8/24/2016 11:15:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		3.01 +/- 1.39	0.884	pCi/l			
Radium-226	SM 7500 Ra B M*	0.416 +/- 0.184	0.203	pCi/l	09/06/16	09/07/16	AK
Radium-228	EPA 904*/9320*	2.60 +/- 1.21	0.682	pCi/l	09/16/16	09/21/16	JR

Lab ID : 20160843-03

Client ID : FGD-4

Date Sampled : 8/24/2016 12:00:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		0.810 +/- 0.927	0.654	pCi/l			
Radium-226	SM 7500 Ra B M*	0.185 +/- 0.145	0.199	pCi/l	09/06/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.625 +/- 0.782	0.455	pCi/l	09/16/16	09/21/16	JR

Lab ID : 20160843-04

Client ID : FGD-6

Date Sampled : 8/24/2016 12:50:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		1.36 +/- 1.21	0.893	pCi/l			
Radium-226	SM 7500 Ra B M*	0.465 +/- 0.174	0.130	pCi/l	09/06/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.896 +/- 1.04	0.762	pCi/l	09/16/16	09/21/16	JR



Client : DHL Analytical, Inc.
 Client Project : 1608276
 Lab Number : 20160843
 Date Reported : 09/26/16
 Date Received : 08/31/16
 Page Number : 3 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160843-05
Client ID : FGD-5
Date Sampled : 8/24/2016 1:40:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	0.660 +/- 1.33	0.868	pCi/l				
Radium-226 SM 7500 Ra B M*	0.398 +/- 0.193	0.224	pCi/l		09/06/16	09/07/16	AK
Radium-228 EPA 904*/9320*	0.261 +/- 1.13	0.643	pCi/l		09/16/16	09/21/16	JR

Lab ID : 20160843-06
Client ID : FGD-1
Date Sampled : 8/24/2016 2:30:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	2.43 +/- 1.10	0.684	pCi/l				
Radium-226 SM 7500 Ra B M*	0.188 +/- 0.110	0.102	pCi/l		09/06/16	09/07/16	AK
Radium-228 EPA 904*/9320*	2.24 +/- 0.995	0.582	pCi/l		09/16/16	09/21/16	JR

Lab ID : 20160843-07
Client ID : MW-07
Date Sampled : 8/24/2016 3:20:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	1.83 +/- 1.23	0.822	pCi/l				
Radium-226 SM 7500 Ra B M*	0.213 +/- 0.148	0.177	pCi/l		09/06/16	09/07/16	AK
Radium-228 EPA 904*/9320*	1.61 +/- 1.08	0.644	pCi/l		09/16/16	09/21/16	JR

Lab ID : 20160843-08
Client ID : MW-05
Date Sampled : 8/24/2016 4:20:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium	3.37 +/- 2.12	1.24	pCi/l				
Radium-226 SM 7500 Ra B M*	0.562 +/- 0.182	0.113	pCi/l		09/06/16	09/07/16	AK
Radium-228 EPA 904*/9320*	2.80 +/- 1.93	1.12	pCi/l		09/16/16	09/21/16	JR



Client : DHL Analytical, Inc.
Client Project : 1608276
Lab Number : 20160843
Date Reported : 09/26/16
Date Received : 08/31/16
Page Number : 4 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160843-09
Client ID : DUP-01
Date Sampled : 8/24/2016 4:20:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.35 +/- 1.10	0.685	pCi/l			
Radium-226	SM 7500 Ra B M*	0.601 +/- 0.218	0.168	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	0.751 +/- 0.883	0.517	pCi/l	09/16/16	09/21/16	JR

Lab ID : 20160843-10
Client ID : EB-1
Date Sampled : 8/24/2016 4:40:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.095 +/- 0.847	0.626	pCi/l			
Radium-226	SM 7500 Ra B M*	0.022 +/- 0.085	0.156	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	0.073 +/- 0.762	0.470	pCi/l	09/16/16	09/21/16	JR

Lab ID : 20160843-11
Client ID : FGD-8
Date Sampled : 8/24/2016 5:35:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.00 +/- 0.990	0.635	pCi/l			
Radium-226	SM 7500 Ra B M*	0.778 +/- 0.210	0.143	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	0.223 +/- 0.780	0.491	pCi/l	09/16/16	09/21/16	JR

Lab ID : 20160843-12
Client ID : AL-10
Date Sampled : 8/25/2016 8:50:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		3.45 +/- 1.40	0.732	pCi/l			
Radium-226	SM 7500 Ra B M*	2.34 +/- 0.339	0.116	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	1.11 +/- 1.06	0.616	pCi/l	09/16/16	09/21/16	JR



Client : DHL Analytical, Inc.
Client Project : 1608276
Lab Number : 20160843
Date Reported : 09/26/16
Date Received : 08/31/16
Page Number : 5 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160843-13

Client ID : MW-02

Date Sampled : 8/25/2016 10:00:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		1.10 +/- 1.02	0.688	pCi/l			
Radium-226	SM 7500 Ra B M*	0.182 +/- 0.133	0.166	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	0.922 +/- 0.886	0.521	pCi/l	09/16/16	09/21/16	JR

Lab ID : 20160843-14

Client ID : MW-09

Date Sampled : 8/25/2016 11:05:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		3.40 +/- 1.16	0.684	pCi/l			
Radium-226	SM 7500 Ra B M*	1.06 +/- 0.245	0.142	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	2.34 +/- 0.914	0.542	pCi/l	09/16/16	09/22/16	JR

Lab ID : 20160843-15

Client ID : FGD-11

Date Sampled : 8/25/2016 12:05:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		7.81 +/- 1.37	0.709	pCi/l			
Radium-226	SM 7500 Ra B M*	4.23 +/- 0.509	0.217	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	3.58 +/- 0.863	0.492	pCi/l	09/16/16	09/22/16	JR

Lab ID : 20160843-16

Client ID : FGD-12

Date Sampled : 8/25/2016 1:05:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		3.43 +/- 1.04	0.599	pCi/l			
Radium-226	SM 7500 Ra B M*	1.59 +/- 0.312	0.164	pCi/l	09/06/16	09/08/16	AK
Radium-228	EPA 904*/9320*	1.84 +/- 0.724	0.434	pCi/l	09/16/16	09/22/16	JR

Client : DHL Analytical, Inc.
 Client Project : 1608276
 Lab Number : 20160843
 Date Reported : 09/26/16
 Date Received : 08/31/16
 Page Number : 6 of 6

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	RPD	Batch ID
Radium-226	0.016	102.0			2.2	0.082	75.8	88.1	13.3	R1130
Radium-228	0.465	118.0			5.5	0.053	88.4	93.6	5.8	R3856

Lab Approval:



Ron Eidson
Director of Radiochemistry

LUMINANT

DHL Analytical, Inc.

2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1608276

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515
FAX:
Acct #: DHLRRTX

29-Aug-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E904.0	SM7500Ra-B M				
FGD-2	Aqueous	-01B	08/24/16 10:20 AM	500HDPEHNO3	1					
FGD-2	Aqueous	-01C	08/24/16 10:20 AM	500HDPEHNO3		1				
FGD-3	Aqueous	-02B	08/24/16 11:15 AM	500HDPEHNO3	1					
FGD-3	Aqueous	-02C	08/24/16 11:15 AM	500HDPEHNO3		1				
FGD-4	Aqueous	-03B	08/24/16 12:00 PM	500HDPEHNO3	1					
FGD-4	Aqueous	-03C	08/24/16 12:00 PM	500HDPEHNO3		1				
FGD-6	Aqueous	-04B	08/24/16 12:50 PM	500HDPEHNO3	1					
FGD-6	Aqueous	-04C	08/24/16 12:50 PM	500HDPEHNO3		1				
FGD-5	Aqueous	-05B	08/24/16 01:40 PM	500HDPEHNO3	1					
FGD-5	Aqueous	-05C	08/24/16 01:40 PM	500HDPEHNO3		1				
FGD-1	Aqueous	-06B	08/24/16 02:30 PM	500HDPEHNO3	1					
FGD-1	Aqueous	-06C	08/24/16 02:30 PM	500HDPEHNO3		1				
MW-07	Aqueous	-07B	08/24/16 03:20 PM	500HDPEHNO3	1					
MW-07	Aqueous	-07C	08/24/16 03:20 PM	500HDPEHNO3		1				
MW-05	Aqueous	-08B	08/24/16 04:20 PM	500HDPEHNO3	1					
MW-05	Aqueous	-08C	08/24/16 04:20 PM	500HDPEHNO3		1				
DUP-01	Aqueous	-09B	08/24/16 04:20 PM	500HDPEHNO3	1					
DUP-01	Aqueous	-09C	08/24/16 04:20 PM	500HDPEHNO3		1				

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

2060843 L857240

Relinquished by:

[Signature]

Date/Time

8/29/16 1730

Received by:

[Signature]

Date/Time

8/29/16 1730

Received by:

[Signature]

8/31/16 1045

C.S.

DHL Analytical, Inc.

2300 Double Creek Drive

Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1608276

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515
FAX:
Acct #: DHLRRTX

29-Aug-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E904.0	SM7500Ra-B M				
EB-1	Aqueous	-10B	08/24/16 04:40 PM	500HDPEHNO3	1					
EB-1	Aqueous	-10C	08/24/16 04:40 PM	500HDPEHNO3		1				
FGD-8	Aqueous	-11B	08/24/16 05:35 PM	500HDPEHNO3	1					
FGD-8	Aqueous	-11C	08/24/16 05:35 PM	500HDPEHNO3		1				
AL-10	Aqueous	-12B	08/25/16 08:50 AM	500HDPEHNO3	1					
AL-10	Aqueous	-12C	08/25/16 08:50 AM	500HDPEHNO3		1				
MW-02	Aqueous	-13B	08/25/16 10:00 AM	500HDPEHNO3	1					
MW-02	Aqueous	-13C	08/25/16 10:00 AM	500HDPEHNO3		1				
MW-09	Aqueous	-14B	08/25/16 11:05 AM	500HDPEHNO3	1					
MW-09	Aqueous	-14C	08/25/16 11:05 AM	500HDPEHNO3		1				
FGD-11	Aqueous	-15B	08/25/16 12:05 PM	500HDPEHNO3	1					
FGD-11	Aqueous	-15C	08/25/16 12:05 PM	500HDPEHNO3		1				
FGD-12	Aqueous	-16B	08/25/16 01:05 PM	500HDPEHNO3	1					
FGD-12	Aqueous	-16C	08/25/16 01:05 PM	500HDPEHNO3		1				

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

20160843

Relinquished by: <u>Baile</u>	Date/Time: <u>8/29/16 1730</u>	Received by: <u>Doreste</u>	Date/Time: <u>8/29/16 1730</u>
Relinquished by: _____	Date/Time: _____	Received by: <u>Amber Kuyser</u>	Date/Time: <u>8/31/16 1045</u>

SAMPLE LOGIN

Date Received: 8/31/2016 10:45:0

Lab Number: 20160843

Due: 9/28/2016

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20160843-01 B	FGD-2	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-01 A	FGD-2	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						
20160843-02 A	FGD-3	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-02 B	FGD-3	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						
20160843-03 A	FGD-4	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-03 B	FGD-4	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						
20160843-04 B	FGD-6	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-04 A	FGD-6	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						
20160843-05 A	FGD-5	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-05 B	FGD-5	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						
20160843-06 A	FGD-1	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-06 B	FGD-1	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						
20160843-07 A	MW-07	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-07 B	MW-07	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						

20160843-08 A	MW-05	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-08 B	MW-05	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-09 B	DUP-01	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-09 A	DUP-01	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-10 A	EB-1	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-10 B	EB-1	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-11 A	FGD-8	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-11 B	FGD-8	NPW	08/24/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-12 B	AL-10	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-12 A	AL-10	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-13 A	MW-02	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160843-13 B	MW-02	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-14 A	MW-09	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-14 B	MW-09	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-15 A	FGD-11	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-15 B	FGD-11	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160843-16 B	FGD-12	NPW	08/25/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20160843-16 A	FGD-12	NPW	08/25/16	79Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes

Radium-226
Radium-228

SM 7500 Ra B M*
EPA 904*/9320*

CONTAINER INSPECTION

Coolers

1

Custody Seals Broken

0

Temperature:

AMB

Ice

Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken

0

Chain of Custody Record

✓

Labels in Tact

✓

Radiation Survey Complete

N/A

Anomalies

Inspected By:

Suber Taylor

DATE

8/31/16

QA or Designee Review:

Si

DATE

8/31/16

Sample Custodian Review:

Quate March

DATE

8/31/16

Project Notes:

LUMINANT



September 08, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Luminant - Oak Grove

Order No.: 1608278

Dear Will Vienne:

DHL Analytical, Inc. received 1 sample(s) on 8/27/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16



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LUMINANT



2300 Double Creek Dr. ■ Round Rock, TX 78664

Phone (512) 388-8222 ■ FAX (512) 388-8229

Web: www.dhlanalytical.comE-Mail: login@dhlanalytical.com

No 72316

CHAIN-OF-CUSTODY

CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX 78664
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3446
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO: _____

DATE: 8-26-16 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1608278
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLIENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

Authorize 5%
surcharge for
TRRP Report?

☐ Yes ☐ No

S=SOIL
W=WATER
A=AIR
L=LIQUID
SE=SEDIMENT

P=PAINT
SL=SLUDGE
O=OTHER
SO=SOLID

PRESERVATION

of Containers

HCl

HNO₃H₂SO₄ □ NaOH □

ICE

UNPRESERVED

Field
Sample I.D.

DHL
Lab #

Date

Time

Matrix

Container
Type

ANALYSES

BTEX □ MTBE □ (METHOD 8021)
TPH 1005 □ TPH 1006 □ HOLD 1006 □
GRO (METHOD 8015) □ DRO (METHOD 8105) □
VOC 8260 □ VOC 624 □ VOC 8260/5935 □
SVOC 8270 □ PAH 8270 □ HOLD PAH □ SVOC 825 □
8270 PEST □ 625 PEST/PCB □ 608 PCB □
8270 C-P PEST □ 8082 PCB □ 8270 PCB □
8271 HERB □ T PHOS AMMONIA □
METALS 6020 □ METALS 7008 □ DISS. METALS □
PH □ HEX CHROM □ ALKALINITY □ COD □
TCAP-SVOC □ ANIONS □
TCAP-METALS □ VOC □ PEST □ HERB □
RCRA 8 □ FLASHPOINT □ DGAS □ Pb □
TDS □ TSS □ % MOISTURE □ CYANIDE □
See attached

FIELD NOTES

FGD-A-PDND 01 8-25-16 1505 W P 2 X X X

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

TURN AROUND TIME

RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 4.0 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

☐ DHL DISPOSAL @ \$5.00 each☐ Return

John Dupont

From: Sara Taube [Sara.Taube@pbwtic.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
~~Radium 226 and 228~~

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

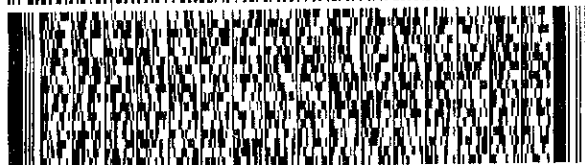
(512) 388-8222

REF:

YNU:
RD:

IND:
RD:

DEPT:



FedEx
Express



1 of 3

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 7839 3247 1021
0201

MASTER

XO BSMA

78664
TX-US AUS

MPS#
[0263]

MPS# 7839 3247 1043 PRIORITY OVERNIGHT
0263

XO BSMA

78664
TX-U!
AUS



5169367 27Aug 00:46 MEMH 51201/6323/0K50

ORIGIN ID:FWHA (512) 671-3434
JOHN BRAYTON
2201 DOUBLE CREEK DR STE 4004
ROUND ROCK, TX 78664
UNITED STATES US

TO **DHL**

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

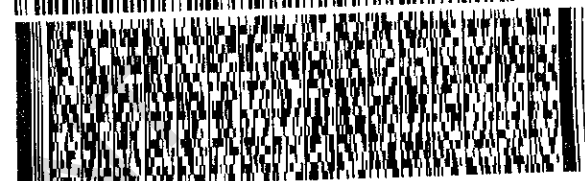
(612) 388-8222

REF:

UNITED STATES
INVESTMENT

ENV:

DEPT.



FedEx
Express



2 of 3

MPS# 7839 3247 1032
0263

Mstr# 7839 3247 1021

[0201]

XO BSMA

SATURDAY 12:00P
PRIORITY OVERNIGHT

78664
TX--US AUS



SATURDAY 12:00

PRIORITY OVERNIGHT

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 8/27/2016

Work Order Number 1608278

Received by JB

Checklist completed by:

Signature

8/29/2016

Date

Reviewed by

Initials

8/29/2016

Date

Carrier name FedEx 1day

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐ 4.0 °C

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH<2 acceptable upon receipt? Yes ☒ No ☐ NA ☐ LOT # 8086

Adjusted? no Checked by [Signature]

Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt? Yes ☐ No ☐ NA ☒ LOT #

Adjusted? _____ Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1608278

CASE NARRATIVE

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

Method SW6020A - Total and Dissolved Metals Analysis

Method SW7470A - Mercury Analysis

Method E300 - Anions Analysis

Method M4500-H+ B - pH of a Water Analysis

Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 8/27/2016. A total of 1 sample was received and analyzed. The sample arrived in good condition and was properly packaged.

METALS ANALYSIS

For Metals Analysis, the RPD of Boron for the Serial Dilution (1608278-06 SD) was above the method control limit. This is flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated Post Digestion Spike. No further corrective action was taken.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Lab Order: 1608278**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1608278-01	FGD-A-POND		08/25/16 03:05 PM	8/27/2016

LUMINANT

Lab Order: 1608278
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1608278-01A	FGD-A-POND	08/25/16 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-A-POND	08/25/16 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-A-POND	08/25/16 03:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/30/16 08:16 AM	77018
	FGD-A-POND	08/25/16 03:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	08/30/16 10:34 AM	77030
1608278-01B	FGD-A-POND	08/25/16 03:05 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-A-POND	08/25/16 03:05 PM	Aqueous	E300	Anion Preparation	08/30/16 09:59 AM	77028
	FGD-A-POND	08/25/16 03:05 PM	Aqueous	M4500-H+ B	pH Preparation	08/31/16 01:16 PM	77050
	FGD-A-POND	08/25/16 03:05 PM	Aqueous	M2540C	TDS Preparation	08/30/16 03:36 PM	77033

Lab Order: 1608278
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1608278-01A	FGD-A-POND	Aqueous	SW7470A	Mercury Total: Aqueous	77030	1	08/31/16 11:08 AM	CETAC2_HG_160831 B
	FGD-A-POND	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	500	09/06/16 02:50 PM	ICP-MS4_160906B
	FGD-A-POND	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	1	09/02/16 09:01 PM	ICP-MS3_160902A
	FGD-A-POND	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77018	100	09/02/16 05:56 PM	ICP-MS3_160902A
1608278-01B	FGD-A-POND	Aqueous	E300	Anions by IC method - Water	77028	100	08/30/16 04:52 PM	IC4_160830A
	FGD-A-POND	Aqueous	E300	Anions by IC method - Water	77028	1	08/30/16 12:55 PM	IC4_160830A
	FGD-A-POND	Aqueous	M4500-H+ B	pH	77050	1	08/31/16 01:53 PM	TITRATOR_160831A
	FGD-A-POND	Aqueous	M2540C	Total Dissolved Solids	77033	1	08/31/16 08:40 AM	WC_160830B

DHL Analytical, Inc.

Date: 08-Sep-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove
Project No: 5164-D
Lab Order: 1608278

Client Sample ID: FGD-A-POND
Lab ID: 1608278-01
Collection Date: 08/25/16 03:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	0.000496	0.0000800	0.000200		mg/L	1	08/31/16 11:08 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Antimony	0.00638	0.000800	0.00250		mg/L	1	09/02/16 09:01 PM
Arsenic	0.00561	0.00200	0.00500		mg/L	1	09/02/16 09:01 PM
Barium	0.208	0.00300	0.0100		mg/L	1	09/02/16 09:01 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 09:01 PM
Boron	115	5.00	15.0		mg/L	500	09/06/16 02:50 PM
Cadmium	0.000471	0.000300	0.00100	J	mg/L	1	09/02/16 09:01 PM
Calcium	629	50.0	150		mg/L	500	09/06/16 02:50 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	09/02/16 09:01 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	09/02/16 09:01 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/02/16 09:01 PM
Lithium	0.196	0.00500	0.0100		mg/L	1	09/02/16 09:01 PM
Molybdenum	0.495	0.00200	0.00500		mg/L	1	09/02/16 09:01 PM
Selenium	2.87	1.00	2.50		mg/L	500	09/06/16 02:50 PM
Thallium	0.00185	0.000500	0.00150		mg/L	1	09/02/16 09:01 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	1960	30.0	100		mg/L	100	08/30/16 04:52 PM
Fluoride	16.3	10.0	40.0	J	mg/L	100	08/30/16 04:52 PM
Sulfate	3670	100	300		mg/L	100	08/30/16 04:52 PM
PH		M4500-H+ B		Analyst: BJT			
pH	7.80	0	0		pH Units@17.6°C	1	08/31/16 01:53 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	10600	50.0	50.0		mg/L	1	08/31/16 08:40 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT**RunID: CETAC2_HG_160831B**

The QC data in batch 77030 applies to the following samples: 1608278-01A

Sample ID	MB-77030		Batch ID:	77030		TestNo:	SW7470A		Units:	mg/L	
SampType:	MBLK		Run ID:	CETAC2_HG_160831B		Analysis Date:	8/31/2016 10:09:17 AM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.0000800	0.000200								

Sample ID	LCS-77030			Batch ID:	77030		TestNo:	SW7470A		Units:	mg/L	
SampType:	LCS			Run ID:	CETAC2_HG_160831B		Analysis Date:	8/31/2016 10:13:49 AM		Prep Date:	8/30/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00194	0.000200	0.00200	0	97.0	85	115			

Sample ID	LCSD-77030	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCSD	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:16:05 AM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00195	0.000200	0.00200	0	97.5	85	115	0.514	15	

Sample ID	1608276-06A SD	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:34:12 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.000400	0.00100	0	0				0	10	

Sample ID	1608276-06A PDS	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:36:28 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00235	0.000200	0.00250	0	94.0	85	115			

Sample ID	1608276-06A MS	Batch ID:	77030	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:38:44 AM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00197	0.000200	0.00200	0	98.5	80	120			

Sample ID	1608276-06A MSD			Batch ID:	77030		TestNo:	SW7470A		Units:	mg/L	
SampType:	MSD			Run ID:	CETAC2_HG_160831B		Analysis Date:	8/31/2016 10:41:00 AM		Prep Date:	8/30/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00201	0.000200	0.00200	0	101	80	120	2.01	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_160831B

Sample ID	ICV-160831	Batch ID:	R87892	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:04:43 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00388	0.000200	0.00400	0	97.0	90	110			

Sample ID	CCV1-160831	Batch ID:	R87892	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 10:50:06 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00191	0.000200	0.00200	0	95.5	90	110			

Sample ID	CCV2-160831	Batch ID:	R87892	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_160831B	Analysis Date:	8/31/2016 11:17:25 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00194	0.000200	0.00200	0	97.0	90	110			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

The QC data in batch 77018 applies to the following samples: 1608278-01A

Sample ID	MB-77018			Batch ID:	77018		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK			Run ID:	ICP-MS3_160902A		Analysis Date:	9/2/2016 4:38:00 PM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	<0.000800	0.00250
Arsenic	<0.00200	0.00500
Barium	<0.00300	0.0100
Beryllium	<0.000300	0.00100
Cadmium	<0.000300	0.00100
Calcium	<0.100	0.300
Chromium	<0.00200	0.00500
Cobalt	<0.00300	0.00500
Lead	<0.000300	0.00100
Lithium	<0.00500	0.0100
Molybdenum	<0.00200	0.00500
Selenium	<0.00200	0.00500
Thallium	<0.000500	0.00150

Sample ID	LCS-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCS	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:44:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.197	0.00250	0.200	0	98.4	80	120
Arsenic	0.202	0.00500	0.200	0	101	80	120
Barium	0.189	0.0100	0.200	0	94.3	80	120
Beryllium	0.197	0.00100	0.200	0	98.4	80	120
Cadmium	0.192	0.00100	0.200	0	96.0	80	120
Calcium	5.00	0.300	5.00	0	100	80	120
Chromium	0.196	0.00500	0.200	0	98.2	80	120
Cobalt	0.197	0.00500	0.200	0	98.3	80	120
Lead	0.189	0.00100	0.200	0	94.7	80	120
Lithium	0.203	0.0100	0.200	0	101	80	120
Molybdenum	0.188	0.00500	0.200	0	93.8	80	120
Selenium	0.196	0.00500	0.200	0	97.8	80	120
Thallium	0.199	0.00150	0.200	0	99.5	80	120

Sample ID	LCSD-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:50:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.199	0.00250	0.200	0	99.4	80	120	1.01	15
Arsenic	0.204	0.00500	0.200	0	102	80	120	0.987	15
Barium	0.192	0.0100	0.200	0	96.0	80	120	1.73	15
Beryllium	0.199	0.00100	0.200	0	99.5	80	120	1.11	15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	LCSD-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:50:00 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.196	0.00100	0.200	0	98.2	80	120	2.21	15	
Calcium	5.09	0.300	5.00	0	102	80	120	1.74	15	
Chromium	0.195	0.00500	0.200	0	97.4	80	120	0.716	15	
Cobalt	0.196	0.00500	0.200	0	98.2	80	120	0.102	15	
Lead	0.192	0.00100	0.200	0	95.9	80	120	1.26	15	
Lithium	0.202	0.0100	0.200	0	101	80	120	0.396	15	
Molybdenum	0.192	0.00500	0.200	0	95.8	80	120	2.06	15	
Selenium	0.201	0.00500	0.200	0	100	80	120	2.47	15	
Thallium	0.202	0.00150	0.200	0	101	80	120	1.74	15	

Sample ID	1608276-06A SD	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 5:08:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0292	0.0500	0	0.0294				0.683	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Calcium	13.4	1.50	0	13.5				0.260	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	0.0353	0.0500	0	0.0330				6.50	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1608276-06A PDS			Batch ID:	77018		TestNo:	SW6020A		Units:	mg/L	
SampType:	PDS			Run ID:	ICP-MS3_160902A		Analysis Date:	9/2/2016 6:08:00 PM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.197	0.00250	0.200	0	98.6	80	120			
Arsenic	0.202	0.00500	0.200	0	101	80	120			
Barium	0.223	0.0100	0.200	0.0294	96.9	80	120			
Beryllium	0.194	0.00100	0.200	0	97.2	80	120			
Cadmium	0.192	0.00100	0.200	0	96.2	80	120			
Calcium	17.6	0.300	5.00	13.5	81.6	80	120			
Chromium	0.201	0.00500	0.200	0	101	80	120			
Cobalt	0.194	0.00500	0.200	0	97.0	80	120			
Lead	0.192	0.00100	0.200	0	95.8	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	1608276-06A PDS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:08:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.216	0.0100	0.200	0.0330	91.4	80	120			
Molybdenum	0.188	0.00500	0.200	0	94.2	80	120			
Selenium	0.193	0.00500	0.200	0	96.6	80	120			
Thallium	0.204	0.00150	0.200	0	102	80	120			

Sample ID	1608276-06A MS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:14:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	80	120			
Arsenic	0.201	0.00500	0.200	0	101	80	120			
Barium	0.220	0.0100	0.200	0.0294	95.4	80	120			
Beryllium	0.188	0.00100	0.200	0	94.2	80	120			
Cadmium	0.191	0.00100	0.200	0	95.3	80	120			
Calcium	18.3	0.300	5.00	13.5	96.8	80	120			
Chromium	0.190	0.00500	0.200	0	94.8	80	120			
Cobalt	0.189	0.00500	0.200	0	94.4	80	120			
Lead	0.187	0.00100	0.200	0	93.6	80	120			
Lithium	0.224	0.0100	0.200	0.0330	95.3	80	120			
Molybdenum	0.191	0.00500	0.200	0	95.6	80	120			
Selenium	0.192	0.00500	0.200	0	96.2	80	120			
Thallium	0.199	0.00150	0.200	0	99.6	80	120			

Sample ID	1608276-06A MSD	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:20:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.4	80	120	1.61	15	
Arsenic	0.199	0.00500	0.200	0	99.6	80	120	0.999	15	
Barium	0.218	0.0100	0.200	0.0294	94.3	80	120	1.00	15	
Beryllium	0.188	0.00100	0.200	0	94.0	80	120	0.266	15	
Cadmium	0.190	0.00100	0.200	0	95.0	80	120	0.368	15	
Calcium	18.3	0.300	5.00	13.5	96.4	80	120	0.109	15	
Chromium	0.190	0.00500	0.200	0	95.0	80	120	0.158	15	
Cobalt	0.190	0.00500	0.200	0	95.2	80	120	0.844	15	
Lead	0.188	0.00100	0.200	0	93.9	80	120	0.320	15	
Lithium	0.224	0.0100	0.200	0.0330	95.3	80	120	0	15	
Molybdenum	0.189	0.00500	0.200	0	94.7	80	120	0.894	15	
Selenium	0.194	0.00500	0.200	0	97.0	80	120	0.932	15	
Thallium	0.198	0.00150	0.200	0	99.2	80	120	0.352	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	ICV1-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 12:27:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.103	0.00250	0.100	0	103	90	110			
Arsenic	0.101	0.00500	0.100	0	101	90	110			
Barium	0.0984	0.0100	0.100	0	98.4	90	110			
Beryllium	0.103	0.00100	0.100	0	103	90	110			
Cadmium	0.0980	0.00100	0.100	0	98.0	90	110			
Calcium	2.50	0.300	2.50	0	100	90	110			
Chromium	0.106	0.00500	0.100	0	106	90	110			
Cobalt	0.104	0.00500	0.100	0	104	90	110			
Lead	0.0985	0.00100	0.100	0	98.5	90	110			
Lithium	0.105	0.0100	0.100	0	105	90	110			
Molybdenum	0.0949	0.00500	0.100	0	94.9	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0976	0.00150	0.100	0	97.6	90	110			

Sample ID	ILCVL-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 12:39:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00207	0.00250	0.00200	0	104	70	130			
Arsenic	0.00510	0.00500	0.00500	0	102	70	130			
Barium	0.00500	0.0100	0.00500	0	99.9	70	130			
Beryllium	0.00110	0.00100	0.00100	0	110	70	130			
Cadmium	0.00103	0.00100	0.00100	0	103	70	130			
Calcium	0.0938	0.300	0.100	0	93.8	70	130			
Chromium	0.00537	0.00500	0.00500	0	107	70	130			
Cobalt	0.00521	0.00500	0.00500	0	104	70	130			
Lead	0.00103	0.00100	0.00100	0	103	70	130			
Lithium	0.0103	0.0100	0.0100	0	103	70	130			
Molybdenum	0.00494	0.00500	0.00500	0	98.8	70	130			
Selenium	0.00516	0.00500	0.00500	0	103	70	130			
Thallium	0.00109	0.00150	0.00100	0	109	70	130			

Sample ID	CCV2-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:14:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.201	0.00250	0.200	0	100	90	110			
Arsenic	0.206	0.00500	0.200	0	103	90	110			
Barium	0.196	0.0100	0.200	0	97.8	90	110			
Beryllium	0.202	0.00100	0.200	0	101	90	110			
Cadmium	0.196	0.00100	0.200	0	98.2	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	CCV2-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:14:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.31	0.300	5.00	0	106	90	110			
Chromium	0.199	0.00500	0.200	0	99.5	90	110			
Cobalt	0.199	0.00500	0.200	0	99.4	90	110			
Lead	0.196	0.00100	0.200	0	98.2	90	110			
Lithium	0.208	0.0100	0.200	0	104	90	110			
Molybdenum	0.194	0.00500	0.200	0	96.8	90	110			
Selenium	0.200	0.00500	0.200	0	99.9	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL2-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 4:26:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00228	0.00250	0.00200	0	114	70	130			
Arsenic	0.00545	0.00500	0.00500	0	109	70	130			
Barium	0.00498	0.0100	0.00500	0	99.6	70	130			
Beryllium	0.00112	0.00100	0.00100	0	112	70	130			
Cadmium	0.00108	0.00100	0.00100	0	108	70	130			
Calcium	0.0878	0.300	0.100	0	87.8	70	130			
Chromium	0.00524	0.00500	0.00500	0	105	70	130			
Cobalt	0.00508	0.00500	0.00500	0	102	70	130			
Lead	0.00109	0.00100	0.00100	0	109	70	130			
Lithium	0.00965	0.0100	0.0100	0	96.5	70	130			
Molybdenum	0.00496	0.00500	0.00500	0	99.2	70	130			
Selenium	0.00496	0.00500	0.00500	0	99.1	70	130			
Thallium	0.00117	0.00150	0.00100	0	117	70	130			

Sample ID	CCV3-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:31:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.207	0.00250	0.200	0	104	90	110			
Arsenic	0.212	0.00500	0.200	0	106	90	110			
Barium	0.197	0.0100	0.200	0	98.6	90	110			
Beryllium	0.200	0.00100	0.200	0	100	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Calcium	5.30	0.300	5.00	0	106	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Cobalt	0.200	0.00500	0.200	0	100	90	110			
Lead	0.200	0.00100	0.200	0	100	90	110			
Lithium	0.201	0.0100	0.200	0	100	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	CCV3-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:31:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.199	0.00500	0.200	0	99.4	90	110			
Selenium		0.205	0.00500	0.200	0	103	90	110			
Thallium		0.208	0.00150	0.200	0	104	90	110			

Sample ID	LCVL3-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 6:49:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00225	0.00250	0.00200	0	113	70	130			
Arsenic	0.00527	0.00500	0.00500	0	105	70	130			
Barium	0.00501	0.0100	0.00500	0	100	70	130			
Beryllium	0.00108	0.00100	0.00100	0	108	70	130			
Cadmium	0.00105	0.00100	0.00100	0	105	70	130			
Calcium	0.0851	0.300	0.100	0	85.1	70	130			
Chromium	0.00508	0.00500	0.00500	0	102	70	130			
Cobalt	0.00504	0.00500	0.00500	0	101	70	130			
Lead	0.00105	0.00100	0.00100	0	105	70	130			
Lithium	0.00969	0.0100	0.0100	0	96.9	70	130			
Molybdenum	0.00491	0.00500	0.00500	0	98.2	70	130			
Selenium	0.00516	0.00500	0.00500	0	103	70	130			
Thallium	0.00111	0.00150	0.00100	0	111	70	130			

Sample ID	CCV4-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 8:02:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.206	0.00250	0.200	0	103	90	110			
Arsenic	0.208	0.00500	0.200	0	104	90	110			
Barium	0.198	0.0100	0.200	0	98.8	90	110			
Beryllium	0.204	0.00100	0.200	0	102	90	110			
Cadmium	0.201	0.00100	0.200	0	100	90	110			
Chromium	0.198	0.00500	0.200	0	99.1	90	110			
Cobalt	0.199	0.00500	0.200	0	99.7	90	110			
Lead	0.196	0.00100	0.200	0	98.0	90	110			
Lithium	0.212	0.0100	0.200	0	106	90	110			
Molybdenum	0.198	0.00500	0.200	0	98.8	90	110			
Thallium	0.208	0.00150	0.200	0	104	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	LCVL4-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 8:20:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Arsenic	0.00521	0.00500	0.00500	0	104	70	130			
Barium	0.00504	0.0100	0.00500	0	101	70	130			
Beryllium	0.00109	0.00100	0.00100	0	109	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Chromium	0.00508	0.00500	0.00500	0	102	70	130			
Cobalt	0.00502	0.00500	0.00500	0	100	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Lithium	0.0101	0.0100	0.0100	0	101	70	130			
Molybdenum	0.00487	0.00500	0.00500	0	97.4	70	130			
Thallium	0.00103	0.00150	0.00100	0	103	70	130			

Sample ID	CCV5-160902			Batch ID:	R87956		TestNo:	SW6020A		Units:	mg/L	
SampType:	CCV			Run ID:	ICP-MS3_160902A		Analysis Date:	9/2/2016 9:32:00 PM		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.210	0.00250	0.200	0	105	90	110			
Arsenic	0.213	0.00500	0.200	0	107	90	110			
Barium	0.198	0.0100	0.200	0	99.0	90	110			
Beryllium	0.200	0.00100	0.200	0	100	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.199	0.00500	0.200	0	99.4	90	110			
Lead	0.199	0.00100	0.200	0	99.7	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			
Molybdenum	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.211	0.00150	0.200	0	105	90	110			

Sample ID	LCVL5-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 9:50:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00205	0.00250	0.00200	0	102	70	130			
Arsenic	0.00532	0.00500	0.00500	0	106	70	130			
Barium	0.00497	0.0100	0.00500	0	99.5	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Chromium	0.00505	0.00500	0.00500	0	101	70	130			
Cobalt	0.00491	0.00500	0.00500	0	98.2	70	130			
Lead	0.000982	0.00100	0.00100	0	98.2	70	130			
Lithium	0.00953	0.0100	0.0100	0	95.3	70	130			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_160902A

Sample ID	LCVL5-160902	Batch ID:	R87956	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_160902A	Analysis Date:	9/2/2016 9:50:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.00485	0.00500	0.00500	0	97.0	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160906B

The QC data in batch 77018 applies to the following samples: 1608278-01A

Sample ID	MB-77018		Batch ID:	77018		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_160906B		Analysis Date:	9/6/2016 2:28:00 PM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	<0.0100	0.0300								

Sample ID	LCS-77018			Batch ID:	77018		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_160906B		Analysis Date:	9/6/2016 2:31:00 PM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron	0.189	0.0300	0.200	0	94.5	80	120			

Sample ID	LCSD-77018	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 2:34:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.188	0.0300	0.200	0	94.0	80	120	0.514	15	

Sample ID	1608276-06A SD		Batch ID:	77018		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD		Run ID:	ICP-MS4_160906B		Analysis Date:	9/6/2016 3:14:00 PM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0778	0.150	0	0.0602				25.6	10	R

Sample ID	1608276-06A PDS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:56:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.267	0.0300	0.200	0.0601	103	80	120			

Sample ID	1608276-06A MS	Batch ID:	77018	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:59:00 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.271	0.0300	0.200	0.0601	105	80	120			

Sample ID	1608276-06A MSD			Batch ID:	77018			TestNo:	SW6020A			Units:	mg/L		
SampType:	MSD			Run ID:	ICP-MS4_160906B			Analysis Date:	9/6/2016 4:02:00 PM			Prep Date:	8/30/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Boron	0.269	0.0300	0.200	0.0601	104	80	120	0.591	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160906B

Sample ID	ICV-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 12:51:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.101	0.0100	0.100	0	101	90	110			
Calcium	2.38	0.300	2.50	0	95.3	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			

Sample ID	LCVL-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 12:57:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.00501	0.0100	0.00500	0	100	70	130			
Calcium	0.0939	0.300	0.100	0	93.9	70	130			
Selenium	0.00464	0.00500	0.00500	0	92.9	70	130			

Sample ID	CCV1-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 1:24:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.199	0.0300	0.200	0	99.5	90	110			
Calcium	4.87	0.300	5.00	0	97.5	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			

Sample ID	LCVL1-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 1:30:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0241	0.0300	0.0200	0	120	70	130			
Calcium	0.0972	0.300	0.100	0	97.2	70	130			
Selenium	0.00531	0.00500	0.00500	0	106	70	130			

Sample ID	CCV2-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 2:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.201	0.0300	0.200	0	101	90	110			
Calcium	4.91	0.300	5.00	0	98.3	90	110			
Selenium	0.208	0.00500	0.200	0	104	90	110			

Sample ID	LCVL2-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:05:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0219	0.0300	0.0200	0	109	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_160906B

Sample ID	LCVL2-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 3:05:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0979	0.300	0.100	0	97.9	70	130			
Selenium	0.00566	0.00500	0.00500	0	113	70	130			

Sample ID	CCV3-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 4:11:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.207	0.0300	0.200	0	103	90	110			

Sample ID	LCVL3-160906	Batch ID:	R87979	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_160906B	Analysis Date:	9/6/2016 4:31:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0240	0.0300	0.0200	0	120	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160830A

The QC data in batch 77028 applies to the following samples: 1608278-01B

Sample ID	MB-77028		Batch ID:	77028		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC4_160830A		Analysis Date:	8/30/2016 10:36:06 AM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-77028		Batch ID:	77028		TestNo:	E300		Units:	mg/L	
SampType:	LCS		Run ID:	IC4_160830A		Analysis Date:	8/30/2016 10:51:06 AM		Prep Date:	8/30/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110			
Fluoride	3.82	0.400	4.000	0	95.4	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	LCSD-77028	Batch ID:	77028	TestNo:	E300	Units:	mg/L				
SampType:	LCSD	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 11:06:06 AM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110	0.161	20	
Fluoride	3.75	0.400	4.000	0	93.8	90	110	1.68	20	
Sulfate	31.6	3.00	30.00	0	105	90	110	0.128	20	

Sample ID	1608276-11DMS	Batch ID:	77028	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 3:22:20 PM	Prep Date:	8/30/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	309	10.0	200.0	106.8	101	90	110			
Fluoride	193	4.00	200.0	0	96.7	90	110			
Sulfate	256	30.0	200.0	40.70	108	90	110			

Sample ID	1608276-11DMSD	Batch ID:	77028	TestNo:	E300	Units:	mg/L				
SampType:	MSD	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 3:37:20 PM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	310	10.0	200.0	106.8	102	90	110	0.409	20	
Fluoride	194	4.00	200.0	0	97.1	90	110	0.452	20	
Sulfate	258	30.0	200.0	40.70	108	90	110	0.558	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_160830A

Sample ID	ICV-160830	Batch ID:	R87889	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 9:57:10 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.5	1.00	25.00	0	106	90	110			
Fluoride	9.51	0.400	10.00	0	95.1	90	110			
Sulfate	81.9	3.00	75.00	0	109	90	110			

Sample ID	CCV1-160830	Batch ID:	R87889	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 2:14:39 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.84	0.400	4.000	0	96.1	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID	CCV2-160830	Batch ID:	R87889	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_160830A	Analysis Date:	8/30/2016 5:22:20 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.5	1.00	10.00	0	105	90	110			
Fluoride	3.85	0.400	4.000	0	96.2	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160831A

The QC data in batch 77050 applies to the following samples: 1608278-01B

Sample ID	1608276-14D-DUP	Batch ID:	77050	TestNo:	M4500-H+ B	Units:	pH Units@18.2°C
SampType:	DUP	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 1:47:00 PM	Prep Date:	8/31/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.30	0	0	6.310		0.159 5

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_160831A

Sample ID	ICV-160831	Batch ID:	R87906		TestNo:	M4500-H+ B		Units:	pH Units@21.9°C		
SampType:	ICV	Run ID:	TITRATOR_160831A		Analysis Date:	8/31/2016 8:53:00 AM		Prep Date:	8/31/2016		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH 9.94 0 10.00 0 99.4 99 101

Sample ID	CCV1-160831	Batch ID:	R87906			TestNo:	M4500-H+ B			Units:	pH Units@21.1°C		
SampType:	CCV	Run ID:	TITRATOR_160831A			Analysis Date:	8/31/2016 10:26:00 AM			Prep Date:	8/31/2016		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV2-160831			Batch ID:	R87906		TestNo:	M4500-H+ B		Units:	pH Units@21.1°C	
SampType:	CCV			Run ID:	TITRATOR_160831A		Analysis Date:	8/31/2016 10:59:00 AM		Prep Date:	8/31/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV3-160831		Batch ID:	R87906		TestNo:	M4500-H+ B		Units:	pH Units@21.4°C		
SampType:	CCV		Run ID:	TITRATOR_160831A		Analysis Date:	8/31/2016 11:28:00 AM		Prep Date:	8/31/2016		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV4-160831	Batch ID:	R87906	TestNo:	M4500-H+ B	Units:	pH Units@22°C				
SampType:	CCV	Run ID:	TITRATOR_160831A	Analysis Date:	8/31/2016 1:08:00 PM	Prep Date:	8/31/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH 6.97 0 7.000 0 99.6 97.1 102.9

Sample ID	CCV5-160831			Batch ID:	R87906		TestNo:	M4500-H+ B		Units:	pH Units@21.6°C	
SampType:	CCV			Run ID:	TITRATOR_160831A		Analysis Date:	8/31/2016 2:02:00 PM		Prep Date:	8/31/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH 6.98 0 7.000 0 99.7 97.1 102.9

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1608278
Project: Luminant - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_160830B

The QC data in batch 77033 applies to the following samples: 1608278-01B

Sample ID	MB-77033	Batch ID:	77033	TestNo:	M2540C	Units:	mg/L				
SampType:	MBLK	Run ID:	WC_160830B	Analysis Date:	8/31/2016 8:40:00 AM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-77033	Batch ID:	77033	TestNo:	M2540C	Units:	mg/L				
SampType:	LCS	Run ID:	WC_160830B	Analysis Date:	8/31/2016 8:40:00 AM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 787 10.0 745.6 0 106 90 113

Sample ID	1608284-03C-DUP	Batch ID:	77033	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_160830B	Analysis Date:	8/31/2016 8:40:00 AM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 4960 50.0 0 5130 3.37 5

Sample ID	1608284-04C-DUP	Batch ID:	77033	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_160830B	Analysis Date:	8/31/2016 8:40:00 AM	Prep Date:	8/30/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 908 10.0 0 923.0 1.64 5

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 NELAC certified



November 02, 2016

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664

TEL: (512) 671-3434

FAX (512) 671-3446

Order No.: 1610036

RE: Luminant - Oak Grove - Ash Landfill

Dear Will Vienne:

DHL Analytical, Inc. received 16 sample(s) on 10/6/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification
Number: T104704211-16-17



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CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX 78664
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3434
DATA REPORTED TO: WILL MIENKE
ADDITIONAL REPORT COPIES TO:

DATE: 10-5-16 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1610036
PROJECT LOCATION OR NAME: LUMINANT- OAK GROVE- ASH LANDFILL
CLIENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

[illegible]

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<i>[Signature]</i>	10-5-16 1730	Fedex
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<i>[Signature]</i> Fedex	10/6/16 9:25	<i>[Signature]</i>
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 4.5 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

John Dupont

From: Sara Taube [Sara.Taube@pbwllc.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

ORIGIN ID:CLLA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 05OCT16
ACTWGT: 55.00 LB
CAD: 6993912/SSFE1722
DIMS: 23x14x14 IN

BILL THIRD PARTY

Part # 186397V-435 RIT2 02/17

TO

DHL
2300 DOUBLE CREEK DR

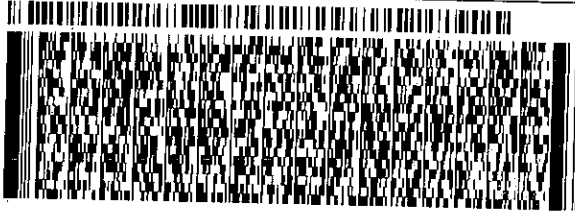
ROUND ROCK TX 78664

(512) 388-8222

REF:

INU:

DEPT:



RT **512**

FZ

J1620

2 of 3

MPS# **7842 7498 8447**

Mstr# 7842 7498 8436

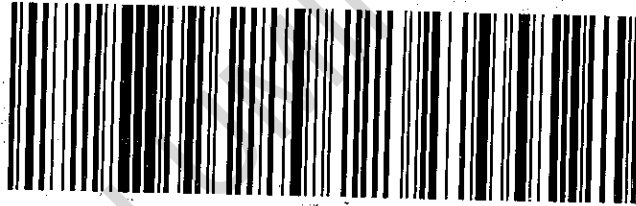
0201

THU - 06 OCT 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664

TX-US **AUS**



ORIGIN ID:CLLA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 05OCT16
ACTWGT: 55.00 LB
CAD: 6993912/SSFE1722
DIMS: 23x15x13 IN

BILL THIRD PARTY

Part # 1562974-435 RMT2 10/12/16
544J1/ES2E/14EB

TO

DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222

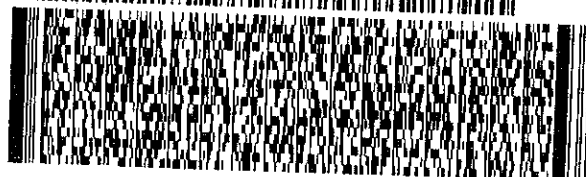
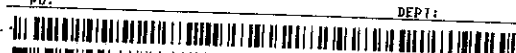
REF:

THU:

PO:

REF:

DEPT:



FedEx
Express



J162018070601

1 of 3

TRK# 7842 7498 8436
[0201]

MASTER

A8 BSMA

THU - 06 OCT 10:30A
PRIORITY OVERNIGHT

78664

TX-US AUS



ORIGIN ID:CLLA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

TO

DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

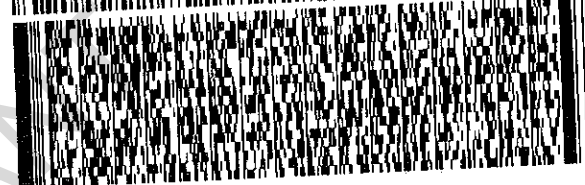
(512) 388-8222

REF:

THU:

PO:

DEPT:



FedEx
Express



J162018070601

3 of 3

MP# 7842 7498 8458
[0263]

Mstr# 7842 7498 8436

[0201]

A8 BSMA

THU - 06 OCT 10:30A
PRIORITY OVERNIGHT

78664

TX-US AUS



RT 512
FZ

10:30

842
10:06

/22

Part # 1562974-435 RMT2 10/12/16
544J1/ES2E/14EB

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 10/6/2016

Work Order Number 1610036

Received by JT

Checklist completed by: [Signature] 10/6/2016
Signature Date

Reviewed by: [Initials] 10/6/2016
Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐ 4.5 °C, 49.3.4

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH<2 acceptable upon receipt? Yes ☒ No ☐ NA ☐ LOT # 8086

Adjusted? NO Checked by [Signature]

Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt? Yes ☐ No ☐ NA ☒ LOT #

Adjusted? _____ Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Lab Order: 1610036

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M.
Analyzed at ESC Lab Sciences.

LOG IN

The samples were received and log-in performed on 10/6/16. A total of 16 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 10/13/16 and 10/25/16 the matrix spike and matrix spike duplicate recoveries were out of control limits for three analytes. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

For Metals analysis performed on 10/25/16 the RPD for the serial dilution was slightly above control limits for Boron. This is flagged accordingly. The PDS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 10/13/16 the PDS recovery was out of control limits for Calcium and Lithium. These are flagged accordingly. The serial dilution was within control limits for these analytes. No further corrective actions were taken.

MERCURY ANALYSIS

For Mercury analysis performed on 10/11/16 (batch 77501) the PDS recovery was slightly below control limits. This is flagged accordingly in the QC summary report. The serial dilution was within control limits. No further corrective actions were taken.

ANIONS ANALYSIS

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Lab Order: 1610036

CASE NARRATIVE

For Anions analysis performed on 10/17/16 (batch 77577) the matrix spike and matrix spike duplicate recoveries were slightly below control limits for Chloride. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

LUMINANT

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Lab Order: 1610036

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1610036-01	MW-02		10/04/16 09:50 AM	10/6/2016
1610036-02	AL-10		10/04/16 10:50 AM	10/6/2016
1610036-03	MW-09		10/04/16 11:45 AM	10/6/2016
1610036-04	MW-05		10/04/16 12:40 PM	10/6/2016
1610036-05	DUP-01		10/04/16 12:40 PM	10/6/2016
1610036-06	MW-07		10/04/16 01:25 PM	10/6/2016
1610036-07	FGD-11		10/04/16 04:15 PM	10/6/2016
1610036-08	FGD-12		10/04/16 05:10 PM	10/6/2016
1610036-09	FGD-8		10/05/16 07:55 AM	10/6/2016
1610036-10	FGD-1		10/05/16 08:45 AM	10/6/2016
1610036-11	FGD-5		10/05/16 09:30 AM	10/6/2016
1610036-12	FGD-2		10/05/16 10:20 AM	10/6/2016
1610036-13	FGD-4		10/05/16 11:10 AM	10/6/2016
1610036-14	FGD-6		10/05/16 11:55 AM	10/6/2016
1610036-15	FGD-3		10/05/16 12:50 PM	10/6/2016
1610036-16	EB-1		10/05/16 01:20 PM	10/6/2016

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1610036-01A	MW-02	10/04/16 09:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	MW-02	10/04/16 09:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	MW-02	10/04/16 09:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/10/16 01:05 PM	77501
1610036-01D	MW-02	10/04/16 09:50 AM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	MW-02	10/04/16 09:50 AM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	MW-02	10/04/16 09:50 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	MW-02	10/04/16 09:50 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-02A	AL-10	10/04/16 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	AL-10	10/04/16 10:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	AL-10	10/04/16 10:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/10/16 01:05 PM	77501
1610036-02D	AL-10	10/04/16 10:50 AM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	AL-10	10/04/16 10:50 AM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	AL-10	10/04/16 10:50 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	AL-10	10/04/16 10:50 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-03A	MW-09	10/04/16 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	MW-09	10/04/16 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	MW-09	10/04/16 11:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/10/16 01:05 PM	77501
1610036-03D	MW-09	10/04/16 11:45 AM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	MW-09	10/04/16 11:45 AM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	MW-09	10/04/16 11:45 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	MW-09	10/04/16 11:45 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-04A	MW-05	10/04/16 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	MW-05	10/04/16 12:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/10/16 01:05 PM	77501
1610036-04D	MW-05	10/04/16 12:40 PM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	MW-05	10/04/16 12:40 PM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	MW-05	10/04/16 12:40 PM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	MW-05	10/04/16 12:40 PM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-05A	DUP-01	10/04/16 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1610036-05A	DUP-01	10/04/16 12:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-05D	DUP-01	10/04/16 12:40 PM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	DUP-01	10/04/16 12:40 PM	Aqueous	E300	Anion Preparation	10/13/16 09:18 AM	77547
	DUP-01	10/04/16 12:40 PM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	DUP-01	10/04/16 12:40 PM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-06A	MW-07	10/04/16 01:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	MW-07	10/04/16 01:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-06D	MW-07	10/04/16 01:25 PM	Aqueous	E300	Anion Preparation	10/13/16 10:07 AM	77551
	MW-07	10/04/16 01:25 PM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	MW-07	10/04/16 01:25 PM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-07A	FGD-11	10/04/16 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-11	10/04/16 04:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-11	10/04/16 04:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-07D	FGD-11	10/04/16 04:15 PM	Aqueous	E300	Anion Preparation	10/13/16 10:07 AM	77551
	FGD-11	10/04/16 04:15 PM	Aqueous	E300	Anion Preparation	10/13/16 10:07 AM	77551
	FGD-11	10/04/16 04:15 PM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-11	10/04/16 04:15 PM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-08A	FGD-12	10/04/16 05:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-12	10/04/16 05:10 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-08D	FGD-12	10/04/16 05:10 PM	Aqueous	E300	Anion Preparation	10/13/16 10:07 AM	77551
	FGD-12	10/04/16 05:10 PM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-12	10/04/16 05:10 PM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-09A	FGD-8	10/05/16 07:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-8	10/05/16 07:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-8	10/05/16 07:55 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-09D	FGD-8	10/05/16 07:55 AM	Aqueous	E300	Anion Preparation	10/13/16 10:07 AM	77551
	FGD-8	10/05/16 07:55 AM	Aqueous	E300	Anion Preparation	10/13/16 10:07 AM	77551
	FGD-8	10/05/16 07:55 AM	Aqueous	E300	Anion Preparation	10/13/16 10:07 AM	77551

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1610036-09D	FGD-8	10/05/16 07:55 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-8	10/05/16 07:55 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-10A	FGD-1	10/05/16 08:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-1	10/05/16 08:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-10D	FGD-1	10/05/16 08:45 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-1	10/05/16 08:45 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-1	10/05/16 08:45 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-11A	FGD-5	10/05/16 09:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-5	10/05/16 09:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-5	10/05/16 09:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-11D	FGD-5	10/05/16 09:30 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-5	10/05/16 09:30 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-5	10/05/16 09:30 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-5	10/05/16 09:30 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-12A	FGD-2	10/05/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-2	10/05/16 10:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-2	10/05/16 10:20 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-12D	FGD-2	10/05/16 10:20 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-2	10/05/16 10:20 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-2	10/05/16 10:20 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-2	10/05/16 10:20 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-13A	FGD-4	10/05/16 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-4	10/05/16 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-4	10/05/16 11:10 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-13D	FGD-4	10/05/16 11:10 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-4	10/05/16 11:10 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-4	10/05/16 11:10 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-4	10/05/16 11:10 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1610036-14A	FGD-6	10/05/16 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-6	10/05/16 11:55 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-6	10/05/16 11:55 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-14D	FGD-6	10/05/16 11:55 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-6	10/05/16 11:55 AM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-6	10/05/16 11:55 AM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-6	10/05/16 11:55 AM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-15A	FGD-3	10/05/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-3	10/05/16 12:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	FGD-3	10/05/16 12:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-15D	FGD-3	10/05/16 12:50 PM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-3	10/05/16 12:50 PM	Aqueous	E300	Anion Preparation	10/17/16 08:40 AM	77577
	FGD-3	10/05/16 12:50 PM	Aqueous	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	FGD-3	10/05/16 12:50 PM	Aqueous	M2540C	TDS Preparation	10/07/16 02:44 PM	77471
1610036-16A	EB-1	10/05/16 01:20 PM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	10/07/16 08:34 AM	77469
	EB-1	10/05/16 01:20 PM	Equip Blank	SW7470A	Mercury Aq Prep, Total	10/11/16 11:24 AM	77519
1610036-16D	EB-1	10/05/16 01:20 PM	Equip Blank	E300	Anion Preparation	10/17/16 08:40 AM	77577
	EB-1	10/05/16 01:20 PM	Equip Blank	E300	Anion Preparation	10/17/16 08:40 AM	77577
	EB-1	10/05/16 01:20 PM	Equip Blank	M4500-H+ B	pH Preparation	10/07/16 08:00 AM	77467
	EB-1	10/05/16 01:20 PM	Equip Blank	M2540C	TDS Preparation	10/07/16 02:44 PM	77471

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1610036-01A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	77501	1	10/11/16 11:34 AM	CETAC2_HG_161011A
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 01:21 PM	ICP-MS3_161025B
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:05 PM	ICP-MS3_161025B
1610036-01D	MW-02	Aqueous	E300	Anions by IC method - Water	77547	1	10/13/16 11:34 AM	IC2_161013A
	MW-02	Aqueous	E300	Anions by IC method - Water	77547	10	10/13/16 02:18 PM	IC2_161013A
	MW-02	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 09:47 AM	TITRATOR_161007A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-02A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	77501	1	10/11/16 11:36 AM	CETAC2_HG_161011A
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 01:27 PM	ICP-MS3_161025B
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:11 PM	ICP-MS3_161025B
1610036-02D	AL-10	Aqueous	E300	Anions by IC method - Water	77547	1	10/13/16 11:49 AM	IC2_161013A
	AL-10	Aqueous	E300	Anions by IC method - Water	77547	10	10/13/16 02:33 PM	IC2_161013A
	AL-10	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 09:49 AM	TITRATOR_161007A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-03A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	77501	1	10/11/16 11:38 AM	CETAC2_HG_161011A
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 01:33 PM	ICP-MS3_161025B
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:17 PM	ICP-MS3_161025B
1610036-03D	MW-09	Aqueous	E300	Anions by IC method - Water	77547	1	10/13/16 12:04 PM	IC2_161013A
	MW-09	Aqueous	E300	Anions by IC method - Water	77547	10	10/13/16 02:48 PM	IC2_161013A
	MW-09	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 09:52 AM	TITRATOR_161007A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-04A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	77501	1	10/11/16 11:41 AM	CETAC2_HG_161011A
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 01:39 PM	ICP-MS3_161025B
1610036-04D	MW-05	Aqueous	E300	Anions by IC method - Water	77547	1	10/13/16 12:18 PM	IC2_161013A
	MW-05	Aqueous	E300	Anions by IC method - Water	77547	10	10/13/16 03:02 PM	IC2_161013A
	MW-05	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 09:54 AM	TITRATOR_161007A

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1610036-04D	MW-05	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-05A	DUP-01	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 09:57 AM	CETAC2_HG_161012A
	DUP-01	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 01:45 PM	ICP-MS3_161025B
1610036-05D	DUP-01	Aqueous	E300	Anions by IC method - Water	77547	1	10/13/16 12:33 PM	IC2_161013A
	DUP-01	Aqueous	E300	Anions by IC method - Water	77547	10	10/13/16 03:17 PM	IC2_161013A
	DUP-01	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 09:56 AM	TITRATOR_161007A
	DUP-01	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-06A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:00 AM	CETAC2_HG_161012A
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 01:51 PM	ICP-MS3_161025B
1610036-06D	MW-07	Aqueous	E300	Anions by IC method - Water	77551	1	10/13/16 11:46 AM	IC3_161013A
	MW-07	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:01 AM	TITRATOR_161007A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-07A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:02 AM	CETAC2_HG_161012A
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 01:57 PM	ICP-MS3_161025B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:23 PM	ICP-MS3_161025B
1610036-07D	FGD-11	Aqueous	E300	Anions by IC method - Water	77551	1	10/13/16 12:06 PM	IC3_161013A
	FGD-11	Aqueous	E300	Anions by IC method - Water	77551	100	10/13/16 01:17 PM	IC3_161013A
	FGD-11	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:04 AM	TITRATOR_161007A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-08A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:04 AM	CETAC2_HG_161012A
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 02:03 PM	ICP-MS3_161025B
1610036-08D	FGD-12	Aqueous	E300	Anions by IC method - Water	77551	1	10/13/16 12:27 PM	IC3_161013A
	FGD-12	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:08 AM	TITRATOR_161007A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-09A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:06 AM	CETAC2_HG_161012A
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	50	10/25/16 04:32 PM	ICP-MS3_161025B

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1610036-09A	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 02:09 PM	ICP-MS3_161025B
1610036-09D	FGD-8	Aqueous	E300	Anions by IC method - Water	77551	1	10/13/16 12:48 PM	IC3_161013A
	FGD-8	Aqueous	E300	Anions by IC method - Water	77551	10	10/13/16 01:41 PM	IC3_161013A
	FGD-8	Aqueous	E300	Anions by IC method - Water	77551	100	10/13/16 02:01 PM	IC3_161013A
	FGD-8	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:11 AM	TITRATOR_161007A
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-10A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:09 AM	CETAC2_HG_161012 A
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 02:58 PM	ICP-MS3_161025B
1610036-10D	FGD-1	Aqueous	E300	Anions by IC method - Water	77577	1	10/17/16 10:41 AM	IC2_161017A
	FGD-1	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:14 AM	TITRATOR_161007A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-11A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:11 AM	CETAC2_HG_161012 A
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 03:04 PM	ICP-MS3_161025B
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:38 PM	ICP-MS3_161025B
1610036-11D	FGD-5	Aqueous	E300	Anions by IC method - Water	77577	10	10/17/16 01:54 PM	IC2_161017A
	FGD-5	Aqueous	E300	Anions by IC method - Water	77577	1	10/17/16 10:55 AM	IC2_161017A
	FGD-5	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:17 AM	TITRATOR_161007A
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-12A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:13 AM	CETAC2_HG_161012 A
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 03:10 PM	ICP-MS3_161025B
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:44 PM	ICP-MS3_161025B
1610036-12D	FGD-2	Aqueous	E300	Anions by IC method - Water	77577	1	10/17/16 11:10 AM	IC2_161017A
	FGD-2	Aqueous	E300	Anions by IC method - Water	77577	10	10/17/16 02:47 PM	IC2_161017A
	FGD-2	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:19 AM	TITRATOR_161007A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-13A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:16 AM	CETAC2_HG_161012 A

Lab Order: 1610036
Client: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landf

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1610036-13A	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:51 PM	ICP-MS3_161025B
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 03:16 PM	ICP-MS3_161025B
1610036-13D	FGD-4	Aqueous	E300	Anions by IC method - Water	77577	1	10/17/16 11:25 AM	IC2_161017A
	FGD-4	Aqueous	E300	Anions by IC method - Water	77577	10	10/17/16 03:01 PM	IC2_161017A
	FGD-4	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:21 AM	TITRATOR_161007A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-14A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:18 AM	CETAC2_HG_161012 A
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 03:22 PM	ICP-MS3_161025B
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 04:57 PM	ICP-MS3_161025B
1610036-14D	FGD-6	Aqueous	E300	Anions by IC method - Water	77577	1	10/17/16 11:45 AM	IC2_161017A
	FGD-6	Aqueous	E300	Anions by IC method - Water	77577	10	10/17/16 03:16 PM	IC2_161017A
	FGD-6	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 10:23 AM	TITRATOR_161007A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-15A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:25 AM	CETAC2_HG_161012 A
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	10	10/25/16 05:04 PM	ICP-MS3_161025B
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 03:28 PM	ICP-MS3_161025B
1610036-15D	FGD-3	Aqueous	E300	Anions by IC method - Water	77577	1	10/17/16 11:59 AM	IC2_161017A
	FGD-3	Aqueous	E300	Anions by IC method - Water	77577	10	10/17/16 03:31 PM	IC2_161017A
	FGD-3	Aqueous	M4500-H+ B	pH	77467	1	10/07/16 11:01 AM	TITRATOR_161007A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C
1610036-16A	EB-1	Equip Blank	SW7470A	Mercury Total: Aqueous	77519	1	10/12/16 10:27 AM	CETAC2_HG_161012 A
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	77469	1	10/25/16 03:34 PM	ICP-MS3_161025B
1610036-16D	EB-1	Equip Blank	E300	Anions by IC method - Water	77577	1	10/17/16 12:14 PM	IC2_161017A
	EB-1	Equip Blank	E300	Anions by IC method - Water	77577	1	10/17/16 04:29 PM	IC2_161017A
	EB-1	Equip Blank	M4500-H+ B	pH	77467	1	10/07/16 11:03 AM	TITRATOR_161007A
	EB-1	Equip Blank	M2540C	Total Dissolved Solids	77471	1	10/10/16 08:42 AM	WC_161007C

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: MW-02
Lab ID: 1610036-01
Collection Date: 10/04/16 09:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/11/16 11:34 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 01:21 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:21 PM
Barium	0.119	0.00300	0.0100		mg/L	1	10/25/16 01:21 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:21 PM
Boron	0.113	0.0100	0.0300		mg/L	1	10/25/16 01:21 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:21 PM
Calcium	61.4	1.00	3.00		mg/L	10	10/25/16 04:05 PM
Chromium	0.00220	0.00200	0.00500	J	mg/L	1	10/25/16 01:21 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 01:21 PM
Lead	0.00112	0.000300	0.00100		mg/L	1	10/25/16 01:21 PM
Lithium	0.100	0.00500	0.0100		mg/L	1	10/25/16 01:21 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:21 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:21 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 01:21 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	222	3.00	10.0		mg/L	10	10/13/16 02:18 PM
Fluoride	0.185	0.100	0.400	J	mg/L	1	10/13/16 11:34 AM
Sulfate	97.4	1.00	3.00		mg/L	1	10/13/16 11:34 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.46	0	0		pH Units@18.4°C	1	10/07/16 09:47 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	667	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: AL-10
Lab ID: 1610036-02
Collection Date: 10/04/16 10:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/11/16 11:36 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 01:27 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:27 PM
Barium	0.0815	0.00300	0.0100		mg/L	1	10/25/16 01:27 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:27 PM
Boron	0.0756	0.0100	0.0300		mg/L	1	10/25/16 01:27 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:27 PM
Calcium	35.1	1.00	3.00		mg/L	10	10/25/16 04:11 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:27 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 01:27 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:27 PM
Lithium	0.00646	0.00500	0.0100	J	mg/L	1	10/25/16 01:27 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:27 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:27 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 01:27 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	57.3	3.00	10.0		mg/L	10	10/13/16 02:33 PM
Fluoride	0.278	0.100	0.400	J	mg/L	1	10/13/16 11:49 AM
Sulfate	20.1	1.00	3.00		mg/L	1	10/13/16 11:49 AM
PH		M4500-H+ B		Analyst: BJT			
pH	7.12	0	0		pH Units@18.8°C	1	10/07/16 09:49 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	507	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: MW-09
Lab ID: 1610036-03
Collection Date: 10/04/16 11:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/11/16 11:38 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 01:33 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:33 PM
Barium	0.125	0.00300	0.0100		mg/L	1	10/25/16 01:33 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:33 PM
Boron	0.0803	0.0100	0.0300		mg/L	1	10/25/16 01:33 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:33 PM
Calcium	47.8	1.00	3.00		mg/L	10	10/25/16 04:17 PM
Chromium	0.00302	0.00200	0.00500	J	mg/L	1	10/25/16 01:33 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 01:33 PM
Lead	0.00104	0.000300	0.00100		mg/L	1	10/25/16 01:33 PM
Lithium	0.0635	0.00500	0.0100		mg/L	1	10/25/16 01:33 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:33 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:33 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 01:33 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	179	3.00	10.0		mg/L	10	10/13/16 02:48 PM
Fluoride	0.256	0.100	0.400	J	mg/L	1	10/13/16 12:04 PM
Sulfate	108	1.00	3.00		mg/L	1	10/13/16 12:04 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.17	0	0		pH Units@18.5°C	1	10/07/16 09:52 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	648	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: MW-05
Lab ID: 1610036-04
Collection Date: 10/04/16 12:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/11/16 11:41 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 01:39 PM
Arsenic	0.0139	0.00200	0.00500		mg/L	1	10/25/16 01:39 PM
Barium	0.0810	0.00300	0.0100		mg/L	1	10/25/16 01:39 PM
Beryllium	0.000342	0.000300	0.00100	J	mg/L	1	10/25/16 01:39 PM
Boron	0.0590	0.0100	0.0300		mg/L	1	10/25/16 01:39 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:39 PM
Calcium	15.4	0.100	0.300		mg/L	1	10/25/16 01:39 PM
Chromium	0.00469	0.00200	0.00500	J	mg/L	1	10/25/16 01:39 PM
Cobalt	0.00333	0.00300	0.00500	J	mg/L	1	10/25/16 01:39 PM
Lead	0.00213	0.000300	0.00100		mg/L	1	10/25/16 01:39 PM
Lithium	0.0416	0.00500	0.0100		mg/L	1	10/25/16 01:39 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:39 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:39 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 01:39 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	57.9	3.00	10.0		mg/L	10	10/13/16 03:02 PM
Fluoride	0.477	0.100	0.400		mg/L	1	10/13/16 12:18 PM
Sulfate	10.9	1.00	3.00		mg/L	1	10/13/16 12:18 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.63	0	0		pH Units@19.5°C	1	10/07/16 09:54 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	253	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: DUP-01
Lab ID: 1610036-05
Collection Date: 10/04/16 12:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 09:57 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 01:45 PM
Arsenic	0.00653	0.00200	0.00500		mg/L	1	10/25/16 01:45 PM
Barium	0.0535	0.00300	0.0100		mg/L	1	10/25/16 01:45 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:45 PM
Boron	0.0548	0.0100	0.0300		mg/L	1	10/25/16 01:45 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:45 PM
Calcium	15.0	0.100	0.300		mg/L	1	10/25/16 01:45 PM
Chromium	0.00253	0.00200	0.00500	J	mg/L	1	10/25/16 01:45 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 01:45 PM
Lead	0.00124	0.000300	0.00100		mg/L	1	10/25/16 01:45 PM
Lithium	0.0417	0.00500	0.0100		mg/L	1	10/25/16 01:45 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:45 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:45 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 01:45 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	57.6	3.00	10.0		mg/L	10	10/13/16 03:17 PM
Fluoride	0.473	0.100	0.400		mg/L	1	10/13/16 12:33 PM
Sulfate	10.7	1.00	3.00		mg/L	1	10/13/16 12:33 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.66	0	0		pH Units@19.8°C	1	10/07/16 09:56 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	254	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: MW-07
Lab ID: 1610036-06
Collection Date: 10/04/16 01:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:00 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 01:51 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:51 PM
Barium	0.0424	0.00300	0.0100		mg/L	1	10/25/16 01:51 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:51 PM
Boron	0.0549	0.0100	0.0300		mg/L	1	10/25/16 01:51 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:51 PM
Calcium	10.3	0.100	0.300		mg/L	1	10/25/16 01:51 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:51 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 01:51 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:51 PM
Lithium	0.0125	0.00500	0.0100		mg/L	1	10/25/16 01:51 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:51 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:51 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 01:51 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	15.6	0.300	1.00		mg/L	1	10/13/16 11:46 AM
Fluoride	0.277	0.100	0.400	J	mg/L	1	10/13/16 11:46 AM
Sulfate	17.1	1.00	3.00		mg/L	1	10/13/16 11:46 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.79	0	0		pH Units@17.7°C	1	10/07/16 10:01 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	256	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-11
Lab ID: 1610036-07
Collection Date: 10/04/16 04:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:02 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 01:57 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:57 PM
Barium	0.550	0.00300	0.0100		mg/L	1	10/25/16 01:57 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:57 PM
Boron	0.127	0.0100	0.0300		mg/L	1	10/25/16 01:57 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 01:57 PM
Calcium	181	1.00	3.00		mg/L	10	10/25/16 04:23 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:57 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 01:57 PM
Lead	0.000618	0.000300	0.00100	J	mg/L	1	10/25/16 01:57 PM
Lithium	0.0124	0.00500	0.0100		mg/L	1	10/25/16 01:57 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:57 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 01:57 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 01:57 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	894	30.0	100		mg/L	100	10/13/16 01:17 PM
Fluoride	0.579	0.100	0.400		mg/L	1	10/13/16 12:06 PM
Sulfate	71.8	1.00	3.00		mg/L	1	10/13/16 12:06 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.77	0	0		pH Units@18.6°C	1	10/07/16 10:04 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	2130	50.0	50.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-12
Lab ID: 1610036-08
Collection Date: 10/04/16 05:10 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:04 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 02:03 PM
Arsenic	0.00402	0.00200	0.00500	J	mg/L	1	10/25/16 02:03 PM
Barium	0.122	0.00300	0.0100		mg/L	1	10/25/16 02:03 PM
Beryllium	0.000620	0.000300	0.00100	J	mg/L	1	10/25/16 02:03 PM
Boron	0.0682	0.0100	0.0300		mg/L	1	10/25/16 02:03 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 02:03 PM
Calcium	12.5	0.100	0.300		mg/L	1	10/25/16 02:03 PM
Chromium	0.0133	0.00200	0.00500		mg/L	1	10/25/16 02:03 PM
Cobalt	0.00395	0.00300	0.00500	J	mg/L	1	10/25/16 02:03 PM
Lead	0.00840	0.000300	0.00100		mg/L	1	10/25/16 02:03 PM
Lithium	0.0259	0.00500	0.0100		mg/L	1	10/25/16 02:03 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 02:03 PM
Selenium	0.00292	0.00200	0.00500	J	mg/L	1	10/25/16 02:03 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 02:03 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	17.8	0.300	1.00		mg/L	1	10/13/16 12:27 PM
Fluoride	0.129	0.100	0.400	J	mg/L	1	10/13/16 12:27 PM
Sulfate	10.5	1.00	3.00		mg/L	1	10/13/16 12:27 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.64	0	0		pH Units@18.2°C	1	10/07/16 10:08 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	142	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-8
Lab ID: 1610036-09
Collection Date: 10/05/16 07:55 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:06 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 02:09 PM
Arsenic	0.00661	0.00200	0.00500		mg/L	1	10/25/16 02:09 PM
Barium	0.753	0.00300	0.0100		mg/L	1	10/25/16 02:09 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 02:09 PM
Boron	0.0794	0.0100	0.0300		mg/L	1	10/25/16 02:09 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 02:09 PM
Calcium	394	5.00	15.0		mg/L	50	10/25/16 04:32 PM
Chromium	0.00672	0.00200	0.00500		mg/L	1	10/25/16 02:09 PM
Cobalt	0.00899	0.00300	0.00500		mg/L	1	10/25/16 02:09 PM
Lead	0.000908	0.000300	0.00100	J	mg/L	1	10/25/16 02:09 PM
Lithium	0.0224	0.00500	0.0100		mg/L	1	10/25/16 02:09 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 02:09 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 02:09 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 02:09 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	1890	30.0	100		mg/L	100	10/13/16 02:01 PM
Fluoride	0.413	0.100	0.400		mg/L	1	10/13/16 12:48 PM
Sulfate	184	10.0	30.0		mg/L	10	10/13/16 01:41 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.31	0	0		pH Units@18.3°C	1	10/07/16 10:11 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	4470	50.0	50.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-1
Lab ID: 1610036-10
Collection Date: 10/05/16 08:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:09 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 02:58 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 02:58 PM
Barium	0.0319	0.00300	0.0100		mg/L	1	10/25/16 02:58 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 02:58 PM
Boron	0.0629	0.0100	0.0300		mg/L	1	10/25/16 02:58 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 02:58 PM
Calcium	14.2	0.100	0.300		mg/L	1	10/25/16 02:58 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 02:58 PM
Cobalt	0.00447	0.00300	0.00500		mg/L	1	10/25/16 02:58 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 02:58 PM
Lithium	0.0331	0.00500	0.0100		mg/L	1	10/25/16 02:58 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 02:58 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 02:58 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 02:58 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: BJT			
Chloride	38.7	0.300	1.00		mg/L	1	10/17/16 10:41 AM
Fluoride	0.483	0.100	0.400		mg/L	1	10/17/16 10:41 AM
Sulfate	44.2	1.00	3.00		mg/L	1	10/17/16 10:41 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.46	0	0		pH Units@18.2°C	1	10/07/16 10:14 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	266	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-5
Lab ID: 1610036-11
Collection Date: 10/05/16 09:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:11 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 03:04 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:04 PM
Barium	0.229	0.00300	0.0100		mg/L	1	10/25/16 03:04 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:04 PM
Boron	0.0995	0.0100	0.0300		mg/L	1	10/25/16 03:04 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:04 PM
Calcium	99.9	1.00	3.00		mg/L	10	10/25/16 04:38 PM
Chromium	0.00304	0.00200	0.00500	J	mg/L	1	10/25/16 03:04 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 03:04 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:04 PM
Lithium	0.153	0.00500	0.0100		mg/L	1	10/25/16 03:04 PM
Molybdenum	0.00355	0.00200	0.00500	J	mg/L	1	10/25/16 03:04 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:04 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 03:04 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: BJT			
Chloride	344	3.00	10.0		mg/L	10	10/17/16 01:54 PM
Fluoride	0.380	0.100	0.400	J	mg/L	1	10/17/16 10:55 AM
Sulfate	57.3	1.00	3.00		mg/L	1	10/17/16 10:55 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.51	0	0		pH Units@19.1°C	1	10/07/16 10:17 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1260	50.0	50.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-2
Lab ID: 1610036-12
Collection Date: 10/05/16 10:20 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:13 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 03:10 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:10 PM
Barium	0.129	0.00300	0.0100		mg/L	1	10/25/16 03:10 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:10 PM
Boron	0.182	0.0100	0.0300		mg/L	1	10/25/16 03:10 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:10 PM
Calcium	58.3	1.00	3.00		mg/L	10	10/25/16 04:44 PM
Chromium	0.00549	0.00200	0.00500		mg/L	1	10/25/16 03:10 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 03:10 PM
Lead	0.000693	0.000300	0.00100	J	mg/L	1	10/25/16 03:10 PM
Lithium	0.0199	0.00500	0.0100		mg/L	1	10/25/16 03:10 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:10 PM
Selenium	0.0176	0.00200	0.00500		mg/L	1	10/25/16 03:10 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 03:10 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: BJT			
Chloride	310	3.00	10.0		mg/L	10	10/17/16 02:47 PM
Fluoride	0.243	0.100	0.400	J	mg/L	1	10/17/16 11:10 AM
Sulfate	114	1.00	3.00		mg/L	1	10/17/16 11:10 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.76	0	0		pH Units@19.3°C	1	10/07/16 10:19 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	910	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-4
Lab ID: 1610036-13
Collection Date: 10/05/16 11:10 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:16 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 03:16 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:16 PM
Barium	0.106	0.00300	0.0100		mg/L	1	10/25/16 03:16 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:16 PM
Boron	0.0672	0.0100	0.0300		mg/L	1	10/25/16 03:16 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:16 PM
Calcium	48.1	1.00	3.00		mg/L	10	10/25/16 04:51 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:16 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 03:16 PM
Lead	0.000489	0.000300	0.00100	J	mg/L	1	10/25/16 03:16 PM
Lithium	0.0353	0.00500	0.0100		mg/L	1	10/25/16 03:16 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:16 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:16 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 03:16 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: BJT			
Chloride	182	3.00	10.0		mg/L	10	10/17/16 03:01 PM
Fluoride	0.376	0.100	0.400	J	mg/L	1	10/17/16 11:25 AM
Sulfate	56.0	1.00	3.00		mg/L	1	10/17/16 11:25 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.78	0	0		pH Units@19.5°C	1	10/07/16 10:21 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	672	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-6
Lab ID: 1610036-14
Collection Date: 10/05/16 11:55 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:18 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 03:22 PM
Arsenic	0.00536	0.00200	0.00500		mg/L	1	10/25/16 03:22 PM
Barium	0.117	0.00300	0.0100		mg/L	1	10/25/16 03:22 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:22 PM
Boron	0.102	0.0100	0.0300		mg/L	1	10/25/16 03:22 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:22 PM
Calcium	35.3	1.00	3.00		mg/L	10	10/25/16 04:57 PM
Chromium	0.00427	0.00200	0.00500	J	mg/L	1	10/25/16 03:22 PM
Cobalt	0.00414	0.00300	0.00500	J	mg/L	1	10/25/16 03:22 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:22 PM
Lithium	0.00985	0.00500	0.0100	J	mg/L	1	10/25/16 03:22 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:22 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:22 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 03:22 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: BJT			
Chloride	275	3.00	10.0		mg/L	10	10/17/16 03:16 PM
Fluoride	0.364	0.100	0.400	J	mg/L	1	10/17/16 11:45 AM
Sulfate	60.2	1.00	3.00		mg/L	1	10/17/16 11:45 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.81	0	0		pH Units@20°C	1	10/07/16 10:23 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1010	50.0	50.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: FGD-3
Lab ID: 1610036-15
Collection Date: 10/05/16 12:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:25 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 03:28 PM
Arsenic	0.00225	0.00200	0.00500	J	mg/L	1	10/25/16 03:28 PM
Barium	0.0390	0.00300	0.0100		mg/L	1	10/25/16 03:28 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:28 PM
Boron	0.212	0.0100	0.0300		mg/L	1	10/25/16 03:28 PM
Cadmium	0.00152	0.000300	0.00100		mg/L	1	10/25/16 03:28 PM
Calcium	88.1	1.00	3.00		mg/L	10	10/25/16 05:04 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:28 PM
Cobalt	0.0226	0.00300	0.00500		mg/L	1	10/25/16 03:28 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:28 PM
Lithium	0.113	0.00500	0.0100		mg/L	1	10/25/16 03:28 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:28 PM
Selenium	0.0276	0.00200	0.00500		mg/L	1	10/25/16 03:28 PM
Thallium	0.00114	0.000500	0.00150	J	mg/L	1	10/25/16 03:28 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: BJT			
Chloride	264	3.00	10.0		mg/L	10	10/17/16 03:31 PM
Fluoride	0.723	0.100	0.400		mg/L	1	10/17/16 11:59 AM
Sulfate	324	10.0	30.0		mg/L	10	10/17/16 03:31 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.74	0	0		pH Units@19.7°C	1	10/07/16 11:01 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1370	50.0	50.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 02-Nov-16

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Oak Grove - Ash Landfill
Project No: 5164-D
Lab Order: 1610036

Client Sample ID: EB-1
Lab ID: 1610036-16
Collection Date: 10/05/16 01:20 PM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	10/12/16 10:27 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	10/25/16 03:34 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:34 PM
Barium	0.0279	0.00300	0.0100		mg/L	1	10/25/16 03:34 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:34 PM
Boron	0.0577	0.0100	0.0300		mg/L	1	10/25/16 03:34 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:34 PM
Calcium	1.83	0.100	0.300		mg/L	1	10/25/16 03:34 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:34 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	10/25/16 03:34 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	10/25/16 03:34 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	10/25/16 03:34 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:34 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	10/25/16 03:34 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	10/25/16 03:34 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: BJT			
Chloride	7.19	0.300	1.00		mg/L	1	10/17/16 12:14 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/17/16 12:14 PM
Sulfate	3.07	1.00	3.00		mg/L	1	10/17/16 12:14 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.98	0	0		pH Units@19.8°C	1	10/07/16 11:03 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	<10.0	10.0	10.0		mg/L	1	10/10/16 08:42 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

ANALYTICAL QC SUMMARY REPORT

Project: Luminant - Oak Grove - Ash Landfill

RunID: CETAC2_HG_161011A

The QC data in batch 77501 applies to the following samples: 1610036-01A, 1610036-02A, 1610036-03A, 1610036-04A

Sample ID	MB-77501	Batch ID:	77501	TestNo:	SW7470A	Units:	mg/L				
SampType:	MBLK	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 10:43:15 A	Prep Date:	10/10/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-77501	Batch ID:	77501	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCS	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 10:45:30 A	Prep Date:	10/10/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00204 0.000200 0.00200 0 102 85 115

Sample ID	LCSD-77501	Batch ID:	77501	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCSD	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 10:47:46 A	Prep Date:	10/10/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00203 0.000200 0.00200 0 102 85 115 0.491 15

Sample ID	1610028-02A SD	Batch ID:	77501	TestNo:	SW7470A	Units:	mg/L				
SampType:	SD	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 10:54:34 A	Prep Date:	10/10/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1610028-02A MS	Batch ID:	77501	TestNo:	SW7470A	Units:	mg/L				
SampType:	MS	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 10:59:05 A	Prep Date:	10/10/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00171 0.000200 0.00200 0 85.5 80 120

Sample ID	1610028-02A MSD	Batch ID:	77501	TestNo:	SW7470A	Units:	mg/L				
SampType:	MSD	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 11:01:21 A	Prep Date:	10/10/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00169 0.000200 0.00200 0 84.5 80 120 1.18 15

Sample ID	1610028-02A PDS	Batch ID:	77501	TestNo:	SW7470A	Units:	mg/L				
SampType:	PDS	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 11:04:54 A	Prep Date:	10/10/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00201 0.000200 0.00250 0 80.4 85 115 S

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1610036
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_161011A

Sample ID	ICV-161011	Batch ID:	R88493	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 10:38:41 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00399	0.000200	0.00400	0	99.8	90	110			

Sample ID	CCV1-161011	Batch ID:	R88493	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 11:25:19 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00193	0.000200	0.00200	0	96.5	90	110			

Sample ID	CCV2-161011	Batch ID:	R88493	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_161011A	Analysis Date:	10/11/2016 11:52:39 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00195	0.000200	0.00200	0	97.5	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- 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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_161012A

The QC data in batch 77519 applies to the following samples: 1610036-05A, 1610036-06A, 1610036-07A, 1610036-08A, 1610036-09A, 1610036-10A, 1610036-11A, 1610036-12A, 1610036-13A, 1610036-14A, 1610036-15A, 1610036-16A

Sample ID	MB-77519	Batch ID:	77519	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 9:51:07 AM	Prep Date:	10/11/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-77519			Batch ID:	77519		TestNo:	SW7470A		Units:	mg/L	
SampType:	LCS			Run ID:	CETAC2_HG_161012A		Analysis Date:	10/12/2016 9:53:23 AM		Prep Date:	10/11/2016	
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00208 0.000200 0.00200 0 104 85 115

Sample ID	LCSD-77519	Batch ID:	77519	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 9:55:39 AM	Prep Date:	10/11/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00216 0.000200 0.00200 0 108 85 115 3.77 15

Sample ID	1610075-03C SD	Batch ID:	77519	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 10:34:15 A	Prep Date:	10/11/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1610075-03C PDS	Batch ID:	77519	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 10:36:31 A	Prep Date:	10/11/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00247 0.000200 0.00250 0 98.8 85 115

Sample ID	1610075-03C MS	Batch ID:	77519	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 10:38:47 A	Prep Date:	10/11/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00206 0.000200 0.00200 0 103 80 120

Sample ID	1610075-03C MSD	Batch ID:	77519	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 10:41:03 A	Prep Date:	10/11/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00207 0.000200 0.00200 0 104 80 120 0.484 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1610036
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_161012A

Sample ID	ICV-161012	Batch ID:	R88509	TestNo:	SW7470A	Units:	mg/L				
SampType:	ICV	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 9:46:33 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00397	0.000200	0.00400	0	99.2	90	110			

Sample ID	CCV1-161012	Batch ID:	R88509	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 10:20:36 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00197	0.000200	0.00200	0	98.5	90	110			

Sample ID	CCV2-161012	Batch ID:	R88509	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_161012A	Analysis Date:	10/12/2016 10:47:54 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00198	0.000200	0.00200	0	99.0	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- 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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_161025B

The QC data in batch 77469 applies to the following samples: 1610036-01A, 1610036-02A, 1610036-03A, 1610036-04A, 1610036-05A, 1610036-06A, 1610036-07A, 1610036-08A, 1610036-09A, 1610036-10A, 1610036-11A, 1610036-12A, 1610036-13A, 1610036-14A, 1610036-15A, 1610036-16A

Sample ID	MB-77469	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L				
SampType:	MBLK	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 12:45:00 P	Prep Date:	10/7/2016				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron <0.0100 0.0300

Sample ID	LCS-77469			Batch ID:	77469		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS3_161025B		Analysis Date:	10/25/2016 12:51:00 P		Prep Date:	10/7/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Boron 0.171 0.0300 0.200 0 85.6 80 120

Sample ID	LCSD-77469	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 12:57:00 P	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.173 0.0300 0.200 0 86.7 80 120 1.22 15

Sample ID	1610007-24B SD	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 1:15:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 6.78 7.50 0 5.60 19.0 10 R

Sample ID	1610007-24B PDS	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 2:15:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 15.0 1.50 10.0 5.60 94.4 80 120

Sample ID	1610007-24B MS	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 2:21:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 5.62 1.50 0.200 5.60 12.5 80 120 S

Sample ID	1610007-24B MSD	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 2:27:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 5.60 1.50 0.200 5.60 0 80 120 0.445 15 S

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_161025B

Sample ID	ICV1-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 9:52:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.0983	0.00250	0.100	0	98.3	90	110			
Arsenic	0.100	0.00500	0.100	0	100	90	110			
Barium	0.0945	0.0100	0.100	0	94.5	90	110			
Beryllium	0.0929	0.00100	0.100	0	92.9	90	110			
Boron	0.0909	0.0300	0.100	0	90.9	90	110			
Cadmium	0.0930	0.00100	0.100	0	93.0	90	110			
Calcium	2.38	0.300	2.50	0	95.4	90	110			
Chromium	0.101	0.00500	0.100	0	101	90	110			
Cobalt	0.102	0.00500	0.100	0	102	90	110			
Lead	0.0946	0.00100	0.100	0	94.6	90	110			
Lithium	0.0944	0.0100	0.100	0	94.4	90	110			
Molybdenum	0.0909	0.00500	0.100	0	90.9	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			
Thallium	0.0935	0.00150	0.100	0	93.5	90	110			

Sample ID	ILCVL-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 10:04:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00198	0.00250	0.00200	0	99.0	70	130			
Arsenic	0.00513	0.00500	0.00500	0	103	70	130			
Barium	0.00497	0.0100	0.00500	0	99.4	70	130			
Beryllium	0.000966	0.00100	0.00100	0	96.6	70	130			
Boron	0.0189	0.0300	0.0200	0	94.3	70	130			
Cadmium	0.000965	0.00100	0.00100	0	96.5	70	130			
Calcium	0.0746	0.300	0.100	0	74.6	70	130			
Chromium	0.00510	0.00500	0.00500	0	102	70	130			
Cobalt	0.00509	0.00500	0.00500	0	102	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Lithium	0.00967	0.0100	0.0100	0	96.7	70	130			
Molybdenum	0.00431	0.00500	0.00500	0	86.2	70	130			
Selenium	0.00528	0.00500	0.00500	0	106	70	130			
Thallium	0.00105	0.00150	0.00100	0	104	70	130			

Sample ID	CCV1-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 11:54:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	99.2	90	110			
Arsenic	0.201	0.00500	0.200	0	100	90	110			
Barium	0.189	0.0100	0.200	0	94.5	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_161025B

Sample ID	CCV1-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 11:54:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.182	0.00100	0.200	0	91.2	90	110			
Boron	0.212	0.0300	0.200	0	106	90	110			
Cadmium	0.189	0.00100	0.200	0	94.4	90	110			
Calcium	5.47	0.300	5.00	0	109	90	110			
Chromium	0.196	0.00500	0.200	0	98.1	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			
Lead	0.193	0.00100	0.200	0	96.5	90	110			
Lithium	0.190	0.0100	0.200	0	95.0	90	110			
Molybdenum	0.190	0.00500	0.200	0	95.0	90	110			
Selenium	0.205	0.00500	0.200	0	102	90	110			
Thallium	0.193	0.00150	0.200	0	96.4	90	110			

Sample ID	LCVL1-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 12:39:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00188	0.00250	0.00200	0	94.0	70	130			
Arsenic	0.00497	0.00500	0.00500	0	99.4	70	130			
Barium	0.00465	0.0100	0.00500	0	93.0	70	130			
Beryllium	0.000865	0.00100	0.00100	0	86.5	70	130			
Boron	0.0237	0.0300	0.0200	0	119	70	130			
Cadmium	0.000978	0.00100	0.00100	0	97.9	70	130			
Calcium	0.0882	0.300	0.100	0	88.2	70	130			
Chromium	0.00485	0.00500	0.00500	0	97.0	70	130			
Cobalt	0.00505	0.00500	0.00500	0	101	70	130			
Lead	0.000981	0.00100	0.00100	0	98.1	70	130			
Lithium	0.00928	0.0100	0.0100	0	92.8	70	130			
Molybdenum	0.00394	0.00500	0.00500	0	78.7	70	130			
Selenium	0.00547	0.00500	0.00500	0	109	70	130			
Thallium	0.000962	0.00150	0.00100	0	96.2	70	130			

Sample ID	CCV2-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 2:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.196	0.00250	0.200	0	98.2	90	110			
Arsenic	0.201	0.00500	0.200	0	101	90	110			
Barium	0.188	0.0100	0.200	0	94.2	90	110			
Beryllium	0.188	0.00100	0.200	0	94.0	90	110			
Boron	0.206	0.0300	0.200	0	103	90	110			
Cadmium	0.188	0.00100	0.200	0	93.8	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_161025B

Sample ID	CCV2-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 2:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.46	0.300	5.00	0	109	90	110			
Chromium	0.190	0.00500	0.200	0	95.0	90	110			
Cobalt	0.201	0.00500	0.200	0	100	90	110			
Lead	0.189	0.00100	0.200	0	94.6	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			
Molybdenum	0.189	0.00500	0.200	0	94.6	90	110			
Selenium	0.206	0.00500	0.200	0	103	90	110			
Thallium	0.191	0.00150	0.200	0	95.3	90	110			

Sample ID	LCVL2-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 2:46:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00208	0.00250	0.00200	0	104	70	130			
Arsenic	0.00527	0.00500	0.00500	0	105	70	130			
Barium	0.00495	0.0100	0.00500	0	98.9	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Boron	0.0208	0.0300	0.0200	0	104	70	130			
Cadmium	0.000993	0.00100	0.00100	0	99.3	70	130			
Calcium	0.110	0.300	0.100	0	110	70	130			
Chromium	0.00476	0.00500	0.00500	0	95.1	70	130			
Cobalt	0.00503	0.00500	0.00500	0	101	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Lithium	0.00991	0.0100	0.0100	0	99.1	70	130			
Molybdenum	0.00408	0.00500	0.00500	0	81.7	70	130			
Selenium	0.00540	0.00500	0.00500	0	108	70	130			
Thallium	0.00104	0.00150	0.00100	0	104	70	130			

Sample ID	CCV3-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 3:40:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.197	0.00250	0.200	0	98.7	90	110			
Arsenic	0.206	0.00500	0.200	0	103	90	110			
Barium	0.190	0.0100	0.200	0	94.9	90	110			
Beryllium	0.193	0.00100	0.200	0	96.6	90	110			
Boron	0.208	0.0300	0.200	0	104	90	110			
Cadmium	0.186	0.00100	0.200	0	93.2	90	110			
Calcium	5.14	0.300	5.00	0	103	90	110			
Chromium	0.191	0.00500	0.200	0	95.6	90	110			
Cobalt	0.202	0.00500	0.200	0	101	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_161025B

Sample ID	CCV3-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 3:40:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Lead	0.192	0.00100	0.200	0	96.0	90	110			
Lithium	0.197	0.0100	0.200	0	98.4	90	110			
Molybdenum	0.186	0.00500	0.200	0	93.2	90	110			
Selenium	0.209	0.00500	0.200	0	105	90	110			
Thallium	0.193	0.00150	0.200	0	96.4	90	110			

Sample ID	LCVL3-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 3:52:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00197	0.00250	0.00200	0	98.6	70	130			
Arsenic	0.00523	0.00500	0.00500	0	105	70	130			
Barium	0.00486	0.0100	0.00500	0	97.1	70	130			
Beryllium	0.000959	0.00100	0.00100	0	95.9	70	130			
Boron	0.0208	0.0300	0.0200	0	104	70	130			
Cadmium	0.00107	0.00100	0.00100	0	107	70	130			
Calcium	0.0946	0.300	0.100	0	94.6	70	130			
Chromium	0.00478	0.00500	0.00500	0	95.7	70	130			
Cobalt	0.00518	0.00500	0.00500	0	104	70	130			
Lead	0.000998	0.00100	0.00100	0	99.8	70	130			
Lithium	0.00995	0.0100	0.0100	0	99.5	70	130			
Molybdenum	0.00410	0.00500	0.00500	0	81.9	70	130			
Selenium	0.00548	0.00500	0.00500	0	110	70	130			
Thallium	0.00101	0.00150	0.00100	0	101	70	130			

Sample ID	CCV4-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 5:34:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.92	0.300	5.00	0	98.4	90	110			

Sample ID	LCVL4-161025	Batch ID:	R88704	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS3_161025B	Analysis Date:	10/25/2016 5:52:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0955	0.300	0.100	0	95.5	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_161013C

The QC data in batch 77469 applies to the following samples: 1610036-01A, 1610036-02A, 1610036-03A, 1610036-04A, 1610036-05A, 1610036-06A, 1610036-07A, 1610036-08A, 1610036-09A, 1610036-10A, 1610036-11A, 1610036-12A, 1610036-13A, 1610036-14A, 1610036-15A, 1610036-16A

Sample ID	MB-77469	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 9:07:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250
Arsenic	<0.00200	0.00500
Barium	<0.00300	0.0100
Beryllium	<0.000300	0.00100
Cadmium	<0.000300	0.00100
Calcium	<0.100	0.300
Chromium	<0.00200	0.00500
Cobalt	<0.00300	0.00500
Lead	<0.000300	0.00100
Lithium	<0.00500	0.0100
Molybdenum	<0.00200	0.00500
Selenium	<0.00200	0.00500
Thallium	<0.000500	0.00150

Sample ID	LCS-77469		Batch ID:	77469		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_161013C		Analysis Date:	10/13/2016 9:09:00 PM		Prep Date:	10/7/2016	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.189	0.00250	0.200	0	94.6	80	120
Arsenic	0.194	0.00500	0.200	0	97.1	80	120
Barium	0.190	0.0100	0.200	0	94.9	80	120
Beryllium	0.191	0.00100	0.200	0	95.5	80	120
Cadmium	0.190	0.00100	0.200	0	94.9	80	120
Calcium	4.65	0.300	5.00	0	93.0	80	120
Chromium	0.194	0.00500	0.200	0	97.1	80	120
Cobalt	0.194	0.00500	0.200	0	96.8	80	120
Lead	0.188	0.00100	0.200	0	93.9	80	120
Lithium	0.190	0.0100	0.200	0	95.2	80	120
Molybdenum	0.183	0.00500	0.200	0	91.7	80	120
Selenium	0.193	0.00500	0.200	0	96.5	80	120
Thallium	0.185	0.00150	0.200	0	92.4	80	120

Sample ID	LCSD-77469	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 9:11:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.188	0.00250	0.200	0	93.9	80	120	0.752	15
Arsenic	0.194	0.00500	0.200	0	97.2	80	120	0.101	15
Barium	0.188	0.0100	0.200	0	94.0	80	120	1.02	15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_161013C

Sample ID	LCSD-77469	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 9:11:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.196	0.00100	0.200	0	98.0	80	120	2.57	15	
Cadmium	0.188	0.00100	0.200	0	94.2	80	120	0.827	15	
Calcium	4.57	0.300	5.00	0	91.4	80	120	1.73	15	
Chromium	0.194	0.00500	0.200	0	97.2	80	120	0.063	15	
Cobalt	0.193	0.00500	0.200	0	96.7	80	120	0.076	15	
Lead	0.188	0.00100	0.200	0	94.0	80	120	0.198	15	
Lithium	0.192	0.0100	0.200	0	96.0	80	120	0.801	15	
Molybdenum	0.183	0.00500	0.200	0	91.4	80	120	0.345	15	
Selenium	0.192	0.00500	0.200	0	95.9	80	120	0.625	15	
Thallium	0.187	0.00150	0.200	0	93.3	80	120	1.03	15	

Sample ID	1610007-24B SD	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 9:17:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0336	0.0500	0	0.0327				2.66	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Calcium	412	1.50	0	406				1.56	10	
Chromium	<0.0100	0.0250	0	0				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	0.644	0.0500	0	0.601				6.85	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1610007-24B PDS	Batch ID:	77469	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 9:25:00 PM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.170	0.00250	0.200	0	84.8	80	120			
Arsenic	0.197	0.00500	0.200	0	98.7	80	120			
Barium	0.219	0.0100	0.200	0.0327	93.0	80	120			
Beryllium	0.180	0.00100	0.200	0	90.2	80	120			
Cadmium	0.173	0.00100	0.200	0	86.5	80	120			
Calcium	392	0.300	5.00	406	-272	80	120			S
Chromium	0.183	0.00500	0.200	0	91.3	80	120			
Cobalt	0.182	0.00500	0.200	0	90.8	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_161013C

Sample ID 1610007-24B PDS	Batch ID: 77469	TestNo: SW6020A	Units: mg/L
SampType: PDS	Run ID: ICP-MS4_161013C	Analysis Date: 10/13/2016 9:25:00 PM	Prep Date: 10/7/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.183	0.00100	0.200	0	91.5	80	120			
Lithium	0.708	0.0100	0.200	0.601	53.8	80	120			S
Molybdenum	0.183	0.00500	0.200	0	91.4	80	120			
Selenium	0.194	0.00500	0.200	0	96.9	80	120			
Thallium	0.181	0.00150	0.200	0	90.6	80	120			

Sample ID 1610007-24B MS	Batch ID: 77469	TestNo: SW6020A	Units: mg/L
SampType: MS	Run ID: ICP-MS4_161013C	Analysis Date: 10/13/2016 9:27:00 PM	Prep Date: 10/7/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	99.9	80	120			
Arsenic	0.210	0.00500	0.200	0	105	80	120			
Barium	0.227	0.0100	0.200	0.0327	97.2	80	120			
Beryllium	0.183	0.00100	0.200	0	91.7	80	120			
Cadmium	0.182	0.00100	0.200	0	91.0	80	120			
Calcium	414	0.300	5.00	406	159	80	120			S
Chromium	0.185	0.00500	0.200	0	92.3	80	120			
Cobalt	0.185	0.00500	0.200	0	92.7	80	120			
Lead	0.193	0.00100	0.200	0	96.6	80	120			
Lithium	0.707	0.0100	0.200	0.601	53.0	80	120			S
Molybdenum	0.195	0.00500	0.200	0	97.4	80	120			
Selenium	0.206	0.00500	0.200	0	103	80	120			
Thallium	0.193	0.00150	0.200	0	96.5	80	120			

Sample ID 1610007-24B MSD	Batch ID: 77469	TestNo: SW6020A	Units: mg/L
SampType: MSD	Run ID: ICP-MS4_161013C	Analysis Date: 10/13/2016 9:29:00 PM	Prep Date: 10/7/2016

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	99.1	80	120	0.811	15	
Arsenic	0.207	0.00500	0.200	0	103	80	120	1.44	15	
Barium	0.230	0.0100	0.200	0.0327	98.4	80	120	1.05	15	
Beryllium	0.183	0.00100	0.200	0	91.3	80	120	0.336	15	
Cadmium	0.180	0.00100	0.200	0	90.1	80	120	1.07	15	
Calcium	437	0.300	5.00	406	614	80	120	5.34	15	S
Chromium	0.184	0.00500	0.200	0	92.2	80	120	0.140	15	
Cobalt	0.185	0.00500	0.200	0	92.4	80	120	0.359	15	
Lead	0.192	0.00100	0.200	0	95.8	80	120	0.817	15	
Lithium	0.722	0.0100	0.200	0.601	60.3	80	120	2.06	15	S
Molybdenum	0.194	0.00500	0.200	0	96.8	80	120	0.558	15	
Selenium	0.204	0.00500	0.200	0	102	80	120	1.09	15	
Thallium	0.190	0.00150	0.200	0	95.2	80	120	1.38	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_161013C

Sample ID	ICV-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 10:34:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.100	0.00250	0.100	0	100	90	110			
Arsenic	0.101	0.00500	0.100	0	101	90	110			
Barium	0.0990	0.0100	0.100	0	99.0	90	110			
Beryllium	0.0984	0.00100	0.100	0	98.4	90	110			
Cadmium	0.0984	0.00100	0.100	0	98.4	90	110			
Calcium	2.40	0.300	2.50	0	96.0	90	110			
Chromium	0.105	0.00500	0.100	0	105	90	110			
Cobalt	0.105	0.00500	0.100	0	105	90	110			
Lead	0.0992	0.00100	0.100	0	99.2	90	110			
Lithium	0.0948	0.0100	0.100	0	94.8	90	110			
Molybdenum	0.0957	0.00500	0.100	0	95.7	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0969	0.00150	0.100	0	96.9	90	110			

Sample ID	LCVL-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 10:39:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00191	0.00250	0.00200	0	95.5	70	130			
Arsenic	0.00507	0.00500	0.00500	0	101	70	130			
Barium	0.00485	0.0100	0.00500	0	97.1	70	130			
Beryllium	0.000841	0.00100	0.00100	0	84.1	70	130			
Cadmium	0.000934	0.00100	0.00100	0	93.4	70	130			
Calcium	0.0926	0.300	0.100	0	92.6	70	130			
Chromium	0.00515	0.00500	0.00500	0	103	70	130			
Cobalt	0.00522	0.00500	0.00500	0	104	70	130			
Lead	0.00106	0.00100	0.00100	0	106	70	130			
Lithium	0.00991	0.0100	0.0100	0	99.1	70	130			
Molybdenum	0.00499	0.00500	0.00500	0	99.7	70	130			
Selenium	0.00504	0.00500	0.00500	0	101	70	130			
Thallium	0.000974	0.00150	0.00100	0	97.4	70	130			

Sample ID	CCV12-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 8:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.198	0.00250	0.200	0	99.0	90	110			
Arsenic	0.206	0.00500	0.200	0	103	90	110			
Barium	0.200	0.0100	0.200	0	99.8	90	110			
Beryllium	0.203	0.00100	0.200	0	102	90	110			
Cadmium	0.200	0.00100	0.200	0	99.8	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_161013C

Sample ID	CCV12-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 8:59:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.69	0.300	5.00	0	93.7	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.205	0.00500	0.200	0	102	90	110			
Lead	0.194	0.00100	0.200	0	96.9	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			
Molybdenum	0.195	0.00500	0.200	0	97.3	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.191	0.00150	0.200	0	95.5	90	110			

Sample ID	LCVL12-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 9:03:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00199	0.00250	0.00200	0	99.3	70	130			
Arsenic	0.00511	0.00500	0.00500	0	102	70	130			
Barium	0.00485	0.0100	0.00500	0	96.9	70	130			
Beryllium	0.00103	0.00100	0.00100	0	103	70	130			
Cadmium	0.000951	0.00100	0.00100	0	95.1	70	130			
Calcium	0.0804	0.300	0.100	0	80.4	70	130			
Chromium	0.00511	0.00500	0.00500	0	102	70	130			
Cobalt	0.00507	0.00500	0.00500	0	101	70	130			
Lead	0.000907	0.00100	0.00100	0	90.7	70	130			
Lithium	0.0107	0.0100	0.0100	0	107	70	130			
Molybdenum	0.00483	0.00500	0.00500	0	96.5	70	130			
Selenium	0.00582	0.00500	0.00500	0	116	70	130			
Thallium	0.000973	0.00150	0.00100	0	97.3	70	130			

Sample ID	CCV13-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 10:01:00 P	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.204	0.00250	0.200	0	102	90	110			
Arsenic	0.210	0.00500	0.200	0	105	90	110			
Barium	0.201	0.0100	0.200	0	101	90	110			
Beryllium	0.204	0.00100	0.200	0	102	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Calcium	4.86	0.300	5.00	0	97.1	90	110			
Chromium	0.203	0.00500	0.200	0	102	90	110			
Cobalt	0.200	0.00500	0.200	0	99.9	90	110			
Lead	0.197	0.00100	0.200	0	98.5	90	110			
Lithium	0.203	0.0100	0.200	0	102	90	110			

Qualifiers:

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit

R RPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_161013C

Sample ID	CCV13-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 10:01:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.192	0.00500	0.200	0	96.2	90	110			
Selenium	0.207	0.00500	0.200	0	103	90	110			
Thallium	0.194	0.00150	0.200	0	97.1	90	110			

Sample ID	LCVL13-161013	Batch ID:	R88546	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_161013C	Analysis Date:	10/13/2016 10:05:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00228	0.00250	0.00200	0	114	70	130			
Arsenic	0.00557	0.00500	0.00500	0	111	70	130			
Barium	0.00486	0.0100	0.00500	0	97.2	70	130			
Beryllium	0.000879	0.00100	0.00100	0	87.9	70	130			
Cadmium	0.000970	0.00100	0.00100	0	97.0	70	130			
Calcium	0.0833	0.300	0.100	0	83.3	70	130			
Chromium	0.00512	0.00500	0.00500	0	102	70	130			
Cobalt	0.00518	0.00500	0.00500	0	104	70	130			
Lead	0.000911	0.00100	0.00100	0	91.1	70	130			
Lithium	0.0106	0.0100	0.0100	0	106	70	130			
Molybdenum	0.00481	0.00500	0.00500	0	96.1	70	130			
Selenium	0.00621	0.00500	0.00500	0	124	70	130			
Thallium	0.000988	0.00150	0.00100	0	98.8	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_161013A

The QC data in batch 77547 applies to the following samples: 1610036-01D, 1610036-02D, 1610036-03D, 1610036-04D, 1610036-05D

Sample ID	MB-77547		Batch ID:	77547		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC2_161013A		Analysis Date:	10/13/2016 9:54:08 AM		Prep Date:	10/13/2016	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID	LCS-77547			Batch ID:	77547		TestNo:	E300		Units:	mg/L	
SampType:	LCS			Run ID:	IC2_161013A		Analysis Date:	10/13/2016 10:08:45 A		Prep Date:	10/13/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.89	1.00	10.00	0	98.9	90	110
Fluoride	3.74	0.400	4.000	0	93.4	90	110
Sulfate	29.8	3.00	30.00	0	99.3	90	110

Sample ID	LCSD-77547	Batch ID:	77547	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC2_161013A	Analysis Date:	10/13/2016 10:23:21 A	Prep Date:	10/13/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.90	1.00	10.00	0	99.0	90	110	0.094	20
Fluoride	3.79	0.400	4.000	0	94.8	90	110	1.43	20
Sulfate	29.8	3.00	30.00	0	99.3	90	110	0.035	20

Sample ID	1610104-03BMS	Batch ID:	77547	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_161013A	Analysis Date:	10/13/2016 1:49:37 PM	Prep Date:	10/13/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	344	10.0	200.0	140.2	102	90	110
Fluoride	199	4.00	200.0	0	99.3	90	110
Sulfate	279	30.0	200.0	80.53	99.3	90	110

Sample ID	1610104-03BMSD	Batch ID:	77547	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC2_161013A	Analysis Date:	10/13/2016 2:04:13 PM	Prep Date:	10/13/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	344	10.0	200.0	140.2	102	90	110	0.020	20
Fluoride	199	4.00	200.0	0	99.7	90	110	0.443	20
Sulfate	279	30.0	200.0	80.53	99.2	90	110	0.035	20

Qualifiers:

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

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1610036
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_161013A

Sample ID	ICV-161013	Batch ID:	R88570	TestNo:	E300	Units:	mg/L				
SampType:	ICV	Run ID:	IC2_161013A	Analysis Date:	10/13/2016 9:18:47 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	25.2	1.00	25.00	0	101	90	110			
Fluoride	9.05	0.400	10.00	0	90.5	90	110			
Sulfate	75.8	3.00	75.00	0	101	90	110			

Sample ID	CCV1-161013		Batch ID:	R88570		TestNo:	E300		Units:	mg/L	
SampType:	CCV		Run ID:	IC2_161013A		Analysis Date:	10/13/2016 12:49:16 P		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.91	1.00	10.00	0	99.1	90	110			
Fluoride	3.93	0.400	4.000	0	98.2	90	110			
Sulfate	29.7	3.00	30.00	0	99.0	90	110			

Sample ID	CCV2-161013		Batch ID:	R88570		TestNo:	E300		Units:	mg/L	
SampType:	CCV		Run ID:	IC2_161013A		Analysis Date:	10/13/2016 3:31:52 PM		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.0	1.00	10.00	0	100	90	110			
Fluoride	4.00	0.400	4.000	0	99.9	90	110			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_161017A

The QC data in batch 77577 applies to the following samples: 1610036-10D, 1610036-11D, 1610036-12D, 1610036-13D, 1610036-14D, 1610036-15D, 1610036-16D

Sample ID	MB-77577		Batch ID:	77577		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC2_161017A		Analysis Date:	10/17/2016 9:46:26 AM		Prep Date:	10/17/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID	LCS-77577		Batch ID:	77577		TestNo:	E300		Units:	mg/L	
SampType:	LCS		Run ID:	IC2_161017A		Analysis Date:	10/17/2016 10:01:02 A		Prep Date:	10/17/2016	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.64	1.00	10.00	0	96.4	90	110
Fluoride	3.70	0.400	4.000	0	92.6	90	110
Sulfate	29.1	3.00	30.00	0	97.1	90	110

Sample ID	LCSD-77577		Batch ID:	77577		TestNo:	E300		Units:	mg/L	
SampType:	LCSD		Run ID:	IC2_161017A		Analysis Date:	10/17/2016 10:15:39 A		Prep Date:	10/17/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.84	1.00	10.00	0	98.4	90	110	2.06	20
Fluoride	3.85	0.400	4.000	0	96.3	90	110	4.01	20
Sulfate	29.8	3.00	30.00	0	99.3	90	110	2.27	20

Sample ID	1610036-11DMS			Batch ID:	77577		TestNo:	E300		Units:	mg/L	
SampType:	MS			Run ID:	IC2_161017A		Analysis Date:	10/17/2016 2:18:06 PM		Prep Date:	10/17/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	513	10.0	200.0	343.9	84.6	90	110			S
Fluoride	198	4.00	200.0	0	99.0	90	110			
Sulfate	249	30.0	200.0	54.68	97.3	90	110			

Sample ID	1610036-11DMSD			Batch ID:	77577		TestNo:	E300		Units:	mg/L			
SampType:	MSD			Run ID:	IC2_161017A		Analysis Date:	10/17/2016 2:32:43 PM		Prep Date:	10/17/2016			
Analyte	Result			RL	SPK value		Ref Val	%REC		LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	513	10.0	200.0	343.9	84.8	90	110	0.040	20	S
Fluoride	201	4.00	200.0	0	100	90	110	1.45	20	
Sulfate	251	30.0	200.0	54.68	98.0	90	110	0.567	20	

Qualifiers:

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

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1610036
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_161017A

Sample ID	ICV-161017	Batch ID:	R88589		TestNo:	E300		Units:	mg/L		
SampType:	ICV	Run ID:	IC2_161017A		Analysis Date:	10/17/2016 9:17:13 AM		Prep Date:			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		25.1	1.00	25.00	0	100	90	110			
Fluoride		9.33	0.400	10.00	0	93.3	90	110			
Sulfate		75.1	3.00	75.00	0	100	90	110			

Sample ID	CCV1-161017	Batch ID:	R88589	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_161017A	Analysis Date:	10/17/2016 1:12:55 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.95	1.00	10.00	0	99.5	90	110			
Fluoride	4.01	0.400	4.000	0	100	90	110			
Sulfate	30.2	3.00	30.00	0	101	90	110			

Sample ID	CCV2-161017	Batch ID:	R88589	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_161017A	Analysis Date:	10/17/2016 4:59:39 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.88	1.00	10.00	0	98.8	90	110			
Fluoride	4.00	0.400	4.000	0	99.9	90	110			
Sulfate	29.9	3.00	30.00	0	99.6	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_161013A

The QC data in batch 77551 applies to the following samples: 1610036-06D, 1610036-07D, 1610036-08D, 1610036-09D

Sample ID	MB-77551		Batch ID:	77551		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC3_161013A		Analysis Date:	10/13/2016 10:13:35 A		Prep Date:	10/13/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID	LCS-77551		Batch ID:	77551		TestNo:	E300		Units:	mg/L	
SampType:	LCS		Run ID:	IC3_161013A		Analysis Date:	10/13/2016 10:37:04 A		Prep Date:	10/13/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.56	1.00	10.00	0	95.6	90	110
Fluoride	4.39	0.400	4.000	0	110	90	110
Sulfate	29.2	3.00	30.00	0	97.5	90	110

Sample ID	LCSD-77551	Batch ID:	77551	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC3_161013A	Analysis Date:	10/13/2016 10:57:42 A	Prep Date:	10/13/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.58	1.00	10.00	0	95.8	90	110	0.136	20
Fluoride	4.14	0.400	4.000	0	103	90	110	5.84	20
Sulfate	28.8	3.00	30.00	0	96.1	90	110	1.40	20

Sample ID	1610036-07DMS	Batch ID:	77551	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC3_161013A	Analysis Date:	10/13/2016 2:26:56 PM	Prep Date:	10/13/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2800	100	2000	894.5	95.2	90	110
Fluoride	1880	40.0	2000	0	93.9	90	110
Sulfate	1940	300	2000	0	97.2	90	110

Sample ID	1610036-07DMSD	Batch ID:	77551	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC3_161013A	Analysis Date:	10/13/2016 2:50:29 PM	Prep Date:	10/13/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2790	100	2000	894.5	94.8	90	110	0.268	20
Fluoride	1880	40.0	2000	0	94.0	90	110	0.106	20
Sulfate	1950	300	2000	0	97.7	90	110	0.539	20

Qualifiers:

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

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1610036
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_161013A

Sample ID	ICV-161013	Batch ID:	R88569	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC3_161013A	Analysis Date:	10/13/2016 9:25:12 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	23.6	1.00	25.00	0	94.6	90	110			
Fluoride	9.82	0.400	10.00	0	98.2	90	110			
Sulfate	70.4	3.00	75.00	0	93.9	90	110			

Sample ID	CCV1-161013	Batch ID:	R88569	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC3_161013A	Analysis Date:	10/13/2016 3:31:46 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.58	1.00	10.00	0	95.8	90	110			
Fluoride	4.19	0.400	4.000	0	105	90	110			
Sulfate	29.1	3.00	30.00	0	97.1	90	110			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_161007A

The QC data in batch 77467 applies to the following samples: 1610036-01D, 1610036-02D, 1610036-03D, 1610036-04D, 1610036-05D, 1610036-06D, 1610036-07D, 1610036-08D, 1610036-09D, 1610036-10D, 1610036-11D, 1610036-12D, 1610036-13D, 1610036-14D, 1610036-15D, 1610036-16D

Sample ID	1610028-09D-DUP	Batch ID:	77467	TestNo:	M4500-H+ B	Units:	pH Units@18.2°C
SampType:	DUP	Run ID:	TITRATOR_161007A	Analysis Date:	10/7/2016 9:39:00 AM	Prep Date:	10/7/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.40	0	0	6.370		0.470 5

Sample ID	1610036-07D-DUP	Batch ID:	77467	TestNo:	M4500-H+ B	Units:	pH Units@17.9°C
SampType:	DUP	Run ID:	TITRATOR_161007A	Analysis Date:	10/7/2016 10:05:00 AM	Prep Date:	10/7/2016
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual
pH		6.79	0	0	6.770		0.295 5

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1610036
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_161007A

Sample ID	ICV-161007	Batch ID:	R88450	TestNo:	M4500-H+ B	Units:	pH Units@21.6°C			
SampType:	ICV	Run ID:	TITRATOR_161007A	Analysis Date:	10/7/2016 8:13:00 AM	Prep Date:	10/7/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	9.91	0	10.00	0	99.1	99	101			

Sample ID	CCV1-161007			Batch ID:	R88450		TestNo:	M4500-H+ B		Units:	pH Units@21.3°C		
SampType:	CCV			Run ID:	TITRATOR_161007A		Analysis Date:	10/7/2016 9:58:00 AM		Prep Date:	10/7/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	6.97	0	7.000	0	99.6	97.1	102.9			

Sample ID	CCV2-161007			Batch ID:	R88450		TestNo:	M4500-H+ B		Units:	pH Units@21.1°C	
SampType:	CCV			Run ID:	TITRATOR_161007A		Analysis Date:	10/7/2016 10:24:00 AM		Prep Date:	10/7/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

pH	6.97	0	7.000	0	99.6	97.1	102.9			

Sample ID	CCV3-161007			Batch ID:	R88450		TestNo:	M4500-H+ B		Units:	pH Units@21.8°C	
SampType:	CCV			Run ID:	TITRATOR_161007A		Analysis Date:	10/7/2016 11:05:00 AM		Prep Date:	10/7/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

pH	6.97	0	7.000	0	99.6	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1610036

Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: WC_161007C

The QC data in batch 77471 applies to the following samples: 1610036-01D, 1610036-02D, 1610036-03D, 1610036-04D, 1610036-05D, 1610036-06D, 1610036-07D, 1610036-08D, 1610036-09D, 1610036-10D, 1610036-11D, 1610036-12D, 1610036-13D, 1610036-14D, 1610036-15D, 1610036-16D

Sample ID	MB-77471	Batch ID:	77471	TestNo:	M2540C	Units:	mg/L			
SampType:	MBLK	Run ID:	WC_161007C	Analysis Date:	10/10/2016 8:42:00 AM	Prep Date:	10/7/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-77471	Batch ID:	77471	TestNo:	M2540C	Units:	mg/L			
SampType:	LCS	Run ID:	WC_161007C	Analysis Date:	10/10/2016 8:42:00 AM	Prep Date:	10/7/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 752 10.0 745.6 0 101 90 113

Sample ID	1610047-01A-DUP	Batch ID:	77471	TestNo:	M2540C	Units:	mg/L			
SampType:	DUP	Run ID:	WC_161007C	Analysis Date:	10/10/2016 8:42:00 AM	Prep Date:	10/7/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 10400 200 0 10640 2.09 5

Sample ID	1610047-04A-DUP	Batch ID:	77471	TestNo:	M2540C	Units:	mg/L			
SampType:	DUP	Run ID:	WC_161007C	Analysis Date:	10/10/2016 8:42:00 AM	Prep Date:	10/7/2016			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 8780 200 0 8740 0.457 5

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 NELAC certified

Case Narrative

Lab No: 20160977

This report contains the analytical results for the 16 sample(s) received under chain of custody by ESC Lab Sciences on 10/10/2016 10:21:52 AM. These samples are associated with your 1610036 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances

20160977-04 Ra-228 confirmed.

L865240



Client : DHL Analytical, Inc.
 Client Project : 1610036
 Lab Number : 20160977
 Date Reported : 11/02/16
 Date Received : 10/10/16
 Page Number : 2 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160977-01
Client ID : MW-02
Date Sampled : 10/4/2016 9:50:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		2.22 +/- 1.13	0.668	pCi/l			
Radium-226	SM 7500 Ra B M*	0.292 +/- 0.148	0.133	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	1.93 +/- 0.979	0.535	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-02
Client ID : AL-10
Date Sampled : 10/4/2016 10:50:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.719 +/- 1.04	0.674	pCi/l			
Radium-226	SM 7500 Ra B M*	0.719 +/- 0.255	0.215	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	-0.071 +/- 0.780	0.459	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-03
Client ID : MW-09
Date Sampled : 10/4/2016 11:45:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.33 +/- 1.34	1.06	pCi/l			
Radium-226	SM 7500 Ra B M*	1.33 +/- 0.302	0.221	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	-0.136 +/- 1.04	0.839	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-04
Client ID : MW-05
Date Sampled : 10/4/2016 12:40:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.24 +/- 1.25	0.794	pCi/l			
Radium-226	SM 7500 Ra B M*	0.677 +/- 0.183	0.142	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	0.562 +/- 1.07	0.652	pCi/l	10/18/16	10/25/16	JR



Client : DHL Analytical, Inc.
Client Project : 1610036
Lab Number : 20160977
Date Reported : 11/02/16
Date Received : 10/10/16
Page Number : 3 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160977-05
Client ID : DUP-01
Date Sampled : 10/4/2016 12:40:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.65 +/- 1.34	0.879	pCi/l			
Radium-226	SM 7500 Ra B M*	0.898 +/- 0.211	0.141	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	0.749 +/- 1.13	0.738	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-06
Client ID : MW-07
Date Sampled : 10/4/2016 1:25:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.34 +/- 1.19	0.793	pCi/l			
Radium-226	SM 7500 Ra B M*	0.560 +/- 0.191	0.188	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	0.780 +/- 1.00	0.605	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-07
Client ID : FGD-11
Date Sampled : 10/4/2016 4:15:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		4.26 +/- 1.15	0.618	pCi/l			
Radium-226	SM 7500 Ra B M*	1.73 +/- 0.315	0.126	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	2.53 +/- 0.831	0.492	pCi/l	10/18/16	10/31/16	JR

Lab ID : 20160977-08
Client ID : FGD-12
Date Sampled : 10/4/2016 5:10:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.41 +/- 1.29	0.968	pCi/l			
Radium-226	SM 7500 Ra B M*	1.41 +/- 0.284	0.208	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	-0.136 +/- 1.01	0.760	pCi/l	10/18/16	10/25/16	JR



Client : DHL Analytical, Inc.
 Client Project : 1610036
 Lab Number : 20160977
 Date Reported : 11/02/16
 Date Received : 10/10/16
 Page Number : 4 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160977-09
Client ID : FGD-8
Date Sampled : 10/5/2016 7:55:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		7.31 +/- 1.38	0.702	pCi/l			
Radium-226	SM 7500 Ra B M*	1.35 +/- 0.262	0.111	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	5.96 +/- 1.12	0.591	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-10
Client ID : FGD-1
Date Sampled : 10/5/2016 8:45:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.937 +/- 0.915	0.543	pCi/l			
Radium-226	SM 7500 Ra B M*	0.430 +/- 0.159	0.101	pCi/l	10/25/16	10/26/16	AK
Radium-228	EPA 904*/9320*	0.507 +/- 0.756	0.442	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-11
Client ID : FGD-5
Date Sampled : 10/5/2016 9:30:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		2.04 +/- 1.07	0.651	pCi/l			
Radium-226	SM 7500 Ra B M*	0.877 +/- 0.248	0.176	pCi/l	10/25/16	10/27/16	AK
Radium-228	EPA 904*/9320*	1.16 +/- 0.823	0.475	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-12
Client ID : FGD-2
Date Sampled : 10/5/2016 10:20:00 AM
Matrix : NPW

Radiochemical Analyses

Combined Radium		2.42 +/- 1.22	0.969	pCi/l			
Radium-226	SM 7500 Ra B M*	0.716 +/- 0.209	0.107	pCi/l	10/25/16	10/27/16	AK
Radium-228	EPA 904*/9320*	1.70 +/- 1.01	0.862	pCi/l	10/18/16	10/25/16	JR

Client : DHL Analytical, Inc.
 Client Project : 1610036
 Lab Number : 20160977
 Date Reported : 11/02/16
 Date Received : 10/10/16
 Page Number : 5 of 6

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20160977-13

Client ID : FGD-4

Date Sampled : 10/5/2016 11:10:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		1.61 +/- 0.940	0.607	pCi/l			
Radium-226	SM 7500 Ra B M*	0.308 +/- 0.141	0.128	pCi/l	10/25/16	10/27/16	AK
Radium-228	EPA 904*/9320*	1.30 +/- 0.799	0.479	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-14

Client ID : FGD-6

Date Sampled : 10/5/2016 11:55:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.18 +/- 1.07	0.675	pCi/l			
Radium-226	SM 7500 Ra B M*	0.489 +/- 0.169	0.126	pCi/l	10/25/16	10/27/16	AK
Radium-228	EPA 904*/9320*	1.69 +/- 0.904	0.549	pCi/l	10/18/16	10/25/16	JR

Lab ID : 20160977-15

Client ID : FGD-3

Date Sampled : 10/5/2016 12:50:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.90 +/- 0.932	0.591	pCi/l			
Radium-226	SM 7500 Ra B M*	0.455 +/- 0.186	0.168	pCi/l	10/25/16	10/27/16	AK
Radium-228	EPA 904*/9320*	2.44 +/- 0.746	0.423	pCi/l	10/21/16	10/26/16	JR

Lab ID : 20160977-16

Client ID : EB-1

Date Sampled : 10/5/2016 1:20:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		1.13 +/- 1.17	0.720	pCi/l			
Radium-226	SM 7500 Ra B M*	0.523 +/- 0.195	0.164	pCi/l	10/25/16	10/27/16	AK
Radium-228	EPA 904*/9320*	0.604 +/- 0.977	0.556	pCi/l	10/21/16	10/26/16	JR

Client : DHL Analytical, Inc.
 Client Project : 1610036
 Lab Number : 20160977
 Date Reported : 11/02/16
 Date Received : 10/10/16
 Page Number : 6 of 6

QC Report

Parameter	Blank	LCS %REC	LCSD %REC RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC RPD	Batch ID
Radium-226	0.064	109.0		NC	0.322	105.0	104.0 1.5	R1148
Radium-228	-0.230	99.9		NC	0.396	85.5	78.5 7.8	R3867
Radium-228	-0.091	89.4		NC	1.290	91.7	98.4 9.9	R3868

Lab Approval:



Ron Eidson
Director of Radiochemistry

LUMINANT

DHL Analytical, Inc.

2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1610036

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515
FAX:
Acct #: DHLRRTX

06-Oct-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E904.0	SM7500Ra-B M				
1 8	MW-02	Aqueous	-01B	10/04/16 09:50 AM	500HDPEHNO3	1				
	MW-02	Aqueous	-01C	10/04/16 09:50 AM	500HDPEHNO3		1			
2 9	AL-10	Aqueous	-02B	10/04/16 10:50 AM	500HDPEHNO3	1				
	AL-10	Aqueous	-02C	10/04/16 10:50 AM	500HDPEHNO3		1			
3 10	MW-09	Aqueous	-03B	10/04/16 11:45 AM	500HDPEHNO3	1				
	MW-09	Aqueous	-03C	10/04/16 11:45 AM	500HDPEHNO3		1			
4 11	MW-05	Aqueous	-04B	10/04/16 12:40 PM	500HDPEHNO3	1				
	MW-05	Aqueous	-04C	10/04/16 12:40 PM	500HDPEHNO3		1			
5 12	DUP-01	Aqueous	-05B	10/04/16 12 40 PM	500HDPEHNO3	1				
	DUP-01	Aqueous	-05C	10/04/16 12 40 PM	500HDPEHNO3		1			
6 13	MW-07	Aqueous	-06B	10/04/16 01 25 PM	500HDPEHNO3	1				
	MW-07	Aqueous	-06C	10/04/16 01 25 PM	500HDPEHNO3		1			
7 14	FGD-11	Aqueous	-07B	10/04/16 04:15 PM	500HDPEHNO3	1				
	FGD-11	Aqueous	-07C	10/04/16 04:15 PM	500HDPEHNO3		1			
8 15	FGD-12	Aqueous	-08B	10/04/16 05 10 PM	500HDPEHNO3	1				
	FGD-12	Aqueous	-08C	10/04/16 05:10 PM	500HDPEHNO3		1			
9 16	FGD-8	Aqueous	-09B	10/05/16 07 55 AM	500HDPEHNO3	1				
	FGD-8	Aqueous	-09C	10/05/16 07 55 AM	500HDPEHNO3		1			

General Comments

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

6. 865240
20/60977

Relinquished by: [Signature]
Relinquished by: [Signature]

Date/Time: 10/11/16 1730

Received by: [Signature]
Received by: [Signature]

Date/Time: 10/11/16 1730
10/11/16 1010

DHL Analytical, Inc.

2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1610036

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515
FAX:
Acct #: DHLRRTX

06-Oct-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests				
					E904.0	SM7500Ra-B M			
10 FGD-1	Aqueous	-10B	10/05/16 08:45 AM	500HDPEHNO3	1				
2 11 FGD-1	Aqueous	-10C	10/05/16 08:45 AM	500HDPEHNO3		1			
3 11 FGD-5	Aqueous	-11B	10/05/16 09:30 AM	500HDPEHNO3	1				
3 12 FGD-5	Aqueous	-11C	10/05/16 09:30 AM	500HDPEHNO3		1			
4 12 FGD-2	Aqueous	-12B	10/05/16 10:20 AM	500HDPEHNO3	1				
4 13 FGD-2	Aqueous	-12C	10/05/16 10:20 AM	500HDPEHNO3		1			
5 13 FGD-4	Aqueous	-13B	10/05/16 11:10 AM	500HDPEHNO3	1				
5 14 FGD-4	Aqueous	-13C	10/05/16 11:10 AM	500HDPEHNO3		1			
6 14 FGD-6	Aqueous	-14B	10/05/16 11:55 AM	500HDPEHNO3	1				
6 15 FGD-6	Aqueous	-14C	10/05/16 11:55 AM	500HDPEHNO3		1			
7 15 FGD-3	Aqueous	-15B	10/05/16 12:50 PM	500HDPEHNO3	1				
7 16 FGD-3	Aqueous	-15C	10/05/16 12:50 PM	500HDPEHNO3		1			
8 16 EB-1	Equip Blank	-16B	10/05/16 01:20 PM	500HDPEHNO3	1				
8 16 EB-1	Equip Blank	-16C	10/05/16 01:20 PM	500HDPEHNO3		1			

10/10/16
L

General Comments:

Please analyze these samples with Normal Turnaround Time.
Report RA-226, Ra-228 & Combined per Specs DHLRRTX033116S.
Quality Control Package Needed: Standard - NELAC Rad Test compliant
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

L865240
70160977

Relinquished by: <u>Barker</u>	Date/Time: <u>10/10/16 1730</u>	Received by: <u>Forester</u>	Date/Time: <u>10/10/16 1730</u>
Relinquished by: _____	Date/Time: _____	Received by: <u>[Signature]</u>	Date/Time: <u>10/10/16 1740</u>

SAMPLE LOGIN

Date Received: 10/10/2016 10:21:

Lab Number: 20160977

Due: 11/7/2016

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20160977-01 B	MW-02	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160977-01 A	MW-02	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160977-02 A	AL-10	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160977-02 B	AL-10	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160977-03 A	MW-09	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160977-03 B	MW-09	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160977-04 B	MW-05	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160977-04 A	MW-05	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160977-05 A	DUP-01	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160977-05 B	DUP-01	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160977-06 A	MW-07	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160977-06 B	MW-07	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160977-07 A	FGD-11	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
20160977-07 B	FGD-11	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20160977-08 A	FGD-12	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-08 B	FGD-12	NPW	10/04/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-09 B	FGD-8	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-09 A	FGD-8	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-10 A	FGD-1	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-10 B	FGD-1	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-11 A	FGD-5	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-11 B	FGD-5	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-12 B	FGD-2	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-12 A	FGD-2	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-13 A	FGD-4	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-13 B	FGD-4	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-14 A	FGD-6	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-14 B	FGD-6	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-15 A	FGD-3	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-15 B	FGD-3	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20160977-16 B	EB-1	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes
20160977-16 A	EB-1	NPW	10/05/16	Plastic	500 ml	HNO3, pH < 2	Yes	Yes

CONTAINER INSPECTION

Coolers 1 Custody Seals Broken 0 Temperature: Amb°C Ice Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken 0 Chain of Custody Record ✓ Labels in Tact ✓ Radiation Survey Complete N/A

Anomalies Several labels had water damage making them illegible;
F60-4, F60-6, F60-3, F60-11

Inspected By: [Signature] DATE 10/10/16

QA or Designee Review: Ronald Thomas DATE 10/10/16

Sample Custodian Review: Diana Mann DATE 10/10/16

Project Notes:



February 01, 2017

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Oak Grove Ash Landfill

Order No.: 1612275

Dear Will Vienne:

DHL Analytical, Inc. received 8 sample(s) on 12/23/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-17



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John Dupont

From: Sara Taube [Sara.Taube@pbwllc.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 12/23/2016

Work Order Number 1612275

Received by AL

Checklist completed by [Signature] 12/27/2016
Signature Date

Reviewed by [Signature] 12/27/2016
Initials Date

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	1.8 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 8086
	Adjusted? <u>NO</u>		Checked by <u>[Signature]</u>
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____		Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Lab Order: 1612275

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M.
Analyzed at ESC Lab Sciences.

LOG IN

The samples were received and log-in performed on 12/23/16. A total of 8 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 1/7/17 (batch 78492) the matrix spike and matrix spike duplicate recoveries were out of control limits for Calcium. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 1/8/17 and 1/11/17 (batches 78492 & 78572) the PDS recoveries were above control limits for Calcium. These are flagged accordingly. The serial dilutions were within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 1/7/17 (batch 78492) the RPD for the serial dilution was slightly above control limits for Boron. This is flagged accordingly. The PDS was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Lab Order: 1612275**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1612275-01	MW-02		12/21/16 01:10 PM	12/23/2016
1612275-02	AL-10		12/22/16 09:30 AM	12/23/2016
1612275-03	MW-09		12/22/16 10:35 AM	12/23/2016
1612275-04	MW-08R		12/22/16 11:45 AM	12/23/2016
1612275-05	MW-05		12/22/16 03:15 PM	12/23/2016
1612275-06	DUP-01		12/22/16 03:15 PM	12/23/2016
1612275-07	EB-1		12/22/16 04:45 PM	12/23/2016
1612275-08	MW-07		12/22/16 02:25 PM	12/23/2016

Lab Order: 1612275
Client: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1612275-01A	MW-02	12/21/16 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-02	12/21/16 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-02	12/21/16 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-02	12/21/16 01:10 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564
1612275-01D	MW-02	12/21/16 01:10 PM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-02	12/21/16 01:10 PM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-02	12/21/16 01:10 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	MW-02	12/21/16 01:10 PM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612275-02A	AL-10	12/22/16 09:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	AL-10	12/22/16 09:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	AL-10	12/22/16 09:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564
1612275-02D	AL-10	12/22/16 09:30 AM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	AL-10	12/22/16 09:30 AM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	AL-10	12/22/16 09:30 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	AL-10	12/22/16 09:30 AM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612275-03A	MW-09	12/22/16 10:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-09	12/22/16 10:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-09	12/22/16 10:35 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564
1612275-03D	MW-09	12/22/16 10:35 AM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-09	12/22/16 10:35 AM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-09	12/22/16 10:35 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	MW-09	12/22/16 10:35 AM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612275-04A	MW-08R	12/22/16 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-08R	12/22/16 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-08R	12/22/16 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	12/28/16 08:24 AM	78492
	MW-08R	12/22/16 11:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564
1612275-04D	MW-08R	12/22/16 11:45 AM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-08R	12/22/16 11:45 AM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554

Lab Order: 1612275
Client: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1612275-04D	MW-08R	12/22/16 11:45 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	MW-08R	12/22/16 11:45 AM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612275-05A	MW-05	12/22/16 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	MW-05	12/22/16 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	MW-05	12/22/16 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	MW-05	12/22/16 03:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564
1612275-05D	MW-05	12/22/16 03:15 PM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-05	12/22/16 03:15 PM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-05	12/22/16 03:15 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	MW-05	12/22/16 03:15 PM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612275-06A	DUP-01	12/22/16 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	DUP-01	12/22/16 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	DUP-01	12/22/16 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	DUP-01	12/22/16 03:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564
1612275-06D	DUP-01	12/22/16 03:15 PM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	DUP-01	12/22/16 03:15 PM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	DUP-01	12/22/16 03:15 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	DUP-01	12/22/16 03:15 PM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612275-07A	EB-1	12/22/16 04:45 PM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	EB-1	12/22/16 04:45 PM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	EB-1	12/22/16 04:45 PM	Equip Blank	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564
1612275-07D	EB-1	12/22/16 04:45 PM	Equip Blank	E300	Anion Preparation	01/03/17 08:50 AM	78554
	EB-1	12/22/16 04:45 PM	Equip Blank	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	EB-1	12/22/16 04:45 PM	Equip Blank	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612275-08A	MW-07	12/22/16 02:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	MW-07	12/22/16 02:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	MW-07	12/22/16 02:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/04/17 08:56 AM	78572
	MW-07	12/22/16 02:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	01/03/17 11:27 AM	78564

Lab Order: 1612275
Client: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1612275-08D	MW-07	12/22/16 02:25 PM	Aqueous	E300	Anion Preparation	01/03/17 08:50 AM	78554
	MW-07	12/22/16 02:25 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	MW-07	12/22/16 02:25 PM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478

LUMINANT

Lab Order: 1612275
Client: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1612275-01A	MW-02	Aqueous	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 10:10 AM	CETAC2_HG_170105C
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	1	01/07/17 08:16 PM	ICP-MS4_170107D
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	5	01/08/17 01:20 PM	ICP-MS4_170108C
	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	1	01/08/17 01:39 PM	ICP-MS4_170108C
1612275-01D	MW-02	Aqueous	E300	Anions by IC method - Water	78554	1	01/03/17 10:11 AM	IC2_170103A
	MW-02	Aqueous	E300	Anions by IC method - Water	78554	10	01/03/17 12:40 PM	IC2_170103A
	MW-02	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:23 AM	TITRATOR_161228A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C
1612275-02A	AL-10	Aqueous	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 10:13 AM	CETAC2_HG_170105C
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	1	01/07/17 08:18 PM	ICP-MS4_170107D
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	2	01/08/17 01:22 PM	ICP-MS4_170108C
1612275-02D	AL-10	Aqueous	E300	Anions by IC method - Water	78554	1	01/03/17 10:25 AM	IC2_170103A
	AL-10	Aqueous	E300	Anions by IC method - Water	78554	10	01/03/17 12:55 PM	IC2_170103A
	AL-10	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:27 AM	TITRATOR_161228A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C
1612275-03A	MW-09	Aqueous	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 10:15 AM	CETAC2_HG_170105C
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	1	01/07/17 08:20 PM	ICP-MS4_170107D
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	2	01/08/17 01:24 PM	ICP-MS4_170108C
1612275-03D	MW-09	Aqueous	E300	Anions by IC method - Water	78554	1	01/03/17 10:40 AM	IC2_170103A
	MW-09	Aqueous	E300	Anions by IC method - Water	78554	10	01/03/17 01:57 PM	IC2_170103A
	MW-09	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:30 AM	TITRATOR_161228A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C
1612275-04A	MW-08R	Aqueous	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 09:59 AM	CETAC2_HG_170105C
	MW-08R	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	1	01/07/17 08:22 PM	ICP-MS4_170107D
	MW-08R	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	1	01/08/17 01:26 PM	ICP-MS4_170108C
	MW-08R	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78492	10	01/08/17 06:58 PM	ICP-MS4_170108C

Lab Order: 1612275
Client: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1612275-04D	MW-08R	Aqueous	E300	Anions by IC method - Water	78554	1	01/03/17 10:54 AM	IC2_170103A
	MW-08R	Aqueous	E300	Anions by IC method - Water	78554	10	01/03/17 02:12 PM	IC2_170103A
	MW-08R	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:32 AM	TITRATOR_161228A
	MW-08R	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C
1612275-05A	MW-05	Aqueous	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 10:17 AM	CETAC2_HG_170105 C
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/09/17 12:35 PM	ICP-MS4_170109B
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/11/17 05:13 PM	ICP-MS4_170111E
	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	10	01/12/17 08:25 AM	ICP-MS4_170111E
1612275-05D	MW-05	Aqueous	E300	Anions by IC method - Water	78554	1	01/03/17 11:09 AM	IC2_170103A
	MW-05	Aqueous	E300	Anions by IC method - Water	78554	10	01/03/17 02:27 PM	IC2_170103A
	MW-05	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:35 AM	TITRATOR_161228A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C
1612275-06A	DUP-01	Aqueous	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 10:19 AM	CETAC2_HG_170105 C
	DUP-01	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/09/17 12:37 PM	ICP-MS4_170109B
	DUP-01	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/11/17 05:15 PM	ICP-MS4_170111E
	DUP-01	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	10	01/12/17 08:27 AM	ICP-MS4_170111E
1612275-06D	DUP-01	Aqueous	E300	Anions by IC method - Water	78554	10	01/03/17 02:41 PM	IC2_170103A
	DUP-01	Aqueous	E300	Anions by IC method - Water	78554	1	01/03/17 11:24 AM	IC2_170103A
	DUP-01	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:36 AM	TITRATOR_161228A
	DUP-01	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C
1612275-07A	EB-1	Equip Blank	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 10:22 AM	CETAC2_HG_170105 C
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/09/17 12:39 PM	ICP-MS4_170109B
	EB-1	Equip Blank	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/11/17 05:17 PM	ICP-MS4_170111E
1612275-07D	EB-1	Equip Blank	E300	Anions by IC method - Water	78554	1	01/03/17 12:26 PM	IC2_170103A
	EB-1	Equip Blank	M4500-H+ B	pH	78491	1	12/28/16 09:39 AM	TITRATOR_161228A
	EB-1	Equip Blank	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C

Lab Order: 1612275
Client: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1612275-08A	MW-07	Aqueous	SW7470A	Mercury Total: Aqueous	78564	1	01/05/17 10:24 AM	CETAC2_HG_170105 C
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/09/17 12:31 PM	ICP-MS4_170109B
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	1	01/11/17 05:09 PM	ICP-MS4_170111E
	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78572	10	01/11/17 09:42 PM	ICP-MS4_170111E
1612275-08D	MW-07	Aqueous	E300	Anions by IC method - Water	78554	1	01/03/17 11:38 AM	IC2_170103A
	MW-07	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:41 AM	TITRATOR_161228A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: MW-02
Lab ID: 1612275-01
Collection Date: 12/21/16 01:10 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 10:10 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/07/17 08:16 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:16 PM
Barium	0.110	0.00300	0.0100		mg/L	1	01/07/17 08:16 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:16 PM
Boron	0.110	0.0100	0.0300		mg/L	1	01/08/17 01:39 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:16 PM
Calcium	47.8	0.500	1.50		mg/L	5	01/08/17 01:20 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:16 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/07/17 08:16 PM
Lead	0.000403	0.000300	0.00100	J	mg/L	1	01/07/17 08:16 PM
Lithium	0.0971	0.00500	0.0100		mg/L	1	01/07/17 08:16 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:16 PM
Selenium	0.00232	0.00200	0.00500	J	mg/L	1	01/07/17 08:16 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/07/17 08:16 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	185	3.00	10.0		mg/L	10	01/03/17 12:40 PM
Fluoride	0.293	0.100	0.400	J	mg/L	1	01/03/17 10:11 AM
Sulfate	83.4	1.00	3.00		mg/L	1	01/03/17 10:11 AM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.43	0	0		pH Units@19.5°C	1	12/28/16 09:23 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	590	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: AL-10
Lab ID: 1612275-02
Collection Date: 12/22/16 09:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 10:13 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/07/17 08:18 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:18 PM
Barium	0.0846	0.00300	0.0100		mg/L	1	01/07/17 08:18 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:18 PM
Boron	0.0759	0.0200	0.0600		mg/L	2	01/08/17 01:22 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:18 PM
Calcium	32.5	0.200	0.600		mg/L	2	01/08/17 01:22 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:18 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/07/17 08:18 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:18 PM
Lithium	0.00647	0.00500	0.0100	J	mg/L	1	01/07/17 08:18 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:18 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:18 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/07/17 08:18 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	57.2	3.00	10.0		mg/L	10	01/03/17 12:55 PM
Fluoride	0.195	0.100	0.400	J	mg/L	1	01/03/17 10:25 AM
Sulfate	21.5	1.00	3.00		mg/L	1	01/03/17 10:25 AM
PH		M4500-H+ B		Analyst: BJT			
pH	7.16	0	0		pH Units@19.7°C	1	12/28/16 09:27 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	527	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: MW-09
Lab ID: 1612275-03
Collection Date: 12/22/16 10:35 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 10:15 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/07/17 08:20 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:20 PM
Barium	0.123	0.00300	0.0100		mg/L	1	01/07/17 08:20 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:20 PM
Boron	0.0776	0.0200	0.0600		mg/L	2	01/08/17 01:24 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:20 PM
Calcium	42.6	0.200	0.600		mg/L	2	01/08/17 01:24 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:20 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/07/17 08:20 PM
Lead	0.000411	0.000300	0.00100	J	mg/L	1	01/07/17 08:20 PM
Lithium	0.0636	0.00500	0.0100		mg/L	1	01/07/17 08:20 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:20 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:20 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/07/17 08:20 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	290	3.00	10.0		mg/L	10	01/03/17 01:57 PM
Fluoride	0.159	0.100	0.400	J	mg/L	1	01/03/17 10:40 AM
Sulfate	116	1.00	3.00		mg/L	1	01/03/17 10:40 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.54	0	0		pH Units@19.5°C	1	12/28/16 09:30 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	791	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: MW-08R
Lab ID: 1612275-04
Collection Date: 12/22/16 11:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 09:59 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/07/17 08:22 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:22 PM
Barium	0.0855	0.00300	0.0100		mg/L	1	01/07/17 08:22 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:22 PM
Boron	0.0702	0.0100	0.0300		mg/L	1	01/08/17 01:26 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:22 PM
Calcium	32.4	1.00	3.00		mg/L	10	01/08/17 06:58 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:22 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/07/17 08:22 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/07/17 08:22 PM
Lithium	0.00656	0.00500	0.0100	J	mg/L	1	01/07/17 08:22 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:22 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/07/17 08:22 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/07/17 08:22 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	166	3.00	10.0		mg/L	10	01/03/17 02:12 PM
Fluoride	0.355	0.100	0.400	J	mg/L	1	01/03/17 10:54 AM
Sulfate	39.7	1.00	3.00		mg/L	1	01/03/17 10:54 AM
PH		M4500-H+ B		Analyst: BJT			
pH	7.22	0	0		pH Units@19.2°C	1	12/28/16 09:32 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	617	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: MW-05
Lab ID: 1612275-05
Collection Date: 12/22/16 03:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 10:17 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/09/17 12:35 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:35 PM
Barium	0.0415	0.00300	0.0100		mg/L	1	01/09/17 12:35 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:35 PM
Boron	0.0759	0.0100	0.0300		mg/L	1	01/11/17 05:13 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:35 PM
Calcium	61.4	1.00	3.00		mg/L	10	01/12/17 08:25 AM
Chromium	0.0197	0.00200	0.00500		mg/L	1	01/09/17 12:35 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/09/17 12:35 PM
Lead	0.000570	0.000300	0.00100	J	mg/L	1	01/09/17 12:35 PM
Lithium	0.114	0.00500	0.0100		mg/L	1	01/09/17 12:35 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:35 PM
Selenium	0.00371	0.00200	0.00500	J	mg/L	1	01/09/17 12:35 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/09/17 12:35 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	264	3.00	10.0		mg/L	10	01/03/17 02:27 PM
Fluoride	0.446	0.100	0.400		mg/L	1	01/03/17 11:09 AM
Sulfate	55.6	1.00	3.00		mg/L	1	01/03/17 11:09 AM
PH							
M4500-H+ B				Analyst: BJT			
pH	7.35	0	0		pH Units@19.4°C	1	12/28/16 09:35 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	778	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: DUP-01
Lab ID: 1612275-06
Collection Date: 12/22/16 03:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 10:19 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/09/17 12:37 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:37 PM
Barium	0.0502	0.00300	0.0100		mg/L	1	01/09/17 12:37 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:37 PM
Boron	0.0578	0.0100	0.0300		mg/L	1	01/11/17 05:15 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:37 PM
Calcium	78.7	1.00	3.00		mg/L	10	01/12/17 08:27 AM
Chromium	0.0110	0.00200	0.00500		mg/L	1	01/09/17 12:37 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/09/17 12:37 PM
Lead	0.000461	0.000300	0.00100	J	mg/L	1	01/09/17 12:37 PM
Lithium	0.126	0.00500	0.0100		mg/L	1	01/09/17 12:37 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:37 PM
Selenium	0.00598	0.00200	0.00500		mg/L	1	01/09/17 12:37 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/09/17 12:37 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	299	3.00	10.0		mg/L	10	01/03/17 02:41 PM
Fluoride	0.432	0.100	0.400		mg/L	1	01/03/17 11:24 AM
Sulfate	62.3	1.00	3.00		mg/L	1	01/03/17 11:24 AM
PH		M4500-H+ B		Analyst: BJT			
pH	7.13	0	0		pH Units@18.5°C	1	12/28/16 09:36 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	845	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: EB-1
Lab ID: 1612275-07
Collection Date: 12/22/16 04:45 PM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 10:22 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/09/17 12:39 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:39 PM
Barium	0.0748	0.00300	0.0100		mg/L	1	01/09/17 12:39 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:39 PM
Boron	0.0182	0.0100	0.0300	J	mg/L	1	01/11/17 05:17 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:39 PM
Calcium	3.02	0.100	0.300		mg/L	1	01/09/17 12:39 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:39 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/09/17 12:39 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:39 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	01/09/17 12:39 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:39 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:39 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/09/17 12:39 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	8.39	0.300	1.00		mg/L	1	01/03/17 12:26 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	01/03/17 12:26 PM
Sulfate	1.67	1.00	3.00	J	mg/L	1	01/03/17 12:26 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.07	0	0		pH Units@19°C	1	12/28/16 09:39 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	<10.0	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 01-Feb-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove Ash Landfill
Project No: 5164-D
Lab Order: 1612275

Client Sample ID: MW-07
Lab ID: 1612275-08
Collection Date: 12/22/16 02:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	01/05/17 10:24 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/09/17 12:31 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:31 PM
Barium	0.0476	0.00300	0.0100		mg/L	1	01/09/17 12:31 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:31 PM
Boron	0.0540	0.0100	0.0300		mg/L	1	01/11/17 05:09 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/09/17 12:31 PM
Calcium	12.5	1.00	3.00		mg/L	10	01/11/17 09:42 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:31 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/09/17 12:31 PM
Lead	0.000333	0.000300	0.00100	J	mg/L	1	01/09/17 12:31 PM
Lithium	0.0178	0.00500	0.0100		mg/L	1	01/09/17 12:31 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:31 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/09/17 12:31 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/09/17 12:31 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	22.9	0.300	1.00		mg/L	1	01/03/17 11:38 AM
Fluoride	0.229	0.100	0.400	J	mg/L	1	01/03/17 11:38 AM
Sulfate	34.7	1.00	3.00		mg/L	1	01/03/17 11:38 AM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.58	0	0		pH Units@19°C	1	12/28/16 09:41 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	262	10.0	10.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1612275

Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_170105C

The QC data in batch 78564 applies to the following samples: 1612275-01A, 1612275-02A, 1612275-03A, 1612275-04A, 1612275-05A, 1612275-06A, 1612275-07A, 1612275-08A

Sample ID	MB-78564	Batch ID:	78564	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 9:52:46 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-78564	Batch ID:	78564	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 9:55:02 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00214 0.000200 0.00200 0 107 85 115

Sample ID	LCSD-78564	Batch ID:	78564	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 9:57:18 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00214 0.000200 0.00200 0 107 85 115 0 15

Sample ID	1612275-04A SD	Batch ID:	78564	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 10:01:51 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1612275-04A PDS	Batch ID:	78564	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 10:04:06 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00248 0.000200 0.00250 0 99.2 85 115

Sample ID	1612275-04A MS	Batch ID:	78564	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 10:06:22 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00216 0.000200 0.00200 0 108 80 120

Sample ID	1612275-04A MSD	Batch ID:	78564	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 10:08:38 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00211 0.000200 0.00200 0 106 80 120 2.34 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_170105C

Sample ID	ICV-170105	Batch ID:	R89790	TestNo:	SW7470A	Units:	mg/L
SampType:	ICV	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 9:48:12 AM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Mercury	0.00398	0.000200	0.00400	0	99.5	90	110

Sample ID	CCV1-170105	Batch ID:	R89790	TestNo:	SW7470A	Units:	mg/L
SampType:	CCV	Run ID:	CETAC2_HG_170105C	Analysis Date:	1/5/2017 10:31:19 AM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

The QC data in batch 78492 applies to the following samples: 1612275-01A, 1612275-02A, 1612275-03A, 1612275-04A

Sample ID	MB-78492		Batch ID:	78492		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_170107D		Analysis Date:	1/7/2017 6:30:00 PM		Prep Date:	12/28/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250
Arsenic	<0.00200	0.00500
Barium	<0.00300	0.0100
Beryllium	<0.000300	0.00100
Boron	<0.0100	0.0300
Cadmium	<0.000300	0.00100
Calcium	<0.100	0.300
Chromium	<0.00200	0.00500
Cobalt	<0.00300	0.00500
Lead	<0.000300	0.00100
Lithium	<0.00500	0.0100
Molybdenum	<0.00200	0.00500
Selenium	<0.00200	0.00500
Thallium	<0.000500	0.00150

Sample ID	LCS-78492		Batch ID:	78492		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_170107D		Analysis Date:	1/7/2017 6:32:00 PM		Prep Date:	12/28/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.203	0.00250	0.200	0	102	80	120
Arsenic	0.213	0.00500	0.200	0	106	80	120
Barium	0.203	0.0100	0.200	0	102	80	120
Beryllium	0.211	0.00100	0.200	0	105	80	120
Boron	0.208	0.0300	0.200	0	104	80	120
Cadmium	0.207	0.00100	0.200	0	104	80	120
Calcium	5.00	0.300	5.00	0	100	80	120
Chromium	0.208	0.00500	0.200	0	104	80	120
Cobalt	0.210	0.00500	0.200	0	105	80	120
Lead	0.202	0.00100	0.200	0	101	80	120
Lithium	0.205	0.0100	0.200	0	103	80	120
Molybdenum	0.203	0.00500	0.200	0	102	80	120
Selenium	0.210	0.00500	0.200	0	105	80	120
Thallium	0.202	0.00150	0.200	0	101	80	120

Sample ID	LCSD-78492	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 6:34:00 PM	Prep Date:	12/28/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.205	0.00250	0.200	0	102	80	120	0.682	15
Arsenic	0.214	0.00500	0.200	0	107	80	120	0.821	15

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	LCSD-78492	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 6:34:00 PM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	0.205	0.0100	0.200	0	103	80	120	0.935	15	
Beryllium	0.217	0.00100	0.200	0	108	80	120	2.77	15	
Boron	0.212	0.0300	0.200	0	106	80	120	1.92	15	
Cadmium	0.208	0.00100	0.200	0	104	80	120	0.260	15	
Calcium	4.97	0.300	5.00	0	99.4	80	120	0.616	15	
Chromium	0.210	0.00500	0.200	0	105	80	120	1.14	15	
Cobalt	0.213	0.00500	0.200	0	106	80	120	1.33	15	
Lead	0.205	0.00100	0.200	0	103	80	120	1.53	15	
Lithium	0.208	0.0100	0.200	0	104	80	120	1.21	15	
Molybdenum	0.202	0.00500	0.200	0	101	80	120	0.444	15	
Selenium	0.211	0.00500	0.200	0	106	80	120	0.882	15	
Thallium	0.204	0.00150	0.200	0	102	80	120	0.908	15	

Sample ID	1612246-04A SD			Batch ID:	78492		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_170107D		Analysis Date:	1/7/2017 6:40:00 PM		Prep Date:	12/28/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.0303	0.0500	0	0.0304				0.372	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Boron	0.388	0.150	0	0.337				14.0	10	R
Cadmium	0.00485	0.00500	0	0.00475				2.00	10	
Chromium	<0.0100	0.0250	0	0.00333				0	10	
Cobalt	0.108	0.0250	0	0.105				3.07	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	0.0471	0.0500	0	0.0438				7.26	10	
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1612246-04A PDS	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 7:01:00 PM	Prep Date:	12/28/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.211	0.00250	0.200	0	106	80	120			
Arsenic	0.224	0.00500	0.200	0	112	80	120			
Barium	0.235	0.0100	0.200	0.0304	102	80	120			
Beryllium	0.210	0.00100	0.200	0	105	80	120			
Boron	0.515	0.0300	0.200	0.337	89.0	80	120			
Cadmium	0.203	0.00100	0.200	0.00475	99.3	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	1612246-04A PDS			Batch ID:	78492		TestNo:	SW6020A		Units:	mg/L	
SampType:	PDS			Run ID:	ICP-MS4_170107D		Analysis Date:	1/7/2017 7:01:00 PM		Prep Date:	12/28/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chromium	0.213	0.00500	0.200	0.00333	105	80	120			
Cobalt	0.307	0.00500	0.200	0.105	101	80	120			
Lead	0.208	0.00100	0.200	0	104	80	120			
Lithium	0.232	0.0100	0.200	0.0438	94.0	80	120			
Molybdenum	0.203	0.00500	0.200	0	101	80	120			
Selenium	0.217	0.00500	0.200	0	108	80	120			
Thallium	0.207	0.00150	0.200	0	104	80	120			

Sample ID	1612246-04A MS	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 7:03:00 PM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.209	0.00250	0.200	0	104	80	120			
Arsenic	0.219	0.00500	0.200	0	110	80	120			
Barium	0.238	0.0100	0.200	0.0304	104	80	120			
Beryllium	0.201	0.00100	0.200	0	100	80	120			
Boron	0.548	0.0300	0.200	0.337	105	80	120			
Cadmium	0.207	0.00100	0.200	0.00475	101	80	120			
Calcium	357	0.300	5.00	355	52.0	80	120			S
Chromium	0.203	0.00500	0.200	0.00333	99.7	80	120			
Cobalt	0.304	0.00500	0.200	0.105	99.6	80	120			
Lead	0.205	0.00100	0.200	0	102	80	120			
Lithium	0.230	0.0100	0.200	0.0438	93.3	80	120			
Molybdenum	0.209	0.00500	0.200	0	104	80	120			
Selenium	0.212	0.00500	0.200	0	106	80	120			
Thallium	0.206	0.00150	0.200	0	103	80	120			

Sample ID	1612246-04A MSD	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 7:05:00 PM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.209	0.00250	0.200	0	104	80	120	0.127	15	
Arsenic	0.225	0.00500	0.200	0	112	80	120	2.39	15	
Barium	0.239	0.0100	0.200	0.0304	104	80	120	0.435	15	
Beryllium	0.207	0.00100	0.200	0	104	80	120	3.39	15	
Boron	0.540	0.0300	0.200	0.337	101	80	120	1.40	15	
Cadmium	0.205	0.00100	0.200	0.00475	100	80	120	1.06	15	
Calcium	365	0.300	5.00	355	211	80	120	2.21	15	S
Chromium	0.206	0.00500	0.200	0.00333	102	80	120	1.87	15	
Cobalt	0.309	0.00500	0.200	0.105	102	80	120	1.62	15	
Lead	0.207	0.00100	0.200	0	104	80	120	1.21	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	1612246-04A MSD	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 7:05:00 PM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lithium	0.240	0.0100	0.200	0.0438	98.0	80	120	3.95	15	
Molybdenum	0.208	0.00500	0.200	0	104	80	120	0.478	15	
Selenium	0.218	0.00500	0.200	0	109	80	120	2.83	15	
Thallium	0.210	0.00150	0.200	0	105	80	120	2.06	15	

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	ICV-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 12:28:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.0993	0.00250	0.100	0	99.3	90	110			
Arsenic	0.102	0.00500	0.100	0	102	90	110			
Barium	0.103	0.0100	0.100	0	103	90	110			
Beryllium	0.101	0.00100	0.100	0	101	90	110			
Boron	0.100	0.0300	0.100	0	100	90	110			
Cadmium	0.102	0.00100	0.100	0	102	90	110			
Calcium	2.32	0.300	2.50	0	92.7	90	110			
Chromium	0.107	0.00500	0.100	0	107	90	110			
Cobalt	0.106	0.00500	0.100	0	106	90	110			
Lead	0.102	0.00100	0.100	0	102	90	110			
Lithium	0.100	0.0100	0.100	0	100	90	110			
Molybdenum	0.0993	0.00500	0.100	0	99.3	90	110			
Selenium	0.103	0.00500	0.100	0	103	90	110			
Thallium	0.101	0.00150	0.100	0	101	90	110			

Sample ID	LCVL-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 12:32:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00190	0.00250	0.00200	0	95.0	70	130			
Arsenic	0.00504	0.00500	0.00500	0	101	70	130			
Barium	0.00514	0.0100	0.00500	0	103	70	130			
Beryllium	0.000982	0.00100	0.00100	0	98.2	70	130			
Boron	0.0210	0.0300	0.0200	0	105	70	130			
Cadmium	0.00104	0.00100	0.00100	0	104	70	130			
Calcium	0.105	0.300	0.100	0	105	70	130			
Chromium	0.00526	0.00500	0.00500	0	105	70	130			
Cobalt	0.00522	0.00500	0.00500	0	104	70	130			
Lead	0.00107	0.00100	0.00100	0	107	70	130			
Lithium	0.00973	0.0100	0.0100	0	97.3	70	130			
Molybdenum	0.00532	0.00500	0.00500	0	106	70	130			
Selenium	0.00521	0.00500	0.00500	0	104	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV5-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 6:06:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.205	0.00250	0.200	0	103	90	110			
Arsenic	0.217	0.00500	0.200	0	108	90	110			
Barium	0.205	0.0100	0.200	0	102	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	CCV5-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 6:06:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.206	0.00100	0.200	0	103	90	110			
Boron	0.202	0.0300	0.200	0	101	90	110			
Cadmium	0.207	0.00100	0.200	0	103	90	110			
Calcium	4.93	0.300	5.00	0	98.7	90	110			
Chromium	0.204	0.00500	0.200	0	102	90	110			
Cobalt	0.212	0.00500	0.200	0	106	90	110			
Lead	0.207	0.00100	0.200	0	103	90	110			
Lithium	0.198	0.0100	0.200	0	99.2	90	110			
Molybdenum	0.202	0.00500	0.200	0	101	90	110			
Selenium	0.216	0.00500	0.200	0	108	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL5-170107			Batch ID:	R89825		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCVL			Run ID:	ICP-MS4_170107D		Analysis Date:	1/7/2017 6:24:00 PM		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.00181	0.00250	0.00200	0	90.5	70	130			
Arsenic	0.00542	0.00500	0.00500	0	108	70	130			
Barium	0.00498	0.0100	0.00500	0	99.5	70	130			
Beryllium	0.00101	0.00100	0.00100	0	101	70	130			
Boron	0.0236	0.0300	0.0200	0	118	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Calcium	0.0994	0.300	0.100	0	99.4	70	130			
Chromium	0.00517	0.00500	0.00500	0	103	70	130			
Cobalt	0.00526	0.00500	0.00500	0	105	70	130			
Lead	0.000946	0.00100	0.00100	0	94.6	70	130			
Lithium	0.00994	0.0100	0.0100	0	99.4	70	130			
Molybdenum	0.00483	0.00500	0.00500	0	96.6	70	130			
Selenium	0.00597	0.00500	0.00500	0	119	70	130			
Thallium	0.00100	0.00150	0.00100	0	100	70	130			

Sample ID	CCV6-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 7:16:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.201	0.00250	0.200	0	100	90	110			
Arsenic	0.218	0.00500	0.200	0	109	90	110			
Barium	0.203	0.0100	0.200	0	101	90	110			
Beryllium	0.214	0.00100	0.200	0	107	90	110			
Boron	0.215	0.0300	0.200	0	108	90	110			
Cadmium	0.205	0.00100	0.200	0	103	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	CCV6-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 7:16:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.93	0.300	5.00	0	98.7	90	110			
Chromium	0.206	0.00500	0.200	0	103	90	110			
Cobalt	0.215	0.00500	0.200	0	108	90	110			
Lead	0.205	0.00100	0.200	0	103	90	110			
Lithium	0.205	0.0100	0.200	0	103	90	110			
Molybdenum	0.199	0.00500	0.200	0	99.4	90	110			
Selenium	0.220	0.00500	0.200	0	110	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL6-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 8:02:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00178	0.00250	0.00200	0	89.0	70	130			
Arsenic	0.00517	0.00500	0.00500	0	103	70	130			
Barium	0.00493	0.0100	0.00500	0	98.7	70	130			
Beryllium	0.00113	0.00100	0.00100	0	113	70	130			
Boron	0.0234	0.0300	0.0200	0	117	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Calcium	0.0962	0.300	0.100	0	96.2	70	130			
Chromium	0.00491	0.00500	0.00500	0	98.2	70	130			
Cobalt	0.00526	0.00500	0.00500	0	105	70	130			
Lead	0.000928	0.00100	0.00100	0	92.8	70	130			
Lithium	0.00949	0.0100	0.0100	0	94.9	70	130			
Molybdenum	0.00486	0.00500	0.00500	0	97.1	70	130			
Selenium	0.00519	0.00500	0.00500	0	104	70	130			
Thallium	0.000958	0.00150	0.00100	0	95.8	70	130			

Sample ID	CCV7-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 8:24:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.200	0.00250	0.200	0	100	90	110			
Arsenic	0.219	0.00500	0.200	0	110	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.209	0.00100	0.200	0	104	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			
Chromium	0.203	0.00500	0.200	0	102	90	110			
Cobalt	0.211	0.00500	0.200	0	106	90	110			
Lead	0.204	0.00100	0.200	0	102	90	110			
Lithium	0.202	0.0100	0.200	0	101	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	CCV7-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 8:24:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.196	0.00500	0.200	0	97.9	90	110			
Selenium	0.218	0.00500	0.200	0	109	90	110			
Thallium	0.201	0.00150	0.200	0	101	90	110			

Sample ID	LCVL7-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170107D	Analysis Date:	1/7/2017 8:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00182	0.00250	0.00200	0	91.2	70	130			
Arsenic	0.00542	0.00500	0.00500	0	108	70	130			
Barium	0.00483	0.0100	0.00500	0	96.5	70	130			
Beryllium	0.00115	0.00100	0.00100	0	115	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Chromium	0.00494	0.00500	0.00500	0	98.7	70	130			
Cobalt	0.00514	0.00500	0.00500	0	103	70	130			
Lead	0.000931	0.00100	0.00100	0	93.1	70	130			
Lithium	0.0101	0.0100	0.0100	0	101	70	130			
Molybdenum	0.00461	0.00500	0.00500	0	92.2	70	130			
Selenium	0.00587	0.00500	0.00500	0	117	70	130			
Thallium	0.000962	0.00150	0.00100	0	96.2	70	130			

Sample ID	CCV13-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170107D	Analysis Date:	1/8/2017 12:01:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.204	0.00250	0.200	0	102	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.209	0.00100	0.200	0	104	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			
Chromium	0.203	0.00500	0.200	0	102	90	110			
Cobalt	0.210	0.00500	0.200	0	105	90	110			
Lithium	0.193	0.0100	0.200	0	96.6	90	110			
Molybdenum	0.196	0.00500	0.200	0	98.0	90	110			
Selenium	0.220	0.00500	0.200	0	110	90	110			
Thallium	0.203	0.00150	0.200	0	102	90	110			

Sample ID	LCVL13-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170107D	Analysis Date:	1/8/2017 12:05:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00253	0.00250	0.00200	0	126	70	130			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170107D

Sample ID	LCVL13-170107	Batch ID:	R89825	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170107D	Analysis Date:	1/8/2017 12:05:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.00515	0.0100	0.00500	0	103	70	130			
Beryllium	0.00124	0.00100	0.00100	0	124	70	130			
Cadmium	0.00108	0.00100	0.00100	0	108	70	130			
Chromium	0.00509	0.00500	0.00500	0	102	70	130			
Cobalt	0.00540	0.00500	0.00500	0	108	70	130			
Lithium	0.00977	0.0100	0.0100	0	97.7	70	130			
Molybdenum	0.00501	0.00500	0.00500	0	100	70	130			
Selenium	0.00649	0.00500	0.00500	0	130	70	130			
Thallium	0.00106	0.00150	0.00100	0	106	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

The QC data in batch 78492 applies to the following samples: 1612275-01A, 1612275-02A, 1612275-03A, 1612275-04A

Sample ID	1612246-04A SD	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 1:51:00 PM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	339	150	0	339				0.120	10	

Sample ID	1612246-04A PDS	Batch ID:	78492	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 2:12:00 PM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	817	30.0	5.00	339	9550	80	120			S

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

Sample ID	ICV-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 11:44:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.104	0.0300	0.100	0	104	90	110			
Calcium	2.27	0.300	2.50	0	90.9	90	110			

Sample ID	LCVL-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 11:49:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0195	0.0300	0.0200	0	97.3	70	130			
Calcium	0.0957	0.300	0.100	0	95.7	70	130			

Sample ID	CCV2-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 1:02:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.212	0.0300	0.200	0	106	90	110			
Calcium	4.72	0.300	5.00	0	94.5	90	110			

Sample ID	LCVL2-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 1:06:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0189	0.0300	0.0200	0	94.3	70	130			
Calcium	0.0988	0.300	0.100	0	98.8	70	130			

Sample ID	CCV3-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 1:41:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.207	0.0300	0.200	0	103	90	110			
Calcium	4.80	0.300	5.00	0	95.9	90	110			

Sample ID	LCVL3-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 1:45:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0151	0.0300	0.0200	0	75.3	70	130			
Calcium	0.0987	0.300	0.100	0	98.7	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

Sample ID	CCV4-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 2:17:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Calcium	4.79	0.300	5.00	0	95.7	90	110

Sample ID	LCVL4-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 2:21:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Calcium	0.0957	0.300	0.100	0	95.7	70	130

Sample ID	CCV11-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 6:44:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Calcium	4.73	0.300	5.00	0	94.6	90	110

Sample ID	LCVL11-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 6:48:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Calcium	0.115	0.300	0.100	0	115	70	130

Sample ID	CCV12-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 7:17:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Calcium	4.65	0.300	5.00	0	93.1	90	110

Sample ID	LCVL12-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 7:21:00 PM	Prep Date:	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual
Calcium	0.102	0.300	0.100	0	102	70	130

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170109B

The QC data in batch 78572 applies to the following samples: 1612275-05A, 1612275-06A, 1612275-07A, 1612275-08A

Sample ID	MB-78572		Batch ID:	78572		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_170109B		Analysis Date:	1/9/2017 12:23:00 PM		Prep Date:	1/4/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250
Arsenic	<0.00200	0.00500
Barium	<0.00300	0.0100
Beryllium	<0.000300	0.00100
Cadmium	<0.000300	0.00100
Calcium	<0.100	0.300
Chromium	<0.00200	0.00500
Cobalt	<0.00300	0.00500
Lead	<0.000300	0.00100
Lithium	<0.00500	0.0100
Molybdenum	<0.00200	0.00500
Selenium	<0.00200	0.00500
Thallium	<0.000500	0.00150

Sample ID	LCS-78572			Batch ID:	78572		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_170109B		Analysis Date:	1/9/2017 12:25:00 PM		Prep Date:	1/4/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.206	0.00250	0.200	0	103	80	120
Arsenic	0.202	0.00500	0.200	0	101	80	120
Barium	0.201	0.0100	0.200	0	101	80	120
Beryllium	0.207	0.00100	0.200	0	103	80	120
Cadmium	0.204	0.00100	0.200	0	102	80	120
Calcium	5.01	0.300	5.00	0	100	80	120
Chromium	0.210	0.00500	0.200	0	105	80	120
Cobalt	0.206	0.00500	0.200	0	103	80	120
Lead	0.198	0.00100	0.200	0	99.2	80	120
Lithium	0.210	0.0100	0.200	0	105	80	120
Molybdenum	0.200	0.00500	0.200	0	100	80	120
Selenium	0.202	0.00500	0.200	0	101	80	120
Thallium	0.200	0.00150	0.200	0	100	80	120

Sample ID	LCSD-78572			Batch ID:	78572		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCSD			Run ID:	ICP-MS4_170109B		Analysis Date:	1/9/2017 12:27:00 PM		Prep Date:	1/4/2017	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.204	0.00250	0.200	0	102	80	120	0.821	15
Arsenic	0.202	0.00500	0.200	0	101	80	120	0.198	15
Barium	0.201	0.0100	0.200	0	101	80	120	0.084	15
Beryllium	0.210	0.00100	0.200	0	105	80	120	1.41	15

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170109B

Sample ID	LCSD-78572	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:27:00 PM	Prep Date:	1/4/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.201	0.00100	0.200	0	101	80	120	1.20	15	
Calcium	5.06	0.300	5.00	0	101	80	120	0.976	15	
Chromium	0.211	0.00500	0.200	0	106	80	120	0.425	15	
Cobalt	0.207	0.00500	0.200	0	103	80	120	0.253	15	
Lead	0.200	0.00100	0.200	0	100	80	120	0.813	15	
Lithium	0.208	0.0100	0.200	0	104	80	120	0.668	15	
Molybdenum	0.199	0.00500	0.200	0	99.6	80	120	0.600	15	
Selenium	0.199	0.00500	0.200	0	99.7	80	120	1.21	15	
Thallium	0.201	0.00150	0.200	0	101	80	120	0.580	15	

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170109B

Sample ID	ICV-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 10:24:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.101	0.00250	0.100	0	101	90	110			
Arsenic	0.102	0.00500	0.100	0	102	90	110			
Barium	0.102	0.0100	0.100	0	102	90	110			
Beryllium	0.106	0.00100	0.100	0	106	90	110			
Cadmium	0.101	0.00100	0.100	0	101	90	110			
Calcium	2.38	0.300	2.50	0	95.2	90	110			
Chromium	0.109	0.00500	0.100	0	109	90	110			
Cobalt	0.105	0.00500	0.100	0	105	90	110			
Lead	0.100	0.00100	0.100	0	100	90	110			
Lithium	0.0999	0.0100	0.100	0	99.9	90	110			
Molybdenum	0.0978	0.00500	0.100	0	97.8	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0996	0.00150	0.100	0	99.6	90	110			

Sample ID	LCVL-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 10:28:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00196	0.00250	0.00200	0	97.9	70	130			
Arsenic	0.00508	0.00500	0.00500	0	102	70	130			
Barium	0.00484	0.0100	0.00500	0	96.7	70	130			
Beryllium	0.00112	0.00100	0.00100	0	112	70	130			
Cadmium	0.000999	0.00100	0.00100	0	99.9	70	130			
Calcium	0.0978	0.300	0.100	0	97.8	70	130			
Chromium	0.00520	0.00500	0.00500	0	104	70	130			
Cobalt	0.00516	0.00500	0.00500	0	103	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Lithium	0.0100	0.0100	0.0100	0	100	70	130			
Molybdenum	0.00506	0.00500	0.00500	0	101	70	130			
Selenium	0.00528	0.00500	0.00500	0	106	70	130			
Thallium	0.00101	0.00150	0.00100	0	101	70	130			

Sample ID	CCV3-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:08:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.210	0.00250	0.200	0	105	90	110			
Arsenic	0.207	0.00500	0.200	0	103	90	110			
Barium	0.203	0.0100	0.200	0	101	90	110			
Beryllium	0.210	0.00100	0.200	0	105	90	110			
Cadmium	0.205	0.00100	0.200	0	103	90	110			

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170109B

Sample ID	CCV3-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:08:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.00	0.300	5.00	0	99.9	90	110			
Chromium	0.214	0.00500	0.200	0	107	90	110			
Cobalt	0.211	0.00500	0.200	0	106	90	110			
Lead	0.204	0.00100	0.200	0	102	90	110			
Lithium	0.212	0.0100	0.200	0	106	90	110			
Molybdenum	0.203	0.00500	0.200	0	102	90	110			
Selenium	0.205	0.00500	0.200	0	102	90	110			
Thallium	0.206	0.00150	0.200	0	103	90	110			

Sample ID	LCVL3-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:16:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00210	0.00250	0.00200	0	105	70	130			
Arsenic	0.00497	0.00500	0.00500	0	99.4	70	130			
Barium	0.00496	0.0100	0.00500	0	99.1	70	130			
Beryllium	0.000938	0.00100	0.00100	0	93.8	70	130			
Cadmium	0.000942	0.00100	0.00100	0	94.2	70	130			
Calcium	0.0971	0.300	0.100	0	97.1	70	130			
Chromium	0.00526	0.00500	0.00500	0	105	70	130			
Cobalt	0.00514	0.00500	0.00500	0	103	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Lithium	0.00948	0.0100	0.0100	0	94.8	70	130			
Molybdenum	0.00481	0.00500	0.00500	0	96.1	70	130			
Selenium	0.00496	0.00500	0.00500	0	99.2	70	130			
Thallium	0.000989	0.00150	0.00100	0	98.9	70	130			

Sample ID	CCV4-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:59:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.208	0.00250	0.200	0	104	90	110			
Arsenic	0.210	0.00500	0.200	0	105	90	110			
Barium	0.207	0.0100	0.200	0	103	90	110			
Beryllium	0.209	0.00100	0.200	0	104	90	110			
Cadmium	0.203	0.00100	0.200	0	102	90	110			
Calcium	5.14	0.300	5.00	0	103	90	110			
Chromium	0.210	0.00500	0.200	0	105	90	110			
Cobalt	0.206	0.00500	0.200	0	103	90	110			
Lead	0.204	0.00100	0.200	0	102	90	110			
Lithium	0.208	0.0100	0.200	0	104	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170109B

Sample ID	CCV4-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:59:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.200	0.00500	0.200	0	100	90	110			
Selenium		0.210	0.00500	0.200	0	105	90	110			
Thallium		0.207	0.00150	0.200	0	104	90	110			

Sample ID	LCVL4-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 1:10:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00194	0.00250	0.00200	0	97.2	70	130			
Arsenic	0.00531	0.00500	0.00500	0	106	70	130			
Barium	0.00489	0.0100	0.00500	0	97.8	70	130			
Beryllium	0.000980	0.00100	0.00100	0	98.0	70	130			
Cadmium	0.000940	0.00100	0.00100	0	94.0	70	130			
Calcium	0.109	0.300	0.100	0	109	70	130			
Chromium	0.00511	0.00500	0.00500	0	102	70	130			
Cobalt	0.00517	0.00500	0.00500	0	103	70	130			
Lead	0.000998	0.00100	0.00100	0	99.8	70	130			
Lithium	0.0108	0.0100	0.0100	0	108	70	130			
Molybdenum	0.00472	0.00500	0.00500	0	94.4	70	130			
Selenium	0.00560	0.00500	0.00500	0	112	70	130			
Thallium	0.000985	0.00150	0.00100	0	98.5	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170111E

The QC data in batch 78572 applies to the following samples: 1612275-05A, 1612275-06A, 1612275-07A, 1612275-08A

Sample ID	MB-78572	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L				
SampType:	MBLK	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:00:00 PM	Prep Date:	1/4/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	<0.0100	0.0300									

Sample ID	LCS-78572	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCS	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:02:00 PM	Prep Date:	1/4/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.199	0.0300	0.200	0	99.6	80	120				

Sample ID	LCSD-78572	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:04:00 PM	Prep Date:	1/4/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.187	0.0300	0.200	0	93.6	80	120	6.22	15		

Sample ID	1612275-08A SD	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L				
SampType:	SD	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:11:00 PM	Prep Date:	1/4/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0					0	10	
Arsenic	<0.0100	0.0250	0	0					0	10	
Barium	0.0473	0.0500	0	0.0487					2.82	10	
Beryllium	<0.00150	0.00500	0	0					0	10	
Boron	<0.0500	0.150	0	0.0540					0	10	
Cadmium	<0.00150	0.00500	0	0					0	10	
Chromium	<0.0100	0.0250	0	0					0	10	
Cobalt	<0.0150	0.0250	0	0					0	10	
Lead	<0.00150	0.00500	0	0.000334					0	10	
Lithium	<0.0250	0.0500	0	0.0174					0	10	
Molybdenum	<0.0100	0.0250	0	0					0	10	
Selenium	<0.0100	0.0250	0	0					0	10	
Thallium	<0.00250	0.00750	0	0					0	10	

Sample ID	1612275-08A PDS	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:31:00 PM	Prep Date:	1/4/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.188	0.00250	0.200	0	94.1	80	120				
Arsenic	0.197	0.00500	0.200	0	98.6	80	120				
Barium	0.252	0.0100	0.200	0.0487	101	80	120				
Beryllium	0.192	0.00100	0.200	0	96.1	80	120				

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170111E

Sample ID	1612275-08A PDS	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:31:00 PM	Prep Date:	1/4/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.240	0.0300	0.200	0.0540	93.0	80	120			
Cadmium	0.197	0.00100	0.200	0	98.4	80	120			
Chromium	0.209	0.00500	0.200	0	104	80	120			
Cobalt	0.195	0.00500	0.200	0	97.4	80	120			
Lead	0.195	0.00100	0.200	0.000334	97.1	80	120			
Lithium	0.200	0.0100	0.200	0.0174	91.4	80	120			
Molybdenum	0.196	0.00500	0.200	0	97.8	80	120			
Selenium	0.195	0.00500	0.200	0	97.4	80	120			
Thallium	0.192	0.00150	0.200	0	96.0	80	120			

Sample ID	1612275-08A MS	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:33:00 PM	Prep Date:	1/4/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.208	0.00250	0.200	0	104	80	120			
Arsenic	0.204	0.00500	0.200	0	102	80	120			
Barium	0.250	0.0100	0.200	0.0487	101	80	120			
Beryllium	0.195	0.00100	0.200	0	97.5	80	120			
Boron	0.252	0.0300	0.200	0.0540	99.0	80	120			
Cadmium	0.201	0.00100	0.200	0	100	80	120			
Chromium	0.205	0.00500	0.200	0	102	80	120			
Cobalt	0.196	0.00500	0.200	0	98.2	80	120			
Lead	0.196	0.00100	0.200	0.000334	98.1	80	120			
Lithium	0.210	0.0100	0.200	0.0174	96.3	80	120			
Molybdenum	0.200	0.00500	0.200	0	99.9	80	120			
Selenium	0.202	0.00500	0.200	0	101	80	120			
Thallium	0.196	0.00150	0.200	0	98.0	80	120			

Sample ID	1612275-08A MSD	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:35:00 PM	Prep Date:	1/4/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.214	0.00250	0.200	0	107	80	120	2.81	15	
Arsenic	0.202	0.00500	0.200	0	101	80	120	0.988	15	
Barium	0.259	0.0100	0.200	0.0487	105	80	120	3.62	15	
Beryllium	0.193	0.00100	0.200	0	96.5	80	120	1.05	15	
Boron	0.249	0.0300	0.200	0.0540	97.6	80	120	1.06	15	
Cadmium	0.205	0.00100	0.200	0	102	80	120	2.11	15	
Chromium	0.204	0.00500	0.200	0	102	80	120	0.134	15	
Cobalt	0.198	0.00500	0.200	0	99.0	80	120	0.811	15	
Lead	0.196	0.00100	0.200	0.000334	98.0	80	120	0.016	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170111E

Sample ID	1612275-08A MSD	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L		
SampType:	MSD	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:35:00 PM	Prep Date:	1/4/2017		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Lithium	0.211	0.0100	0.200	0.0174	96.6	80	120	0.302	15
Molybdenum	0.207	0.00500	0.200	0	103	80	120	3.39	15
Selenium	0.198	0.00500	0.200	0	99.2	80	120	1.59	15
Thallium	0.198	0.00150	0.200	0	98.8	80	120	0.842	15

Sample ID	1612275-08A SD	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L		
SampType:	SD	Run ID:	ICP-MS4_170111E	Analysis Date:	1/12/2017 8:23:00 AM	Prep Date:	1/4/2017		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Calcium	12.9	15.0	0	12.5				3.21	10

Sample ID	1612275-08A PDS	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L		
SampType:	PDS	Run ID:	ICP-MS4_170111E	Analysis Date:	1/12/2017 8:29:00 AM	Prep Date:	1/4/2017		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Calcium	169	3.00	50.0	12.5	313	80	120		S

Sample ID	1612275-08A MS	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L		
SampType:	MS	Run ID:	ICP-MS4_170111E	Analysis Date:	1/12/2017 8:32:00 AM	Prep Date:	1/4/2017		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Calcium	17.6	3.00	5.00	12.5	103	80	120		

Sample ID	1612275-08A MSD	Batch ID:	78572	TestNo:	SW6020A	Units:	mg/L		
SampType:	MSD	Run ID:	ICP-MS4_170111E	Analysis Date:	1/12/2017 8:34:00 AM	Prep Date:	1/4/2017		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Calcium	17.7	3.00	5.00	12.5	103	80	120	0.218	15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170111E

Sample ID	ICV-170111			Batch ID:	R89913		TestNo:	SW6020A		Units:	mg/L	
SampType:	ICV			Run ID:	ICP-MS4_170111E		Analysis Date:	1/11/2017 1:37:00 PM		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Antimony	0.101	0.00250	0.100	0	101	90	110			
Arsenic	0.0975	0.00500	0.100	0	97.5	90	110			
Barium	0.100	0.0100	0.100	0	100	90	110			
Beryllium	0.0988	0.00100	0.100	0	98.8	90	110			
Boron	0.0919	0.0300	0.100	0	91.9	90	110			
Cadmium	0.0990	0.00100	0.100	0	99.0	90	110			
Chromium	0.105	0.00500	0.100	0	105	90	110			
Cobalt	0.102	0.00500	0.100	0	102	90	110			
Lead	0.0975	0.00100	0.100	0	97.5	90	110			
Lithium	0.0975	0.0100	0.100	0	97.5	90	110			
Molybdenum	0.0993	0.00500	0.100	0	99.3	90	110			
Selenium	0.0960	0.00500	0.100	0	96.0	90	110			
Thallium	0.0966	0.00150	0.100	0	96.6	90	110			

Sample ID	LCVL-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 1:41:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00197	0.00250	0.00200	0	98.4	70	130			
Arsenic	0.00484	0.00500	0.00500	0	96.7	70	130			
Barium	0.00485	0.0100	0.00500	0	97.0	70	130			
Beryllium	0.000892	0.00100	0.00100	0	89.2	70	130			
Boron	0.0156	0.0300	0.0200	0	78.2	70	130			
Cadmium	0.000960	0.00100	0.00100	0	96.0	70	130			
Chromium	0.00459	0.00500	0.00500	0	91.7	70	130			
Cobalt	0.00504	0.00500	0.00500	0	101	70	130			
Lead	0.00108	0.00100	0.00100	0	108	70	130			
Lithium	0.0101	0.0100	0.0100	0	101	70	130			
Molybdenum	0.00522	0.00500	0.00500	0	104	70	130			
Selenium	0.00471	0.00500	0.00500	0	94.2	70	130			
Thallium	0.00100	0.00150	0.00100	0	100	70	130			

Sample ID	CCV3-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 4:55:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.208	0.00250	0.200	0	104	90	110			
Arsenic	0.201	0.00500	0.200	0	101	90	110			
Barium	0.205	0.0100	0.200	0	103	90	110			
Beryllium	0.198	0.00100	0.200	0	99.1	90	110			
Boron	0.202	0.0300	0.200	0	101	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170111E

Sample ID	CCV3-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 4:55:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.205	0.00100	0.200	0	103	90	110			
Chromium	0.206	0.00500	0.200	0	103	90	110			
Cobalt	0.203	0.00500	0.200	0	102	90	110			
Lead	0.199	0.00100	0.200	0	99.6	90	110			
Lithium	0.203	0.0100	0.200	0	102	90	110			
Molybdenum	0.202	0.00500	0.200	0	101	90	110			
Selenium	0.199	0.00500	0.200	0	99.3	90	110			
Thallium	0.199	0.00150	0.200	0	99.6	90	110			

Sample ID	LCVL3-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 4:57:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00218	0.00250	0.00200	0	109	70	130			
Arsenic	0.00511	0.00500	0.00500	0	102	70	130			
Barium	0.00510	0.0100	0.00500	0	102	70	130			
Beryllium	0.00112	0.00100	0.00100	0	112	70	130			
Boron	0.0215	0.0300	0.0200	0	108	70	130			
Cadmium	0.00112	0.00100	0.00100	0	112	70	130			
Chromium	0.00465	0.00500	0.00500	0	93.1	70	130			
Cobalt	0.00520	0.00500	0.00500	0	104	70	130			
Lead	0.00108	0.00100	0.00100	0	108	70	130			
Lithium	0.0109	0.0100	0.0100	0	109	70	130			
Molybdenum	0.00537	0.00500	0.00500	0	107	70	130			
Selenium	0.00577	0.00500	0.00500	0	115	70	130			
Thallium	0.00108	0.00150	0.00100	0	108	70	130			

Sample ID	CCV4-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:37:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.209	0.00250	0.200	0	105	90	110			
Arsenic	0.201	0.00500	0.200	0	101	90	110			
Barium	0.205	0.0100	0.200	0	103	90	110			
Beryllium	0.195	0.00100	0.200	0	97.4	90	110			
Boron	0.189	0.0300	0.200	0	94.4	90	110			
Cadmium	0.205	0.00100	0.200	0	103	90	110			
Chromium	0.206	0.00500	0.200	0	103	90	110			
Cobalt	0.201	0.00500	0.200	0	101	90	110			
Lead	0.199	0.00100	0.200	0	99.7	90	110			
Lithium	0.196	0.0100	0.200	0	98.1	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170111E

Sample ID	CCV4-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:37:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.203	0.00500	0.200	0	102	90	110			
Selenium		0.200	0.00500	0.200	0	100	90	110			
Thallium		0.197	0.00150	0.200	0	98.7	90	110			

Sample ID	LCVL4-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 5:39:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00238	0.00250	0.00200	0	119	70	130			
Arsenic	0.00510	0.00500	0.00500	0	102	70	130			
Barium	0.00513	0.0100	0.00500	0	103	70	130			
Beryllium	0.000939	0.00100	0.00100	0	93.9	70	130			
Boron	0.0166	0.0300	0.0200	0	83.2	70	130			
Cadmium	0.00112	0.00100	0.00100	0	112	70	130			
Chromium	0.00475	0.00500	0.00500	0	95.0	70	130			
Cobalt	0.00517	0.00500	0.00500	0	103	70	130			
Lead	0.00108	0.00100	0.00100	0	108	70	130			
Lithium	0.0109	0.0100	0.0100	0	109	70	130			
Molybdenum	0.00560	0.00500	0.00500	0	112	70	130			
Selenium	0.00565	0.00500	0.00500	0	113	70	130			
Thallium	0.00115	0.00150	0.00100	0	115	70	130			

Sample ID	CCV9-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170111E	Analysis Date:	1/11/2017 9:20:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.72	0.300	5.00	0	94.4	90	110			

Sample ID	LCVL9-170111	Batch ID:	R89913		TestNo:	SW6020A		Units:	mg/L		
SampType:	LCVL	Run ID:	ICP-MS4_170111E		Analysis Date:	1/11/2017 9:24:00 PM		Prep Date:			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		0.102	0.300	0.100	0	102	70	130			

Sample ID	CCV10-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170111E	Analysis Date:	1/12/2017 8:40:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		4.83	0.300	5.00	0	96.5	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170111E

Sample ID	LCVL10-170111	Batch ID:	R89913	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170111E	Analysis Date:	1/12/2017 8:44:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0935	0.300	0.100	0	93.5	70	130			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_170103A

The QC data in batch 78554 applies to the following samples: 1612275-01D, 1612275-02D, 1612275-03D, 1612275-04D, 1612275-05D, 1612275-06D, 1612275-07D, 1612275-08D

Sample ID	MB-78554		Batch ID:	78554		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC2_170103A		Analysis Date:	1/3/2017 9:25:23 AM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-78554		Batch ID:	78554		TestNo:	E300		Units:	mg/L	
SampType:	LCS		Run ID:	IC2_170103A		Analysis Date:	1/3/2017 9:39:59 AM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.92	1.00	10.00	0	99.2	90	110			
Fluoride	3.86	0.400	4.000	0	96.5	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID	LCSD-78554		Batch ID:	78554		TestNo:	E300		Units:	mg/L	
SampType:	LCSD		Run ID:	IC2_170103A		Analysis Date:	1/3/2017 9:54:36 AM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.97	1.00	10.00	0	99.7	90	110	0.450	20	
Fluoride	3.92	0.400	4.000	0	98.0	90	110	1.57	20	
Sulfate	30.9	3.00	30.00	0	103	90	110	1.09	20	

Sample ID	1612275-02DMS	Batch ID:	78554	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC2_170103A	Analysis Date:	1/3/2017 1:09:52 PM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	273	10.0	200.0	57.22	108	90	110			
Fluoride	203	4.00	200.0	0	101	90	110			
Sulfate	231	30.0	200.0	19.67	105	90	110			

Sample ID	1612275-02DMSD		Batch ID:	78554		TestNo:	E300		Units:	mg/L	
SampType:	MSD		Run ID:	IC2_170103A		Analysis Date:	1/3/2017 1:24:29 PM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	273	10.0	200.0	57.22	108	90	110	0.224	20	
Fluoride	205	4.00	200.0	0	102	90	110	0.866	20	
Sulfate	231	30.0	200.0	19.67	106	90	110	0.083	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_170103A

Sample ID	ICV-170103	Batch ID:	R89763	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_170103A	Analysis Date:	1/3/2017 8:48:31 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.8	1.00	25.00	0	103	90	110			
Fluoride	10.1	0.400	10.00	0	101	90	110			
Sulfate	79.9	3.00	75.00	0	106	90	110			

Sample ID	CCV1-170103	Batch ID:	R89763	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_170103A	Analysis Date:	1/3/2017 11:55:37 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Fluoride	3.97	0.400	4.000	0	99.2	90	110			
Sulfate	31.2	3.00	30.00	0	104	90	110			

Sample ID	CCV2-170103	Batch ID:	R89763	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_170103A	Analysis Date:	1/3/2017 3:28:49 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Fluoride	4.07	0.400	4.000	0	102	90	110			
Sulfate	31.0	3.00	30.00	0	103	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_161228A

The QC data in batch 78491 applies to the following samples: 1612275-01D, 1612275-02D, 1612275-03D, 1612275-04D, 1612275-05D, 1612275-06D, 1612275-07D, 1612275-08D

Sample ID	1612275-01D-DUP	Batch ID:	78491	TestNo:	M4500-H+ B	Units:	pH	Units@19.3°C			
SampType:	DUP	Run ID:	TITRATOR_161228A	Analysis Date:	12/28/2016 9:24:00 AM	Prep Date:	12/28/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		6.50	0	0	6.430				1.08	5	

Sample ID: 1612277-01D-DUP	Batch ID: 78491	TestNo: M4500-H+ B	Units: pH Units@19.9°C							
SampType: DUP	Run ID: TITRATOR_161228A	Analysis Date: 12/28/2016 9:48:00 AM	Prep Date: 12/28/2016							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.79	0	0	6.750				0.591	5	

LUMINANT

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_161228A

Sample ID	ICV-161228			Batch ID:	R89686		TestNo:	M4500-H+ B		Units:	pH Units@21.7°C	
SampType:	ICV			Run ID:	TITRATOR_161228A		Analysis Date:	12/28/2016 8:24:00 AM		Prep Date:	12/28/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	9.91	0	10.00	0	99.1	99	101			

Sample ID	CCV1-161228	Batch ID:	R89686	TestNo:	M4500-H+ B	Units:	pH Units@20.9°C				
SampType:	CCV	Run ID:	TITRATOR_161228A	Analysis Date:	12/28/2016 9:45:00 AM	Prep Date:	12/28/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	6.97	0	7.000	0	99.6	97.1	102.9			

Sample ID	CCV2-161228		Batch ID:	R89686		TestNo:	M4500-H+ B		Units:	pH Units@21.8°C		
SampType:	CCV		Run ID:	TITRATOR_161228A		Analysis Date:	12/28/2016 10:06:00 A		Prep Date:	12/28/2016		
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	6.97	0	7.000	0	99.6	97.1	102.9			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612275
Project: Oak Grove Ash Landfill

ANALYTICAL QC SUMMARY REPORT

RunID: WC_161227C

The QC data in batch 78478 applies to the following samples: 1612275-01D, 1612275-02D, 1612275-03D, 1612275-04D, 1612275-05D, 1612275-06D, 1612275-07D, 1612275-08D

Sample ID	MB-78478	Batch ID:	78478	TestNo:	M2540C	Units:	mg/L			
SampType:	MBLK	Run ID:	WC_161227C	Analysis Date:	12/28/2016 8:41:00 AM	Prep Date:	12/27/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-78478		Batch ID:	78478		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS		Run ID:	WC_161227C		Analysis Date:	12/28/2016 8:41:00 AM		Prep Date:	12/27/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 750 10.0 745.6 0 101 90 113

Sample ID: 1612246-12D-DUP	Batch ID: 78478	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_161227C	Analysis Date: 12/28/2016 8:41:00 AM	Prep Date: 12/27/2016							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3990 50.0 0 4125 3.45 5

Sample ID: 1612277-01D-DUP	Batch ID: 78478	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_161227C	Analysis Date: 12/28/2016 8:41:00 AM	Prep Date: 12/27/2016							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 915 50.0 0 905.0 1.10 5

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 NELAC certified

Case Narrative

Lab No: 20161290

This report contains the analytical results for the 8 sample(s) received under chain of custody by ESC Lab Sciences on 12/29/2016 1:35:08 PM. These samples are associated with your 1612275 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances



Client : DHL Analytical, Inc.
Client Project : 1612275
Lab Number : 20161290
Date Reported : 01/31/17
Date Received : 12/29/16
Page Number : 2 of 4

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20161290-01

Client ID : MW-02

Date Sampled : 12/21/2016 1:10:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.20 +/- 0.601	0.686	pCi/l			
Radium-226	SM 7500 Ra B M*	0.342 +/- 0.167	0.183	pCi/l	01/19/17	01/24/17	AK
Radium-228	EPA 904*/9320*	1.86 +/- 0.434	0.503	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161290-02

Client ID : AL-10

Date Sampled : 12/22/2016 9:30:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.06 +/- 0.701	0.853	pCi/l			
Radium-226	SM 7500 Ra B M*	0.467 +/- 0.173	0.156	pCi/l	01/19/17	01/24/17	AK
Radium-228	EPA 904*/9320*	1.59 +/- 0.528	0.697	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161290-03

Client ID : MW-09

Date Sampled : 12/22/2016 10:35:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.62 +/- 0.747	0.866	pCi/l			
Radium-226	SM 7500 Ra B M*	0.935 +/- 0.219	0.159	pCi/l	01/20/17	01/27/17	AK
Radium-228	EPA 904*/9320*	1.68 +/- 0.528	0.707	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161290-04

Client ID : MW-08R

Date Sampled : 12/22/2016 11:45:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.21 +/- 0.721	0.875	pCi/l			
Radium-226	SM 7500 Ra B M*	0.604 +/- 0.204	0.161	pCi/l	01/20/17	01/27/17	AK
Radium-228	EPA 904*/9320*	1.61 +/- 0.517	0.714	pCi/l	01/23/17	01/26/17	JR



Client : DHL Analytical, Inc.
Client Project : 1612275
Lab Number : 20161290
Date Reported : 01/31/17
Date Received : 12/29/16
Page Number : 3 of 4

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20161290-05

Client ID : MW-05

Date Sampled : 12/22/2016 3:15:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		0.450 +/- 0.656	0.942	pCi/l			
Radium-226	SM 7500 Ra B M*	0.146 +/- 0.181	0.270	pCi/l	01/20/17	01/27/17	AK
Radium-228	EPA 904*/9320*	0.304 +/- 0.475	0.672	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161290-06

Client ID : DUP-01

Date Sampled : 12/22/2016 3:15:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		0.040 +/- 0.713	1.11	pCi/l			
Radium-226	SM 7500 Ra B M*	0.040 +/- 0.205	0.337	pCi/l	01/20/17	01/27/17	AK
Radium-228	EPA 904*/9320*	-0.055 +/- 0.508	0.775	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161290-07

Client ID : EB-1

Date Sampled : 12/22/2016 4:45:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		1.18 +/- 0.622	0.781	pCi/l			
Radium-226	SM 7500 Ra B M*	0.402 +/- 0.176	0.160	pCi/l	01/20/17	01/27/17	AK
Radium-228	EPA 904*/9320*	0.774 +/- 0.446	0.621	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161290-08

Client ID : MW-07

Date Sampled : 12/22/2016 2:25:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		0.457 +/- 0.530	0.734	pCi/l			
Radium-226	SM 7500 Ra B M*	0.108 +/- 0.157	0.245	pCi/l	01/20/17	01/27/17	AK
Radium-228	EPA 904*/9320*	0.349 +/- 0.373	0.489	pCi/l	01/23/17	01/26/17	JR

Client : DHL Analytical, Inc.
 Client Project : 1612275
 Lab Number : 20161290
 Date Reported : 01/31/17
 Date Received : 12/29/16
 Page Number : 4 of 4

QC Report

Parameter	Blank	LCS %REC	LCSD %REC RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC RPD	Batch ID
Radium-226	-0.009	107.0		NC	1.140	123.0	125.0 1.9	R1182
Radium-226	0.002	103.0		NC	0.547	94.2	108.0 13.6	R1181
Radium-228	-0.276	83.3		NC	0.521	77.1	73.4 4.8	R3912

Lab Approval:



Ron Eidson
Director of Radiochemistry

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1612275

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515
FAX:
Acct #: DHLRRTX

27-Dec-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					E904.0	SM7500Ra-B M				
MW-02	Aqueous	-01B	12/21/16 01:10 PM	1LHDPEHNO3	1					
MW-02	Aqueous	-01C	12/21/16 01:10 PM	500HDPEHNO3		1				
AL-10	Aqueous	-02B	12/22/16 09:30 AM	1LHDPEHNO3	1					
AL-10	Aqueous	-02C	12/22/16 09:30 AM	500HDPEHNO3		1				
MW-09	Aqueous	-03B	12/22/16 10:35 AM	1LHDPEHNO3	1					
MW-09	Aqueous	-03C	12/22/16 10:35 AM	500HDPEHNO3		1				
MW-08R	Aqueous	-04B	12/22/16 11:45 AM	1LHDPEHNO3	1					
MW-08R	Aqueous	-04C	12/22/16 11:45 AM	500HDPEHNO3		1				
MW-05	Aqueous	-05B	12/22/16 03:15 PM	1LHDPEHNO3	1					
MW-05	Aqueous	-05C	12/22/16 03:15 PM	500HDPEHNO3		1				
DUP-01	Aqueous	-06B	12/22/16 03:15 PM	1LHDPEHNO3	1					
DUP-01	Aqueous	-06C	12/22/16 03:15 PM	500HDPEHNO3		1				
EB-1	Equip Blank	-07B	12/22/16 04:45 PM	1LHDPEHNO3	1					
EB-1	Equip Blank	-07C	12/22/16 04:45 PM	500HDPEHNO3		1				
MW-07	Aqueous	-08B	12/22/16 02:25 PM	1LHDPEHNO3	1					
MW-07	Aqueous	-08C	12/22/16 02:25 PM	500HDPEHNO3		1				

General Comments:

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

20161220
L 881420

	Date/Time		Date/Time
Relinquished by: <u>Bank</u>	12/27/16 1730	Received by: <u>Donesta</u>	12/27/16 1730
Relinquished by: _____	_____	Received by: <u>J-2</u>	12/29/16 1335

SAMPLE LOGIN

Date Received: 12/29/2016 1:35:0

Lab Number: 20161290

Due: 1/27/2017

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20161290-01 B	MW-02	NPW	12/21/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
20161290-01 A	MW-02	NPW	12/21/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161290-02 A	AL-10	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161290-02 B	AL-10	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161290-03 A	MW-09	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161290-03 B	MW-09	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161290-04 B	MW-08R	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
20161290-04 A	MW-08R	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161290-05 B	MW-05	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
20161290-05 A	MW-05	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161290-06 A	DUP-01	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161290-06 B	DUP-01	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161290-07 A	EB-1	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161290-07 B	EB-1	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20161290-08 B	MW-07	NPW	12/22/16	Plastic	1 L	HNO ₃ , pH < 2	☒	Yes	Yes
20161290-08 A	MW-07	NPW	12/22/16	Plastic	500 ml	HNO ₃ , pH < 2	☒	Yes	Yes
	Radium-226		SM 7500 Ra B M*						
	Radium-228		EPA 904*/9320*						

CONTAINER INSPECTION

Coolers 2 Custody Seals Broken ☒ Temperature: Amb °C Ice ☐ Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken ☒ Chain of Custody Record ☒ Labels in Tact ☒ Radiation Survey Complete ☒

Anomalles

Inspected By: [Signature] DATE 12/29/16
 QA or Designee Review: [Signature] DATE 12/29/16
 Sample Custodian Review: [Signature] DATE 12/29/16

Project Notes:

LUMINANT



January 31, 2017

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664
TEL: (512) 671-3434
FAX (512) 671-3446
RE: Oak Grove FGD Pond Area

Order No.: 1612277

Dear Will Vienne:

DHL Analytical, Inc. received 9 sample(s) on 12/23/2016 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-17



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John Dupont

From: Sara Taube [Sara.Taube@pbw/tic.com]
Sent: Wednesday, July 22, 2015 12:05 PM
To: John Dupont
Subject: CCR Appendix III and IV
Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

Here are the Appendix III and Appendix IV constituents that we will need to have analyzed under the CCR Rule.

Appendix III

Boron
Calcium
Chloride
Fluoride
pH
sulfate
TDS

Appendix IV

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

Cheers,

Sara

10/26/2015

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 12/23/2016

Work Order Number 1612277

Received by AL

Checklist completed by: [Signature] 12/27/2016
Signature Date

Reviewed by [Signature] 12/27/2016
Initials Date

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	0.1 °C, 0.2, 0.1
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH<2 acceptable upon receipt?	Yes ☒	No ☐	NA ☐ LOT # 8086
	Adjusted? <u>NO</u>		Checked by <u>[Signature]</u>
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____		Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Lab Order: 1612277

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M4500-H+ B - pH of a Water Analysis
Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M.
Analyzed at ESC Lab Sciences.

LOG IN

The samples were received and log-in performed on 12/23/16. A total of 9 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 1/8/17 the matrix spike recovery was slightly below control limits for Calcium. This is flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 1/8/17 the PDS recovery was below control limits for Calcium. This is flagged accordingly. The serial dilution was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 1/8/17 the RPD for the serial dilution was slightly above control limits for Lithium. This is flagged accordingly. The PDS was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Lab Order: 1612277

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1612277-01	FGD-6		12/22/16 09:15 AM	12/23/2016
1612277-02	FGD-4		12/22/16 10:25 AM	12/23/2016
1612277-03	FGD-2		12/22/16 11:30 AM	12/23/2016
1612277-04	FGD-5		12/22/16 12:25 PM	12/23/2016
1612277-05	FGD-1		12/22/16 01:25 PM	12/23/2016
1612277-06	FGD-3		12/22/16 03:25 PM	12/23/2016
1612277-07	FGD-8		12/23/16 08:20 AM	12/23/2016
1612277-08	FGD-12		12/23/16 09:30 AM	12/23/2016
1612277-09	FGD-11		12/22/16 04:25 PM	12/23/2016

Lab Order: 1612277
Client: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1612277-01A	FGD-6	12/22/16 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-6	12/22/16 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-6	12/22/16 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-6	12/22/16 09:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-01D	FGD-6	12/22/16 09:15 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-6	12/22/16 09:15 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-6	12/22/16 09:15 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-6	12/22/16 09:15 AM	Aqueous	M2540C	TDS Preparation	12/27/16 03:09 PM	78478
1612277-02A	FGD-4	12/22/16 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-4	12/22/16 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-4	12/22/16 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-4	12/22/16 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-02D	FGD-4	12/22/16 10:25 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-4	12/22/16 10:25 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-4	12/22/16 10:25 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-4	12/22/16 10:25 AM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
1612277-03A	FGD-2	12/22/16 11:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-2	12/22/16 11:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-2	12/22/16 11:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-2	12/22/16 11:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-03D	FGD-2	12/22/16 11:30 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-2	12/22/16 11:30 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-2	12/22/16 11:30 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-2	12/22/16 11:30 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-2	12/22/16 11:30 AM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
1612277-04A	FGD-5	12/22/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-5	12/22/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-5	12/22/16 12:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561

Lab Order: 1612277
Client: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1612277-04A	FGD-5	12/22/16 12:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-04D	FGD-5	12/22/16 12:25 PM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-5	12/22/16 12:25 PM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-5	12/22/16 12:25 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-5	12/22/16 12:25 PM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
1612277-05A	FGD-1	12/22/16 01:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-1	12/22/16 01:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-1	12/22/16 01:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-05D	FGD-1	12/22/16 01:25 PM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-1	12/22/16 01:25 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-1	12/22/16 01:25 PM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
1612277-06A	FGD-3	12/22/16 03:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-3	12/22/16 03:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-3	12/22/16 03:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-3	12/22/16 03:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-06D	FGD-3	12/22/16 03:25 PM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-3	12/22/16 03:25 PM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-3	12/22/16 03:25 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-3	12/22/16 03:25 PM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
1612277-07A	FGD-8	12/23/16 08:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-8	12/23/16 08:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-8	12/23/16 08:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-8	12/23/16 08:20 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-07D	FGD-8	12/23/16 08:20 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-8	12/23/16 08:20 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-8	12/23/16 08:20 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-8	12/23/16 08:20 AM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
1612277-08A	FGD-12	12/23/16 09:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561

Lab Order: 1612277
Client: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1612277-08A	FGD-12	12/23/16 09:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-12	12/23/16 09:30 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-12	12/23/16 09:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-08D	FGD-12	12/23/16 09:30 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-12	12/23/16 09:30 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-12	12/23/16 09:30 AM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-12	12/23/16 09:30 AM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
1612277-09A	FGD-12	12/23/16 09:30 AM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
	FGD-11	12/22/16 04:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-11	12/22/16 04:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-11	12/22/16 04:25 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/03/17 10:40 AM	78561
	FGD-11	12/22/16 04:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/29/16 09:04 AM	78517
1612277-09D	FGD-11	12/22/16 04:25 PM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-11	12/22/16 04:25 PM	Aqueous	E300	Anion Preparation	01/04/17 09:03 AM	78574
	FGD-11	12/22/16 04:25 PM	Aqueous	M4500-H+ B	pH Preparation	12/28/16 08:16 AM	78491
	FGD-11	12/22/16 04:25 PM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513

Lab Order: 1612277
Client: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1612277-01A	FGD-6	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:11 AM	CETAC2_HG_161230 B
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 04:49 PM	ICP-MS4_170108C
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	10	01/09/17 11:50 AM	ICP-MS4_170109B
	FGD-6	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 11:55 AM	ICP-MS4_170110C
1612277-01D	FGD-6	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 10:27 AM	IC2_170104A
	FGD-6	Aqueous	E300	Anions by IC method - Water	78574	10	01/04/17 12:44 PM	IC2_170104A
	FGD-6	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:43 AM	TITRATOR_161228A
	FGD-6	Aqueous	M2540C	Total Dissolved Solids	78478	1	12/28/16 08:41 AM	WC_161227C
1612277-02A	FGD-4	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:13 AM	CETAC2_HG_161230 B
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 11:51 AM	ICP-MS4_170110C
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 04:45 PM	ICP-MS4_170108C
	FGD-4	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	10	01/09/17 11:46 AM	ICP-MS4_170109B
1612277-02D	FGD-4	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 10:41 AM	IC2_170104A
	FGD-4	Aqueous	E300	Anions by IC method - Water	78574	10	01/04/17 02:00 PM	IC2_170104A
	FGD-4	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:49 AM	TITRATOR_161228A
	FGD-4	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B
1612277-03A	FGD-2	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:15 AM	CETAC2_HG_161230 B
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 04:51 PM	ICP-MS4_170108C
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 11:57 AM	ICP-MS4_170110C
	FGD-2	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	50	01/09/17 11:52 AM	ICP-MS4_170109B
1612277-03D	FGD-2	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 10:56 AM	IC2_170104A
	FGD-2	Aqueous	E300	Anions by IC method - Water	78574	10	01/04/17 02:15 PM	IC2_170104A
	FGD-2	Aqueous	E300	Anions by IC method - Water	78574	100	01/04/17 04:04 PM	IC2_170104A
	FGD-2	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:51 AM	TITRATOR_161228A
	FGD-2	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B
1612277-04A	FGD-5	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:18 AM	CETAC2_HG_161230 B

Lab Order: 1612277
Client: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1612277-04A	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 04:53 PM	ICP-MS4_170108C
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	10	01/09/17 11:54 AM	ICP-MS4_170109B
	FGD-5	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 11:59 AM	ICP-MS4_170110C
1612277-04D	FGD-5	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 11:10 AM	IC2_170104A
	FGD-5	Aqueous	E300	Anions by IC method - Water	78574	100	01/04/17 02:29 PM	IC2_170104A
	FGD-5	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:52 AM	TITRATOR_161228A
	FGD-5	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B
1612277-05A	FGD-1	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:20 AM	CETAC2_HG_161230 B
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 04:55 PM	ICP-MS4_170108C
	FGD-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 12:01 PM	ICP-MS4_170110C
1612277-05D	FGD-1	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 11:25 AM	IC2_170104A
	FGD-1	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:55 AM	TITRATOR_161228A
	FGD-1	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B
1612277-06A	FGD-3	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:22 AM	CETAC2_HG_161230 B
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 04:57 PM	ICP-MS4_170108C
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	10	01/09/17 11:56 AM	ICP-MS4_170109B
	FGD-3	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 12:03 PM	ICP-MS4_170110C
1612277-06D	FGD-3	Aqueous	E300	Anions by IC method - Water	78574	10	01/04/17 02:44 PM	IC2_170104A
	FGD-3	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 11:40 AM	IC2_170104A
	FGD-3	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:57 AM	TITRATOR_161228A
	FGD-3	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B
1612277-07A	FGD-8	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:25 AM	CETAC2_HG_161230 B
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 04:59 PM	ICP-MS4_170108C
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	100	01/09/17 11:58 AM	ICP-MS4_170109B
	FGD-8	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 12:05 PM	ICP-MS4_170110C
1612277-07D	FGD-8	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 11:54 AM	IC2_170104A

Lab Order: 1612277
Client: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1612277-07D	FGD-8	Aqueous	E300	Anions by IC method - Water	78574	100	01/04/17 02:59 PM	IC2_170104A
	FGD-8	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 09:59 AM	TITRATOR_161228A
	FGD-8	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B
1612277-08A	FGD-12	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:27 AM	CETAC2_HG_161230 B
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 05:01 PM	ICP-MS4_170108C
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	100	01/09/17 12:00 PM	ICP-MS4_170109B
	FGD-12	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 12:07 PM	ICP-MS4_170110C
1612277-08D	FGD-12	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 12:09 PM	IC2_170104A
	FGD-12	Aqueous	E300	Anions by IC method - Water	78574	100	01/04/17 03:13 PM	IC2_170104A
	FGD-12	Aqueous	E300	Anions by IC method - Water	78574	10	01/04/17 03:50 PM	IC2_170104A
	FGD-12	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 10:01 AM	TITRATOR_161228A
	FGD-12	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B
1612277-09A	FGD-11	Aqueous	SW7470A	Mercury Total: Aqueous	78517	1	12/30/16 11:29 AM	CETAC2_HG_161230 B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/08/17 05:03 PM	ICP-MS4_170108C
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	100	01/09/17 12:02 PM	ICP-MS4_170109B
	FGD-11	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	78561	1	01/10/17 12:09 PM	ICP-MS4_170110C
1612277-09D	FGD-11	Aqueous	E300	Anions by IC method - Water	78574	1	01/04/17 12:23 PM	IC2_170104A
	FGD-11	Aqueous	E300	Anions by IC method - Water	78574	100	01/04/17 03:28 PM	IC2_170104A
	FGD-11	Aqueous	M4500-H+ B	pH	78491	1	12/28/16 10:03 AM	TITRATOR_161228A
	FGD-11	Aqueous	M2540C	Total Dissolved Solids	78513	1	12/30/16 08:43 AM	WC_161229B

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-6
Lab ID: 1612277-01
Collection Date: 12/22/16 09:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:11 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 04:49 PM
Arsenic	0.00458	0.00200	0.00500	J	mg/L	1	01/08/17 04:49 PM
Barium	0.129	0.00300	0.0100		mg/L	1	01/08/17 04:49 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:49 PM
Boron	0.0847	0.0100	0.0300		mg/L	1	01/10/17 11:55 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:49 PM
Calcium	35.6	1.00	3.00		mg/L	10	01/09/17 11:50 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:49 PM
Cobalt	0.00352	0.00300	0.00500	J	mg/L	1	01/08/17 04:49 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:49 PM
Lithium	0.0102	0.00500	0.0100		mg/L	1	01/08/17 04:49 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:49 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:49 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 04:49 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	286	3.00	10.0		mg/L	10	01/04/17 12:44 PM
Fluoride	0.204	0.100	0.400	J	mg/L	1	01/04/17 10:27 AM
Sulfate	64.4	1.00	3.00		mg/L	1	01/04/17 10:27 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.75	0	0		pH Units@19.5°C	1	12/28/16 09:43 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	905	50.0	50.0		mg/L	1	12/28/16 08:41 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-4
Lab ID: 1612277-02
Collection Date: 12/22/16 10:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:13 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 04:45 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:45 PM
Barium	0.114	0.00300	0.0100		mg/L	1	01/08/17 04:45 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:45 PM
Boron	0.0628	0.0100	0.0300		mg/L	1	01/10/17 11:51 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:45 PM
Calcium	44.5	1.00	3.00		mg/L	10	01/09/17 11:46 AM
Chromium	0.00230	0.00200	0.00500	J	mg/L	1	01/08/17 04:45 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/08/17 04:45 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:45 PM
Lithium	0.0273	0.00500	0.0100		mg/L	1	01/08/17 04:45 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:45 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:45 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 04:45 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	181	3.00	10.0		mg/L	10	01/04/17 02:00 PM
Fluoride	0.251	0.100	0.400	J	mg/L	1	01/04/17 10:41 AM
Sulfate	65.4	1.00	3.00		mg/L	1	01/04/17 10:41 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.71	0	0		pH Units@20°C	1	12/28/16 09:49 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	676	10.0	10.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-2
Lab ID: 1612277-03
Collection Date: 12/22/16 11:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:15 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 04:51 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:51 PM
Barium	0.158	0.00300	0.0100		mg/L	1	01/08/17 04:51 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:51 PM
Boron	0.251	0.0100	0.0300		mg/L	1	01/10/17 11:57 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:51 PM
Calcium	95.3	5.00	15.0		mg/L	50	01/09/17 11:52 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:51 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/08/17 04:51 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:51 PM
Lithium	0.0217	0.00500	0.0100		mg/L	1	01/08/17 04:51 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:51 PM
Selenium	0.0220	0.00200	0.00500		mg/L	1	01/08/17 04:51 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 04:51 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	570	30.0	100		mg/L	100	01/04/17 04:04 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	01/04/17 10:56 AM
Sulfate	174	10.0	30.0		mg/L	10	01/04/17 02:15 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.62	0	0		pH Units@19.8°C	1	12/28/16 09:51 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1450	50.0	50.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-5
Lab ID: 1612277-04
Collection Date: 12/22/16 12:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:18 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 04:53 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:53 PM
Barium	0.261	0.00300	0.0100		mg/L	1	01/08/17 04:53 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:53 PM
Boron	0.0982	0.0100	0.0300		mg/L	1	01/10/17 11:59 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:53 PM
Calcium	90.6	1.00	3.00		mg/L	10	01/09/17 11:54 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:53 PM
Cobalt	0.00471	0.00300	0.00500	J	mg/L	1	01/08/17 04:53 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:53 PM
Lithium	0.152	0.00500	0.0100		mg/L	1	01/08/17 04:53 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:53 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:53 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 04:53 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	301	30.0	100		mg/L	100	01/04/17 02:29 PM
Fluoride	0.291	0.100	0.400	J	mg/L	1	01/04/17 11:10 AM
Sulfate	65.5	1.00	3.00		mg/L	1	01/04/17 11:10 AM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.46	0	0		pH Units@19.7°C	1	12/28/16 09:52 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	893	10.0	10.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-1
Lab ID: 1612277-05
Collection Date: 12/22/16 01:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:20 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 04:55 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:55 PM
Barium	0.0418	0.00300	0.0100		mg/L	1	01/08/17 04:55 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:55 PM
Boron	0.0580	0.0100	0.0300		mg/L	1	01/10/17 12:01 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:55 PM
Calcium	13.7	0.100	0.300		mg/L	1	01/08/17 04:55 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:55 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/08/17 04:55 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:55 PM
Lithium	0.0385	0.00500	0.0100		mg/L	1	01/08/17 04:55 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:55 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:55 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 04:55 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	42.6	0.300	1.00		mg/L	1	01/04/17 11:25 AM
Fluoride	0.326	0.100	0.400	J	mg/L	1	01/04/17 11:25 AM
Sulfate	49.3	1.00	3.00		mg/L	1	01/04/17 11:25 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.27	0	0		pH Units@20°C	1	12/28/16 09:55 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	271	10.0	10.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-3
Lab ID: 1612277-06
Collection Date: 12/22/16 03:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:22 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 04:57 PM
Arsenic	0.00226	0.00200	0.00500	J	mg/L	1	01/08/17 04:57 PM
Barium	0.0437	0.00300	0.0100		mg/L	1	01/08/17 04:57 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:57 PM
Boron	0.196	0.0100	0.0300		mg/L	1	01/10/17 12:03 PM
Cadmium	0.00173	0.000300	0.00100		mg/L	1	01/08/17 04:57 PM
Calcium	82.6	1.00	3.00		mg/L	10	01/09/17 11:56 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:57 PM
Cobalt	0.0266	0.00300	0.00500		mg/L	1	01/08/17 04:57 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:57 PM
Lithium	0.110	0.00500	0.0100		mg/L	1	01/08/17 04:57 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:57 PM
Selenium	0.0245	0.00200	0.00500		mg/L	1	01/08/17 04:57 PM
Thallium	0.00124	0.000500	0.00150	J	mg/L	1	01/08/17 04:57 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	290	3.00	10.0		mg/L	10	01/04/17 02:44 PM
Fluoride	1.32	0.100	0.400		mg/L	1	01/04/17 11:40 AM
Sulfate	392	10.0	30.0		mg/L	10	01/04/17 02:44 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.45	0	0		pH Units@19.9°C	1	12/28/16 09:57 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	1490	50.0	50.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-8
Lab ID: 1612277-07
Collection Date: 12/23/16 08:20 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:25 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 04:59 PM
Arsenic	0.0119	0.00200	0.00500		mg/L	1	01/08/17 04:59 PM
Barium	0.894	0.00300	0.0100		mg/L	1	01/08/17 04:59 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:59 PM
Boron	0.0690	0.0100	0.0300		mg/L	1	01/10/17 12:05 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 04:59 PM
Calcium	340	10.0	30.0		mg/L	100	01/09/17 11:58 AM
Chromium	0.00259	0.00200	0.00500	J	mg/L	1	01/08/17 04:59 PM
Cobalt	0.00745	0.00300	0.00500		mg/L	1	01/08/17 04:59 PM
Lead	0.00228	0.000300	0.00100		mg/L	1	01/08/17 04:59 PM
Lithium	0.0185	0.00500	0.0100		mg/L	1	01/08/17 04:59 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 04:59 PM
Selenium	0.00217	0.00200	0.00500	J	mg/L	1	01/08/17 04:59 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 04:59 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	1990	30.0	100		mg/L	100	01/04/17 02:59 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	01/04/17 11:54 AM
Sulfate	144	1.00	3.00		mg/L	1	01/04/17 11:54 AM
PH		M4500-H+ B		Analyst: BJT			
pH	6.22	0	0		pH Units@20°C	1	12/28/16 09:59 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	4330	50.0	50.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-12
Lab ID: 1612277-08
Collection Date: 12/23/16 09:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS							
SW7470A				Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:27 AM
TRACE METALS: ICP-MS - WATER							
SW6020A				Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 05:01 PM
Arsenic	0.00938	0.00200	0.00500		mg/L	1	01/08/17 05:01 PM
Barium	0.557	0.00300	0.0100		mg/L	1	01/08/17 05:01 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 05:01 PM
Boron	0.0512	0.0100	0.0300		mg/L	1	01/10/17 12:07 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 05:01 PM
Calcium	260	10.0	30.0		mg/L	100	01/09/17 12:00 PM
Chromium	0.00435	0.00200	0.00500	J	mg/L	1	01/08/17 05:01 PM
Cobalt	0.00609	0.00300	0.00500		mg/L	1	01/08/17 05:01 PM
Lead	0.00216	0.000300	0.00100		mg/L	1	01/08/17 05:01 PM
Lithium	0.0755	0.00500	0.0100		mg/L	1	01/08/17 05:01 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 05:01 PM
Selenium	0.00786	0.00200	0.00500		mg/L	1	01/08/17 05:01 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 05:01 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: AV			
Chloride	1250	30.0	100		mg/L	100	01/04/17 03:13 PM
Fluoride	0.112	0.100	0.400	J	mg/L	1	01/04/17 12:09 PM
Sulfate	174	10.0	30.0		mg/L	10	01/04/17 03:50 PM
PH							
M4500-H+ B				Analyst: BJT			
pH	6.33	0	0		pH Units@20.2°C	1	12/28/16 10:01 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	3270	50.0	50.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-Jan-17

CLIENT: Pastor, Behling & Wheeler
Project: Oak Grove FGD Pond Area
Project No: 5164-D
Lab Order: 1612277

Client Sample ID: FGD-11
Lab ID: 1612277-09
Collection Date: 12/22/16 04:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	12/30/16 11:29 AM
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: CVD			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	01/08/17 05:03 PM
Arsenic	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 05:03 PM
Barium	0.734	0.00300	0.0100		mg/L	1	01/08/17 05:03 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 05:03 PM
Boron	0.125	0.0100	0.0300		mg/L	1	01/10/17 12:09 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	01/08/17 05:03 PM
Calcium	201	10.0	30.0		mg/L	100	01/09/17 12:02 PM
Chromium	0.00258	0.00200	0.00500	J	mg/L	1	01/08/17 05:03 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	01/08/17 05:03 PM
Lead	0.000635	0.000300	0.00100	J	mg/L	1	01/08/17 05:03 PM
Lithium	0.0124	0.00500	0.0100		mg/L	1	01/08/17 05:03 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 05:03 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	01/08/17 05:03 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	01/08/17 05:03 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: AV			
Chloride	1150	30.0	100		mg/L	100	01/04/17 03:28 PM
Fluoride	0.127	0.100	0.400	J	mg/L	1	01/04/17 12:23 PM
Sulfate	89.5	1.00	3.00		mg/L	1	01/04/17 12:23 PM
PH		M4500-H+ B		Analyst: BJT			
pH	6.76	0	0		pH Units@20.4°C	1	12/28/16 10:03 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: AJH			
Total Dissolved Solids (Residue, Filterable)	2870	50.0	50.0		mg/L	1	12/30/16 08:43 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT**RunID: CETAC2_HG_161230B**

The QC data in batch 78517 applies to the following samples: 1612277-01A, 1612277-02A, 1612277-03A, 1612277-04A, 1612277-05A, 1612277-06A, 1612277-07A, 1612277-08A, 1612277-09A

Sample ID	MB-78517		Batch ID:	78517		TestNo:	SW7470A		Units:	mg/L	
SampType:	MBLK		Run ID:	CETAC2_HG_161230B		Analysis Date:	12/30/2016 10:28:07 A		Prep Date:	12/29/2016	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Mercury <0.0000800 0.000200

Sample ID	LCS-78517		Batch ID:	78517		TestNo:	SW7470A		Units:	mg/L	
SampType:	LCS		Run ID:	CETAC2_HG_161230B		Analysis Date:	12/30/2016 10:30:23 A		Prep Date:	12/29/2016	
Analyte	Result		RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00189 0.000200 0.00200 0 94.5 85 115

Sample ID	LCSD-78517	Batch ID:	78517	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCSD	Run ID:	CETAC2_HG_161230B	Analysis Date:	12/30/2016 10:32:39 A	Prep Date:	12/29/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00191 0.000200 0.00200 0 95.5 85 115 1.05 15

Sample ID	1612246-03A SD	Batch ID:	78517	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_161230B	Analysis Date:	12/30/2016 10:37:11 A	Prep Date:	12/29/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1612246-03A PDS			Batch ID:	78517		TestNo:	SW7470A		Units:	mg/L	
SampType:	PDS			Run ID:	CETAC2_HG_161230B		Analysis Date:	12/30/2016 10:39:27 A		Prep Date:	12/29/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00229 0.000200 0.00250 0 91.6 85 115

Sample ID	1612246-03A MS			Batch ID:	78517			TestNo:	SW7470A			Units:	mg/L		
SampType:	MS			Run ID:	CETAC2_HG_161230B			Analysis Date:	12/30/2016 10:41:43 A			Prep Date:	12/29/2016		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Mercury 0.00196 0.000200 0.00200 0 98.0 80 120

Sample ID	1612246-03A MSD			Batch ID:	78517		TestNo:	SW7470A		Units:	mg/L	
SampType:	MSD			Run ID:	CETAC2_HG_161230B		Analysis Date:	12/30/2016 10:44:00 A		Prep Date:	12/29/2016	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00196 0.000200 0.00200 0 98.0 80 120 0 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_161230B

Sample ID	ICV-161230	Batch ID:	R89725	TestNo:	SW7470A	Units:	mg/L			
SampType:	ICV	Run ID:	CETAC2_HG_161230B	Analysis Date:	12/30/2016 9:49:30 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00394	0.000200	0.00400	0	98.5	90	110			

Sample ID	CCV1-161230	Batch ID:	R89725	TestNo:	SW7470A	Units:	mg/L				
SampType:	CCV	Run ID:	CETAC2_HG_161230B	Analysis Date:	12/30/2016 10:23:33 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.00200	0.000200	0.00200	0	100	90	110			

Sample ID	CCV2-161230	Batch ID:	R89725	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_161230B	Analysis Date:	12/30/2016 11:06:45 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Sample ID	CCV3-161230	Batch ID:	R89725	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_161230B	Analysis Date:	12/30/2016 11:31:55 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00201	0.000200	0.00200	0	101	90	110			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

The QC data in batch 78561 applies to the following samples: 1612277-01A, 1612277-02A, 1612277-03A, 1612277-04A, 1612277-05A, 1612277-06A, 1612277-07A, 1612277-08A, 1612277-09A

Sample ID	MB-78561		Batch ID:	78561		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_170108C		Analysis Date:	1/8/2017 4:39:00 PM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID	LCS-78561		Batch ID:	78561		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_170108C		Analysis Date:	1/8/2017 4:41:00 PM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.199	0.00250	0.200	0	99.5	80	120			
Arsenic	0.208	0.00500	0.200	0	104	80	120			
Barium	0.203	0.0100	0.200	0	102	80	120			
Beryllium	0.202	0.00100	0.200	0	101	80	120			
Cadmium	0.199	0.00100	0.200	0	99.5	80	120			
Calcium	4.69	0.300	5.00	0	93.8	80	120			
Chromium	0.203	0.00500	0.200	0	102	80	120			
Cobalt	0.201	0.00500	0.200	0	100	80	120			
Lead	0.196	0.00100	0.200	0	98.2	80	120			
Lithium	0.197	0.0100	0.200	0	98.3	80	120			
Molybdenum	0.195	0.00500	0.200	0	97.5	80	120			
Selenium	0.207	0.00500	0.200	0	103	80	120			
Thallium	0.195	0.00150	0.200	0	97.3	80	120			

Sample ID	LCSD-78561	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 4:43:00 PM	Prep Date:	1/3/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.204	0.00250	0.200	0	102	80	120	2.71	15	
Arsenic	0.212	0.00500	0.200	0	106	80	120	1.62	15	
Barium	0.208	0.0100	0.200	0	104	80	120	2.23	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

Sample ID	LCSD-78561	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 4:43:00 PM	Prep Date:	1/3/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Beryllium	0.206	0.00100	0.200	0	103	80	120	1.94	15	
Cadmium	0.204	0.00100	0.200	0	102	80	120	2.40	15	
Calcium	4.82	0.300	5.00	0	96.5	80	120	2.85	15	
Chromium	0.204	0.00500	0.200	0	102	80	120	0.507	15	
Cobalt	0.205	0.00500	0.200	0	102	80	120	1.92	15	
Lead	0.200	0.00100	0.200	0	100	80	120	1.85	15	
Lithium	0.199	0.0100	0.200	0	99.5	80	120	1.20	15	
Molybdenum	0.199	0.00500	0.200	0	99.4	80	120	1.94	15	
Selenium	0.211	0.00500	0.200	0	106	80	120	2.24	15	
Thallium	0.200	0.00150	0.200	0	99.9	80	120	2.62	15	

Sample ID	1612277-02A MS	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 5:11:00 PM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.202	0.00250	0.200	0	101	80	120			
Arsenic	0.212	0.00500	0.200	0	106	80	120			
Barium	0.316	0.0100	0.200	0.114	101	80	120			
Beryllium	0.197	0.00100	0.200	0	98.3	80	120			
Cadmium	0.193	0.00100	0.200	0	96.6	80	120			
Calcium	45.9	0.300	5.00	42.1	77.3	80	120			S
Chromium	0.196	0.00500	0.200	0.00230	97.1	80	120			
Cobalt	0.193	0.00500	0.200	0	96.6	80	120			
Lead	0.198	0.00100	0.200	0	99.2	80	120			
Lithium	0.208	0.0100	0.200	0.0273	90.2	80	120			
Molybdenum	0.193	0.00500	0.200	0	96.4	80	120			
Selenium	0.205	0.00500	0.200	0	102	80	120			
Thallium	0.197	0.00150	0.200	0	98.4	80	120			

Sample ID	1612277-02A MSD	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 5:13:00 PM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.206	0.00250	0.200	0	103	80	120	1.97	15	
Arsenic	0.211	0.00500	0.200	0	106	80	120	0.380	15	
Barium	0.323	0.0100	0.200	0.114	105	80	120	2.18	15	
Beryllium	0.195	0.00100	0.200	0	97.7	80	120	0.561	15	
Cadmium	0.197	0.00100	0.200	0	98.4	80	120	1.75	15	
Calcium	46.4	0.300	5.00	42.1	87.3	80	120	1.08	15	
Chromium	0.195	0.00500	0.200	0.00230	96.6	80	120	0.507	15	
Cobalt	0.191	0.00500	0.200	0	95.4	80	120	1.24	15	

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

Sample ID	1612277-02A MSD	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L				
SampType:	MSD	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 5:13:00 PM	Prep Date:	1/3/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Lead	0.197	0.00100	0.200	0	98.6	80	120	0.585	15	
Lithium	0.213	0.0100	0.200	0.0273	93.0	80	120	2.65	15	
Molybdenum	0.196	0.00500	0.200	0	98.1	80	120	1.79	15	
Selenium	0.205	0.00500	0.200	0	103	80	120	0.239	15	
Thallium	0.196	0.00150	0.200	0	97.8	80	120	0.598	15	

Sample ID	1612277-02A SD			Batch ID:	78561		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_170108C		Analysis Date:	1/8/2017 4:47:00 PM		Prep Date:	1/3/2017	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	<0.00400	0.0125	0	0				0	10	
Arsenic	<0.0100	0.0250	0	0				0	10	
Barium	0.115	0.0500	0	0.114				1.02	10	
Beryllium	<0.00150	0.00500	0	0				0	10	
Cadmium	<0.00150	0.00500	0	0				0	10	
Calcium	42.7	1.50	0	42.1				1.53	10	
Chromium	<0.0100	0.0250	0	0.00230				0	10	
Cobalt	<0.0150	0.0250	0	0				0	10	
Lead	<0.00150	0.00500	0	0				0	10	
Lithium	0.0313	0.0500	0	0.0273				13.6	10	R
Molybdenum	<0.0100	0.0250	0	0				0	10	
Selenium	<0.0100	0.0250	0	0				0	10	
Thallium	<0.00250	0.00750	0	0				0	10	

Sample ID	1612277-02A PDS	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 5:09:00 PM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.197	0.00250	0.200	0	98.6	80	120			
Arsenic	0.210	0.00500	0.200	0	105	80	120			
Barium	0.316	0.0100	0.200	0.114	101	80	120			
Beryllium	0.201	0.00100	0.200	0	101	80	120			
Cadmium	0.192	0.00100	0.200	0	96.1	80	120			
Calcium	44.7	0.300	5.00	42.1	53.4	80	120			S
Chromium	0.205	0.00500	0.200	0.00230	102	80	120			
Cobalt	0.194	0.00500	0.200	0	97.0	80	120			
Lead	0.200	0.00100	0.200	0	100	80	120			
Lithium	0.207	0.0100	0.200	0.0273	89.8	80	120			
Molybdenum	0.191	0.00500	0.200	0	95.4	80	120			
Selenium	0.203	0.00500	0.200	0	102	80	120			
Thallium	0.195	0.00150	0.200	0	97.5	80	120			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

Sample ID	ICV-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 11:44:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.101	0.00250	0.100	0	101	90	110			
Arsenic	0.101	0.00500	0.100	0	101	90	110			
Barium	0.105	0.0100	0.100	0	105	90	110			
Beryllium	0.103	0.00100	0.100	0	103	90	110			
Cadmium	0.102	0.00100	0.100	0	102	90	110			
Calcium	2.27	0.300	2.50	0	90.9	90	110			
Chromium	0.106	0.00500	0.100	0	106	90	110			
Cobalt	0.104	0.00500	0.100	0	104	90	110			
Lead	0.101	0.00100	0.100	0	101	90	110			
Lithium	0.0995	0.0100	0.100	0	99.5	90	110			
Molybdenum	0.0992	0.00500	0.100	0	99.2	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0993	0.00150	0.100	0	99.3	90	110			

Sample ID	LCVL-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 11:49:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00197	0.00250	0.00200	0	98.3	70	130			
Arsenic	0.00506	0.00500	0.00500	0	101	70	130			
Barium	0.00510	0.0100	0.00500	0	102	70	130			
Beryllium	0.00115	0.00100	0.00100	0	115	70	130			
Cadmium	0.00104	0.00100	0.00100	0	104	70	130			
Calcium	0.0957	0.300	0.100	0	95.7	70	130			
Chromium	0.00527	0.00500	0.00500	0	105	70	130			
Cobalt	0.00526	0.00500	0.00500	0	105	70	130			
Lead	0.00109	0.00100	0.00100	0	109	70	130			
Lithium	0.00990	0.0100	0.0100	0	99.0	70	130			
Molybdenum	0.00510	0.00500	0.00500	0	102	70	130			
Selenium	0.00525	0.00500	0.00500	0	105	70	130			
Thallium	0.00102	0.00150	0.00100	0	102	70	130			

Sample ID	CCV7-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 4:31:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.204	0.00250	0.200	0	102	90	110			
Arsenic	0.208	0.00500	0.200	0	104	90	110			
Barium	0.207	0.0100	0.200	0	103	90	110			
Beryllium	0.201	0.00100	0.200	0	100	90	110			
Cadmium	0.201	0.00100	0.200	0	101	90	110			

Qualifiers:

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

Sample ID	CCV7-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 4:31:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	4.67	0.300	5.00	0	93.5	90	110			
Chromium	0.203	0.00500	0.200	0	102	90	110			
Cobalt	0.199	0.00500	0.200	0	99.4	90	110			
Lead	0.197	0.00100	0.200	0	98.4	90	110			
Lithium	0.194	0.0100	0.200	0	96.8	90	110			
Molybdenum	0.198	0.00500	0.200	0	99.1	90	110			
Selenium	0.207	0.00500	0.200	0	104	90	110			
Thallium	0.194	0.00150	0.200	0	96.8	90	110			

Sample ID	LCVL7-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 4:35:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.00251	0.00250	0.00200	0	126	70	130			
Arsenic	0.00524	0.00500	0.00500	0	105	70	130			
Barium	0.00524	0.0100	0.00500	0	105	70	130			
Beryllium	0.00103	0.00100	0.00100	0	103	70	130			
Cadmium	0.000965	0.00100	0.00100	0	96.5	70	130			
Calcium	0.102	0.300	0.100	0	102	70	130			
Chromium	0.00495	0.00500	0.00500	0	99.0	70	130			
Cobalt	0.00502	0.00500	0.00500	0	100	70	130			
Lead	0.00101	0.00100	0.00100	0	101	70	130			
Lithium	0.00993	0.0100	0.0100	0	99.3	70	130			
Molybdenum	0.00501	0.00500	0.00500	0	100	70	130			
Selenium	0.00583	0.00500	0.00500	0	117	70	130			
Thallium	0.00103	0.00150	0.00100	0	103	70	130			

Sample ID	CCV8-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 5:15:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Antimony	0.203	0.00250	0.200	0	101	90	110			
Arsenic	0.210	0.00500	0.200	0	105	90	110			
Barium	0.208	0.0100	0.200	0	104	90	110			
Beryllium	0.195	0.00100	0.200	0	97.6	90	110			
Cadmium	0.201	0.00100	0.200	0	100	90	110			
Calcium	4.75	0.300	5.00	0	95.0	90	110			
Chromium	0.201	0.00500	0.200	0	101	90	110			
Cobalt	0.198	0.00500	0.200	0	98.9	90	110			
Lead	0.203	0.00100	0.200	0	102	90	110			
Lithium	0.190	0.0100	0.200	0	95.2	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170108C

Sample ID	CCV8-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 5:15:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum		0.197	0.00500	0.200	0	98.6	90	110			
Selenium		0.209	0.00500	0.200	0	105	90	110			
Thallium		0.200	0.00150	0.200	0	100	90	110			

Sample ID	LCVL8-170108	Batch ID:	R89833	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170108C	Analysis Date:	1/8/2017 5:19:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00211	0.00250	0.00200	0	106	70	130			
Arsenic	0.00542	0.00500	0.00500	0	108	70	130			
Barium	0.00516	0.0100	0.00500	0	103	70	130			
Beryllium	0.000832	0.00100	0.00100	0	83.2	70	130			
Cadmium	0.000952	0.00100	0.00100	0	95.2	70	130			
Calcium	0.130	0.300	0.100	0	130	70	130			
Chromium	0.00508	0.00500	0.00500	0	102	70	130			
Cobalt	0.00499	0.00500	0.00500	0	99.8	70	130			
Lead	0.000996	0.00100	0.00100	0	99.6	70	130			
Lithium	0.0103	0.0100	0.0100	0	103	70	130			
Molybdenum	0.00491	0.00500	0.00500	0	98.1	70	130			
Selenium	0.00591	0.00500	0.00500	0	118	70	130			
Thallium	0.00103	0.00150	0.00100	0	103	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170109B

Sample ID	ICV-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 10:24:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.38	0.300	2.50	0	95.2	90	110			

Sample ID	LCVL-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 10:28:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0978	0.300	0.100	0	97.8	70	130			

Sample ID	CCV2-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 11:33:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.06	0.300	5.00	0	101	90	110			

Sample ID	LCVL2-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 11:42:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0963	0.300	0.100	0	96.3	70	130			

Sample ID	CCV3-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:08:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.00	0.300	5.00	0	99.9	90	110			

Sample ID	LCVL3-170109	Batch ID:	R89854	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_170109B	Analysis Date:	1/9/2017 12:16:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0971	0.300	0.100	0	97.1	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170110C

The QC data in batch 78561 applies to the following samples: 1612277-01A, 1612277-02A, 1612277-03A, 1612277-04A, 1612277-05A, 1612277-06A, 1612277-07A, 1612277-08A, 1612277-09A

Sample ID	MB-78561		Batch ID:	78561		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_170110C		Analysis Date:	1/10/2017 11:43:00 AM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID	LCS-78561		Batch ID:	78561		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_170110C		Analysis Date:	1/10/2017 11:45:00 AM		Prep Date:	1/3/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.191 0.0300 0.200 0 95.7 80 120

Sample ID	LCSD-78561	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 11:47:00 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.205 0.0300 0.200 0 103 80 120 7.05 15

Sample ID	1612277-02A SD	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 11:53:00 AM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0500 0.150 0 0.0628 0 10

Sample ID	1612277-02A PDS	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 12:13:00 PM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.273 0.0300 0.200 0.0628 105 80 120

Sample ID	1612277-02A MS	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 12:15:00 PM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.263 0.0300 0.200 0.0628 99.9 80 120

Sample ID	1612277-02A MSD	Batch ID:	78561	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 12:17:00 PM	Prep Date:	1/3/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.263 0.0300 0.200 0.0628 100 80 120 0.220 15

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170110C

Sample ID	ICV-170110	Batch ID:	R89874	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 11:25:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0962	0.0300	0.100	0	96.2	90	110			

Sample ID	LCVL-170110	Batch ID:	R89874	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 11:29:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.0199	0.0300	0.0200	0	99.7	70	130			

Sample ID	CCV1-170110	Batch ID:	R89874	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 12:19:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.193	0.0300	0.200	0	96.7	90	110			

Sample ID	LCVL1-170110	Batch ID:	R89874	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_170110C	Analysis Date:	1/10/2017 12:24:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.0141	0.0300	0.0200	0	70.4	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_170104A

The QC data in batch 78574 applies to the following samples: 1612277-01D, 1612277-02D, 1612277-03D, 1612277-04D, 1612277-05D, 1612277-06D, 1612277-07D, 1612277-08D, 1612277-09D

Sample ID	MB-78574		Batch ID:	78574		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC2_170104A		Analysis Date:	1/4/2017 9:39:47 AM		Prep Date:	1/4/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID	LCS-78574			Batch ID:	78574		TestNo:	E300		Units:	mg/L	
SampType:	LCS			Run ID:	IC2_170104A		Analysis Date:	1/4/2017 9:54:24 AM		Prep Date:	1/4/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	3.97	0.400	4.000	0	99.1	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Sample ID	LCSD-78574			Batch ID:	78574		TestNo:	E300		Units:	mg/L	
SampType:	LCSD			Run ID:	IC2_170104A		Analysis Date:	1/4/2017 10:09:00 AM		Prep Date:	1/4/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	10.2	1.00	10.00	0	102	90	110	0.342	20	
Fluoride	3.94	0.400	4.000	0	98.4	90	110	0.699	20	
Sulfate	31.0	3.00	30.00	0	103	90	110	1.61	20	

Sample ID	1612277-01DMS			Batch ID:	78574			TestNo:	E300			Units:	mg/L		
SampType:	MS			Run ID:	IC2_170104A			Analysis Date:	1/4/2017 12:59:18 PM			Prep Date:	1/4/2017		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				

Chloride	483	10.0	200.0	285.8	98.8	90	110			
Fluoride	204	4.00	200.0	0	102	90	110			
Sulfate	272	30.0	200.0	58.41	107	90	110			

Sample ID	1612277-01DMSD			Batch ID:	78574			TestNo:	E300			Units:	mg/L		
SampType:	MSD			Run ID:	IC2_170104A			Analysis Date:	1/4/2017 1:13:54 PM			Prep Date:	1/4/2017		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Chloride	482	10.0	200.0	285.8	98.0	90	110	0.310	20	
Fluoride	206	4.00	200.0	0	103	90	110	1.06	20	
Sulfate	274	30.0	200.0	58.41	108	90	110	0.956	20	

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_170104A

Sample ID	ICV-170104	Batch ID:	R89784	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC2_170104A	Analysis Date:	1/4/2017 9:04:26 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.6	1.00	25.00	0	102	90	110			
Fluoride	9.90	0.400	10.00	0	99.0	90	110			
Sulfate	79.1	3.00	75.00	0	106	90	110			

Sample ID	CCV1-170104	Batch ID:	R89784	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_170104A	Analysis Date:	1/4/2017 1:28:31 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Fluoride	4.02	0.400	4.000	0	101	90	110			
Sulfate	31.0	3.00	30.00	0	103	90	110			

Sample ID	CCV2-170104	Batch ID:	R89784	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC2_170104A	Analysis Date:	1/4/2017 4:19:15 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.3	1.00	10.00	0	103	90	110			
Fluoride	4.10	0.400	4.000	0	103	90	110			
Sulfate	31.5	3.00	30.00	0	105	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_161228A

The QC data in batch 78491 applies to the following samples: 1612277-01D, 1612277-02D, 1612277-03D, 1612277-04D, 1612277-05D, 1612277-06D, 1612277-07D, 1612277-08D, 1612277-09D

Sample ID	1612275-01D-DUP	Batch ID:	78491	TestNo:	M4500-H+ B	Units:	pH	Units@19.3°C		
SampType:	DUP	Run ID:	TITRATOR_161228A	Analysis Date:	12/28/2016 9:24:00 AM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	6.50	0	0	6.430				1.08	5

Sample ID	1612277-01D-DUP	Batch ID:	78491	TestNo:	M4500-H+ B	Units:	pH	Units@19.9°C		
SampType:	DUP	Run ID:	TITRATOR_161228A	Analysis Date:	12/28/2016 9:48:00 AM	Prep Date:	12/28/2016			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

pH	6.79	0	0	6.750				0.591	5

LUMINANT

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

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_161228A

Sample ID	ICV-161228	Batch ID:	R89686	TestNo:	M4500-H+ B	Units:	pH Units@21.7°C
SampType:	ICV	Run ID:	TITRATOR_161228A	Analysis Date:	12/28/2016 8:24:00 AM	Prep Date:	12/28/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH	9.91	0	10.00	0	99.1	99	101

Sample ID	CCV1-161228	Batch ID:	R89686	TestNo:	M4500-H+ B	Units:	pH Units@20.9°C
SampType:	CCV	Run ID:	TITRATOR_161228A	Analysis Date:	12/28/2016 9:45:00 AM	Prep Date:	12/28/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH	6.97	0	7.000	0	99.6	97.1	102.9

Sample ID	CCV2-161228	Batch ID:	R89686	TestNo:	M4500-H+ B	Units:	pH Units@21.8°C
SampType:	CCV	Run ID:	TITRATOR_161228A	Analysis Date:	12/28/2016 10:06:00 A	Prep Date:	12/28/2016
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit %RPD RPDLimit Qual

pH	6.97	0	7.000	0	99.6	97.1	102.9

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: WC_161227C

The QC data in batch 78478 applies to the following samples: 1612277-01D

Sample ID	MB-78478	Batch ID:	78478	TestNo:	M2540C	Units:	mg/L				
SampType:	MBLK	Run ID:	WC_161227C	Analysis Date:	12/28/2016 8:41:00 AM	Prep Date:	12/27/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-78478	Batch ID:	78478	TestNo:	M2540C	Units:	mg/L				
SampType:	LCS	Run ID:	WC_161227C	Analysis Date:	12/28/2016 8:41:00 AM	Prep Date:	12/27/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 750 10.0 745.6 0 101 90 113

Sample ID	1612246-12D-DUP	Batch ID:	78478	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_161227C	Analysis Date:	12/28/2016 8:41:00 AM	Prep Date:	12/27/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3990 50.0 0 4125 3.45 5

Sample ID	1612277-01D-DUP	Batch ID:	78478	TestNo:	M2540C	Units:	mg/L				
SampType:	DUP	Run ID:	WC_161227C	Analysis Date:	12/28/2016 8:41:00 AM	Prep Date:	12/27/2016				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 915 50.0 0 905.0 1.10 5

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1612277
Project: Oak Grove FGD Pond Area

ANALYTICAL QC SUMMARY REPORT

RunID: WC_161229B

The QC data in batch 78513 applies to the following samples: 1612277-02D, 1612277-03D, 1612277-04D, 1612277-05D, 1612277-06D, 1612277-07D, 1612277-08D, 1612277-09D

Sample ID	MB-78513		Batch ID:	78513		TestNo:	M2540C		Units:	mg/L	
SampType:	MBLK		Run ID:	WC_161229B		Analysis Date:	12/30/2016 8:43:00 AM		Prep Date:	12/29/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-78513		Batch ID:	78513		TestNo:	M2540C		Units:	mg/L	
SampType:	LCS		Run ID:	WC_161229B		Analysis Date:	12/30/2016 8:43:00 AM		Prep Date:	12/29/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 747 10.0 745.6 0 100 90 113

Sample ID	1612277-07D-DUP		Batch ID:	78513		TestNo:	M2540C		Units:	mg/L	
SampType:	DUP		Run ID:	WC_161229B		Analysis Date:	12/30/2016 8:43:00 AM		Prep Date:	12/29/2016	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 4510 50.0 0 4330 4.07 5

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 NELAC certified

Case Narrative

Lab No: 20161291

This report contains the analytical results for the 9 sample(s) received under chain of custody by ESC Lab Sciences on 12/29/2016 1:35:14 PM. These samples are associated with your 1612277 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances



Client : DHL Analytical, Inc.
Client Project : 1612277
Lab Number : 20161291
Date Reported : 01/31/17
Date Received : 12/29/16
Page Number : 2 of 4

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20161291-01

Client ID : FGD-6

Date Sampled : 12/22/2016 9:15:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		1.27 +/- 0.540	0.676	pCi/l			
Radium-226	SM 7500 Ra B M*	0.349 +/- 0.140	0.125	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	0.917 +/- 0.400	0.551	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161291-02

Client ID : FGD-4

Date Sampled : 12/22/2016 10:25:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		0.227 +/- 0.601	0.822	pCi/l			
Radium-226	SM 7500 Ra B M*	0.227 +/- 0.130	0.155	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	-0.209 +/- 0.471	0.667	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161291-03

Client ID : FGD-2

Date Sampled : 12/22/2016 11:30:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.14 +/- 0.611	0.789	pCi/l			
Radium-226	SM 7500 Ra B M*	0.345 +/- 0.169	0.190	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	1.79 +/- 0.442	0.599	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161291-04

Client ID : FGD-5

Date Sampled : 12/22/2016 12:25:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		1.29 +/- 0.743	0.954	pCi/l			
Radium-226	SM 7500 Ra B M*	0.579 +/- 0.224	0.194	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	0.712 +/- 0.519	0.760	pCi/l	01/23/17	01/26/17	JR



Client : DHL Analytical, Inc.
Client Project : 1612277
Lab Number : 20161291
Date Reported : 01/31/17
Date Received : 12/29/16
Page Number : 3 of 4

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

Lab ID : 20161291-05

Client ID : FGD-1

Date Sampled : 12/22/2016 1:25:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		0.189 +/- 0.544	0.918	pCi/l			
Radium-226	SM 7500 Ra B M*	-0.045 +/- 0.154	0.273	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	0.189 +/- 0.390	0.645	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161291-06

Client ID : FGD-3

Date Sampled : 12/22/2016 3:25:00 PM

Matrix : NPW

Radiochemical Analyses

Combined Radium		2.46 +/- 0.746	1.14	pCi/l			
Radium-226	SM 7500 Ra B M*	-0.041 +/- 0.201	0.352	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	2.46 +/- 0.545	0.792	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161291-07

Client ID : FGD-8

Date Sampled : 12/23/2016 8:20:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		5.87 +/- 0.791	0.669	pCi/l			
Radium-226	SM 7500 Ra B M*	2.17 +/- 0.338	0.132	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	3.70 +/- 0.453	0.537	pCi/l	01/23/17	01/26/17	JR

Lab ID : 20161291-08

Client ID : FGD-12

Date Sampled : 12/23/2016 9:30:00 AM

Matrix : NPW

Radiochemical Analyses

Combined Radium		5.43 +/- 0.830	0.777	pCi/l			
Radium-226	SM 7500 Ra B M*	1.89 +/- 0.336	0.179	pCi/l	01/20/17	01/28/17	AK
Radium-228	EPA 904*/9320*	3.54 +/- 0.494	0.598	pCi/l	01/23/17	01/29/17	JR



Client : DHL Analytical, Inc.
Client Project : 1612277
Lab Number : 20161291
Date Reported : 01/31/17
Date Received : 12/29/16
Page Number : 4 of 4

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20161291-09							
Client ID : FGD-11							
Date Sampled : 12/23/2016 4:25:00 PM							
Matrix : NPW							

Radiochemical Analyses

Combined Radium		9.03 +/- 0.937	0.745	pCi/l			
Radium-226	SM 7500 Ra B M*	3.94 +/- 0.437	0.130	pCi/l	01/20/17	01/29/17	AK
Radium-228	EPA 904*/9320*	5.09 +/- 0.500	0.615	pCi/l	01/23/17	01/29/17	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	RPD	Batch ID
Radium-226	-0.009	107.0			NC	1.140	123.0	125.0	1.9	R1182
Radium-228	-0.276	83.3			NC	0.521	77.1	73.4	4.8	R3912

Lab Approval:

Ron Eidson
Director of Radiochemistry

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

TEL: (512) 388-8222

FAX: (512) 388-8229

Work Order: 1612277

Subcontractor:

ESC Laboratory
311 North Aspen
Broken Arrow, Oklahoma 74012

TEL: (918) 251-2515

FAX:

Acct #: DHLRRTX

27-Dec-16

Sample Id	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests				
					E904.0	SM7500Ra-B M			
FGD-6	Aqueous	-01B	12/22/16 09:15 AM	1LHDPEHNO3	1				
FGD-6	Aqueous	-01C	12/22/16 09:15 AM	500HDPEHNO3		1			
FGD-4	Aqueous	-02B	12/22/16 10:25 AM	1LHDPEHNO3	1				
FGD-4	Aqueous	-02C	12/22/16 10:25 AM	500HDPEHNO3		1			
FGD-2	Aqueous	-03B	12/22/16 11:30 AM	1LHDPEHNO3	1				
FGD-2	Aqueous	-03C	12/22/16 11:30 AM	500HDPEHNO3		1			
FGD-5	Aqueous	-04B	12/22/16 12:25 PM	1LHDPEHNO3	1				
FGD-5	Aqueous	-04C	12/22/16 12:25 PM	500HDPEHNO3		1			
FGD-1	Aqueous	-05B	12/22/16 01:25 PM	1LHDPEHNO3	1				
FGD-1	Aqueous	-05C	12/22/16 01:25 PM	500HDPEHNO3		1			
FGD-3	Aqueous	-06B	12/22/16 03:25 PM	1LHDPEHNO3	1				
FGD-3	Aqueous	-06C	12/22/16 03:25 PM	500HDPEHNO3		1			
FGD-8	Aqueous	-07B	12/23/16 08:20 AM	1LHDPEHNO3	1				
FGD-8	Aqueous	-07C	12/23/16 08:20 AM	500HDPEHNO3		1			
FGD-12	Aqueous	-08B	12/23/16 09:30 AM	1LHDPEHNO3	1				
FGD-12	Aqueous	-08C	12/23/16 09:30 AM	500HDPEHNO3		1			
FGD-11	Aqueous	-09B	12/22/16 04:25 PM	1LHDPEHNO3	1				
FGD-11	Aqueous	-09C	12/22/16 04:25 PM	500HDPEHNO3		1			

General Comments:

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

C 881425
20161291

Date/Time		Date/Time	
Relinquished by: 	12/27/16 1730	Received by: 	12/27/16 1730
Relinquished by:		Received by: 	12/29/16 1335

SAMPLE LOGIN

Date Received: 12/29/2016 1:35:1

Lab Number: 20161291

Due: 1/27/2017

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20161291-01 B	FGD-6	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
20161291-01 A	FGD-6	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161291-02 A	FGD-4	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161291-02 B	FGD-4	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161291-03 A	FGD-2	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161291-03 B	FGD-2	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161291-04 B	FGD-5	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
20161291-04 A	FGD-5	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161291-05 B	FGD-1	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
20161291-05 A	FGD-1	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161291-06 A	FGD-3	NPW	12/22/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161291-06 B	FGD-3	NPW	12/22/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161291-07 A	FGD-8	NPW	12/23/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161291-07 B	FGD-8	NPW	12/23/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20161291-08 A	FGD-12	NPW	12/23/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
20161291-08 B	FGD-12	NPW	12/23/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161291-09 B	FGD-11	NPW	12/23/16	Plastic	1 L	HNO3, pH < 2	☒	Yes	Yes
20161291-09 A	FGD-11	NPW	12/23/16	Plastic	500 ml	HNO3, pH < 2	☒	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

CONTAINER INSPECTION

Coolers 2 Custody Seals Broken ☒ Temperature: sub C Ice Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken ☒ Chain of Custody Record ☒ Labels in Tact ☒ Radiation Survey Complete ☒

Anomalles

Inspected By: [Signature] DATE 12/29/16
 QA or Designee Review: Raymond Thomas DATE 12/29/16
 Sample Custodian Review: Subrata Mondal DATE 12/29/16

Project Notes:

Appendix B

Laboratory Analytical Reports – Detection Monitoring Data



October 12, 2017

Will Vienne
Pastor, Behling & Wheeler
2201 Double Creek Dr #4004
Round Rock, Texas 78664

TEL: (512) 671-3434

FAX (512) 671-3446

Order No.: 1710037

RE: Luminant - Ash Landfill - Oak Grove

Dear Will Vienne:

DHL Analytical, Inc. received 6 sample(s) on 10/5/2017 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC 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,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification
Number: T104704211-17-19



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LUMINANT

CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX 78664
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3446
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

DATE: 10-17-17 PAGE 1 OF 1
PO #: S347-E DHL WORK ORDER #: 1710037
PROJECT LOCATION OR NAME: LUMINANT- ASH LANDFILL - OAK GROVE
CLIENT PROJECT #: S347-E COLLECTOR: J. BRAYTON

[illegible]

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<i>[Signature]</i>	10-9-17 1800	Fel Ex
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<i>[Signature]</i> Fel Ex	10/5/17 9:20	<i>[Signature]</i>
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

TURN AROUND TIME
 RUSH ☐ CALL FIRST
 1 DAY ☐ CALL FIRST
 2 DAY ☐
 NORMAL ☒
 OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 1.7 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

John DuPont

From: Will Vienne <will.vienne@pbwllc.com>
Sent:
To: John DuPont
Cc: John Brayton; Keith Starek; Pat Behling
Subject: CCR Sampling

Follow Up Flag: Follow up
Flag Status: Completed

Hi John,

We are starting the second phase of sampling for the CCR project, which includes sampling the CCR wells on a semi-annual basis. Only Appendix III constituents will be analyzed:

Boron
Calcium
Chloride
Fluoride
Field pH
Sulfate
Total Dissolved
Solids

LUMINANT

ORIGIN ID:NQIA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE
ACTUAT: 5
CAD: 69911
DIMS: 24x:
BILL THIR

RT 512

FZ

TO

DHL
2300 DOUBLE CREEK DR

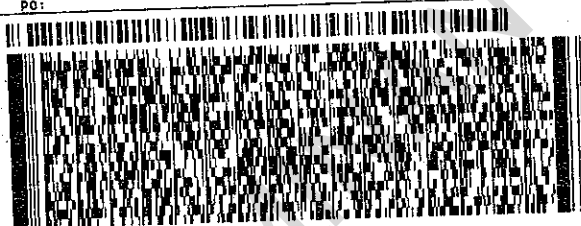
ROUND ROCK TX 78664

(512) 388-8222

REF:

DEPT:

INU:
PO:



FedEx
Express



TRK# 7879 6688 2332
0201

THU - 05 OCT 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS



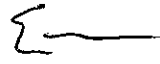
Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 10/5/2017

Work Order Number 1710037

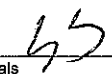
Received by EL

Checklist completed by: 

10/5/2017

Signature

Date

Reviewed by 

10/5/2017

Initials

Date

Carrier name FedEx 1day

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐ 1.7 °C

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH<2 acceptable upon receipt? Yes ☐ No ☒ NA ☐ LOT # 8086

Adjusted? yes Checked by OND

Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt? Yes ☐ No ☐ NA ☒ LOT #

Adjusted? _____ Checked by _____

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

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: Sample MW-02 received w/ pH > 2.

Corrective Action Sample acidified in Log in to pH < 2 w/ HNO₃
(Lot # 11750) on 10/5/17 at 09:55.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Lab Order: 1710037

CASE NARRATIVE

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

Method SW6020A - Metals Analysis
Method E300 - Anions Analysis
Method M2540C - Total Dissolved Solids Analysis

LOG IN

The samples were received and log-in performed on 10/5/2017. A total of 6 samples were received and analyzed. The samples arrived in good condition and were properly packaged. Sample MW-02 was preserved upon arrival to the laboratory to achieve proper pH level.

METALS ANALYSIS

For Metals Analysis, the recovery of Calcium for the Post Digestion Spike, the Matrix Spike and Matrix Spike Duplicate (1710015-09 PDS/MS/MSD) was outside of the method control limits. These are flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated LCS and Serial Dilution. No further corrective action was taken.

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Lab Order: 1710037**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1710037-01	AL-10		10/02/17 11:00 AM	10/5/2017
1710037-02	MW-02		10/02/17 12:05 PM	10/5/2017
1710037-03	MW-09		10/02/17 01:00 PM	10/5/2017
1710037-04	MW-05		10/02/17 02:45 PM	10/5/2017
1710037-05	MW-07		10/02/17 03:40 PM	10/5/2017
1710037-06	MW-08R		10/02/17 04:45 PM	10/5/2017

LUMINANT

Lab Order: 1710037
Client: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Gro

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1710037-01A	AL-10	10/02/17 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
	AL-10	10/02/17 11:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
1710037-01B	AL-10	10/02/17 11:00 AM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	AL-10	10/02/17 11:00 AM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	AL-10	10/02/17 11:00 AM	Aqueous	M2540C	TDS Preparation	10/06/17 12:55 PM	82694
1710037-02A	MW-02	10/02/17 12:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
1710037-02B	MW-02	10/02/17 12:05 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-02	10/02/17 12:05 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-02	10/02/17 12:05 PM	Aqueous	M2540C	TDS Preparation	10/06/17 12:55 PM	82694
1710037-03A	MW-09	10/02/17 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
	MW-09	10/02/17 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
1710037-03B	MW-09	10/02/17 01:00 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-09	10/02/17 01:00 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-09	10/02/17 01:00 PM	Aqueous	M2540C	TDS Preparation	10/06/17 12:55 PM	82694
1710037-04A	MW-05	10/02/17 02:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
1710037-04B	MW-05	10/02/17 02:45 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-05	10/02/17 02:45 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-05	10/02/17 02:45 PM	Aqueous	M2540C	TDS Preparation	10/06/17 12:55 PM	82694
1710037-05A	MW-07	10/02/17 03:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
1710037-05B	MW-07	10/02/17 03:40 PM	Aqueous	E300	Anion Preparation	10/05/17 09:38 AM	82669
	MW-07	10/02/17 03:40 PM	Aqueous	E300	Anion Preparation	10/06/17 10:37 AM	82690
	MW-07	10/02/17 03:40 PM	Aqueous	M2540C	TDS Preparation	10/06/17 12:55 PM	82694
1710037-06A	MW-08R	10/02/17 04:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/06/17 08:19 AM	82680
1710037-06B	MW-08R	10/02/17 04:45 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-08R	10/02/17 04:45 PM	Aqueous	E300	Anion Preparation	10/09/17 09:41 AM	82704
	MW-08R	10/02/17 04:45 PM	Aqueous	M2540C	TDS Preparation	10/06/17 12:55 PM	82694

Lab Order: 1710037
Client: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Gro

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1710037-01A	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	5	10/09/17 02:07 PM	ICP-MS4_171009C
	AL-10	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	1	10/09/17 12:45 PM	ICP-MS4_171009C
1710037-01B	AL-10	Aqueous	E300	Anions by IC method - Water	82704	10	10/09/17 12:06 PM	IC4_171009A
	AL-10	Aqueous	E300	Anions by IC method - Water	82704	1	10/09/17 03:18 PM	IC4_171009A
	AL-10	Aqueous	M2540C	Total Dissolved Solids	82694	1	10/09/17 09:05 AM	WC_171006C
1710037-02A	MW-02	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	1	10/09/17 01:13 PM	ICP-MS4_171009C
1710037-02B	MW-02	Aqueous	E300	Anions by IC method - Water	82704	10	10/09/17 12:18 PM	IC4_171009A
	MW-02	Aqueous	E300	Anions by IC method - Water	82704	1	10/09/17 03:30 PM	IC4_171009A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	82694	1	10/09/17 09:05 AM	WC_171006C
1710037-03A	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	1	10/09/17 01:15 PM	ICP-MS4_171009C
	MW-09	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	5	10/09/17 02:25 PM	ICP-MS4_171009C
1710037-03B	MW-09	Aqueous	E300	Anions by IC method - Water	82704	1	10/09/17 03:42 PM	IC4_171009A
	MW-09	Aqueous	E300	Anions by IC method - Water	82704	10	10/09/17 12:30 PM	IC4_171009A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	82694	1	10/09/17 09:05 AM	WC_171006C
1710037-04A	MW-05	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	1	10/09/17 01:16 PM	ICP-MS4_171009C
1710037-04B	MW-05	Aqueous	E300	Anions by IC method - Water	82704	10	10/09/17 12:42 PM	IC4_171009A
	MW-05	Aqueous	E300	Anions by IC method - Water	82704	1	10/09/17 03:54 PM	IC4_171009A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	82694	1	10/09/17 09:05 AM	WC_171006C
1710037-05A	MW-07	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	1	10/09/17 01:18 PM	ICP-MS4_171009C
1710037-05B	MW-07	Aqueous	E300	Anions by IC method - Water	82669	1	10/05/17 06:25 PM	IC2_171005A
	MW-07	Aqueous	E300	Anions by IC method - Water	82690	1	10/06/17 12:15 PM	IC4_171006A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	82694	1	10/09/17 09:05 AM	WC_171006C
1710037-06A	MW-08R	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82680	1	10/09/17 01:20 PM	ICP-MS4_171009C
1710037-06B	MW-08R	Aqueous	E300	Anions by IC method - Water	82704	100	10/09/17 12:54 PM	IC4_171009A
	MW-08R	Aqueous	E300	Anions by IC method - Water	82704	1	10/09/17 04:06 PM	IC4_171009A
	MW-08R	Aqueous	M2540C	Total Dissolved Solids	82694	1	10/09/17 09:05 AM	WC_171006C

DHL Analytical, Inc.

Date: 12-Oct-17

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Project No: 5347-E
Lab Order: 1710037

Client Sample ID: AL-10
Lab ID: 1710037-01
Collection Date: 10/02/17 11:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A					Analyst: SP
Boron	0.0973	0.0100	0.0300		mg/L	1	10/09/17 12:45 PM
Calcium	27.0	0.500	1.50		mg/L	5	10/09/17 02:07 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JL
Chloride	50.6	3.00	10.0		mg/L	10	10/09/17 12:06 PM
Fluoride	0.120	0.100	0.400	J	mg/L	1	10/09/17 03:18 PM
Sulfate	12.2	1.00	3.00		mg/L	1	10/09/17 03:18 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JW
Total Dissolved Solids (Residue, Filterable)	398	10.0	10.0		mg/L	1	10/09/17 09:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 12-Oct-17

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Project No: 5347-E
Lab Order: 1710037

Client Sample ID: MW-02
Lab ID: 1710037-02
Collection Date: 10/02/17 12:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A					Analyst: SP
Boron	0.0567	0.0100	0.0300		mg/L	1	10/09/17 01:13 PM
Calcium	22.2	0.100	0.300		mg/L	1	10/09/17 01:13 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JL
Chloride	42.4	0.300	1.00		mg/L	1	10/09/17 03:30 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/09/17 03:30 PM
Sulfate	9.67	1.00	3.00		mg/L	1	10/09/17 03:30 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JW
Total Dissolved Solids (Residue, Filterable)	310	10.0	10.0		mg/L	1	10/09/17 09:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 12-Oct-17

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Project No: 5347-E
Lab Order: 1710037

Client Sample ID: MW-09
Lab ID: 1710037-03
Collection Date: 10/02/17 01:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A					Analyst: SP
Boron	0.106	0.0100	0.0300		mg/L	1	10/09/17 01:15 PM
Calcium	58.2	0.500	1.50		mg/L	5	10/09/17 02:25 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JL
Chloride	140	3.00	10.0		mg/L	10	10/09/17 12:30 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/09/17 03:42 PM
Sulfate	95.3	1.00	3.00		mg/L	1	10/09/17 03:42 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JW
Total Dissolved Solids (Residue, Filterable)	433	10.0	10.0		mg/L	1	10/09/17 09:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 12-Oct-17

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Project No: 5347-E
Lab Order: 1710037

Client Sample ID: MW-05
Lab ID: 1710037-04
Collection Date: 10/02/17 02:45 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A					Analyst: SP
Boron	0.0665	0.0100	0.0300		mg/L	1	10/09/17 01:16 PM
Calcium	17.5	0.100	0.300		mg/L	1	10/09/17 01:16 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JL
Chloride	58.6	3.00	10.0		mg/L	10	10/09/17 12:42 PM
Fluoride	0.295	0.100	0.400	J	mg/L	1	10/09/17 03:54 PM
Sulfate	10.4	1.00	3.00		mg/L	1	10/09/17 03:54 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JW
Total Dissolved Solids (Residue, Filterable)	246	10.0	10.0		mg/L	1	10/09/17 09:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 12-Oct-17

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Project No: 5347-E
Lab Order: 1710037

Client Sample ID: MW-07
Lab ID: 1710037-05
Collection Date: 10/02/17 03:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A					Analyst: SP
Boron	0.0733	0.0100	0.0300		mg/L	1	10/09/17 01:18 PM
Calcium	13.9	0.100	0.300		mg/L	1	10/09/17 01:18 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JL
Chloride	15.8	0.300	1.00		mg/L	1	10/06/17 12:15 PM
Fluoride	0.178	0.100	0.400	J	mg/L	1	10/06/17 12:15 PM
Sulfate	38.4	1.00	3.00		mg/L	1	10/06/17 12:15 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JW
Total Dissolved Solids (Residue, Filterable)	298	10.0	10.0		mg/L	1	10/09/17 09:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 12-Oct-17

CLIENT: Pastor, Behling & Wheeler
Project: Luminant - Ash Landfill - Oak Grove
Project No: 5347-E
Lab Order: 1710037

Client Sample ID: MW-08R
Lab ID: 1710037-06
Collection Date: 10/02/17 04:45 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A					Analyst: SP
Boron	0.0610	0.0100	0.0300		mg/L	1	10/09/17 01:20 PM
Calcium	13.1	0.100	0.300		mg/L	1	10/09/17 01:20 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JL
Chloride	14.4	0.300	1.00		mg/L	1	10/09/17 04:06 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	10/09/17 04:06 PM
Sulfate	28.7	1.00	3.00		mg/L	1	10/09/17 04:06 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JW
Total Dissolved Solids (Residue, Filterable)	243	10.0	10.0		mg/L	1	10/09/17 09:05 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Pastor, Behling & Wheeler

Work Order: 1710037

Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171009C

The QC data in batch 82680 applies to the following samples: 1710037-01A, 1710037-02A, 1710037-03A, 1710037-04A, 1710037-05A, 1710037-06A

Sample ID	MB-82680	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:18:00 PM	Prep Date:	10/6/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	<0.0100	0.0300								
Calcium	<0.100	0.300								

Sample ID	LCS-82680	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCS	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:20:00 PM	Prep Date:	10/6/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.203	0.0300	0.200	0	101	80	120			
Calcium	5.18	0.300	5.00	0	104	80	120			

Sample ID	LCSD-82680	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:22:00 PM	Prep Date:	10/6/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.209	0.0300	0.200	0	104	80	120	2.84	15	
Calcium	5.18	0.300	5.00	0	104	80	120	0.014	15	

Sample ID	1710015-09A SD	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:28:00 PM	Prep Date:	10/6/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.342	0.150	0	0.314					8.46	10

Sample ID	1710015-09A PDS	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:47:00 PM	Prep Date:	10/6/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.501	0.0300	0.200	0.314	93.2	80	120			

Sample ID	1710015-09A MS	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:48:00 PM	Prep Date:	10/6/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Boron	0.511	0.0300	0.200	0.314	98.5	80	120			

Sample ID	1710015-09A MSD	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:50:00 PM	Prep Date:	10/6/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Qualifiers:

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit

R RPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1710037
Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171009C

Sample ID	1710015-09A MSD	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L				
SampType:	MSD	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:50:00 PM	Prep Date:	10/6/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.515	0.0300	0.200	0.314	100	80	120	0.713	15	

Sample ID	1710015-09A SD	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 1:49:00 PM	Prep Date:	10/6/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	320	75.0	0	316				1.28	10	

Sample ID	1710015-09A PDS	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 2:09:00 PM	Prep Date:	10/6/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		626	15.0	250	316	124	80	120			S

Sample ID	1710015-09A MS	Batch ID:	82680	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 2:11:00 PM	Prep Date:	10/6/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	314	15.0	5.00	316	-30.9	80	120			S

Sample ID	1710015-09A MSD		Batch ID:	82680		TestNo:	SW6020A		Units:	mg/L	
SampType:	MSD		Run ID:	ICP-MS4_171009C		Analysis Date:	10/9/2017 2:13:00 PM		Prep Date:	10/6/2017	
Analyte	Result		RL	SPK value		Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Calcium	318		15.0	5.00		316	40.1	80	120	1.12	15 S

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1710037
Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171009C

Sample ID	ICV-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 10:07:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0991	0.0300	0.100	0	99.1	90	110			
Calcium	2.55	0.300	2.50	0	102	90	110			

Sample ID	LCVL-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 10:14:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.0208	0.0300	0.0200	0	104	70	130			
Calcium		0.105	0.300	0.100	0	105	70	130			

Sample ID	CCV2-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 11:22:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.212	0.0300	0.200	0	106	90	110			
Calcium	5.18	0.300	5.00	0	104	90	110			

Sample ID	LCVL2-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 11:26:00 AM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.0244	0.0300	0.0200	0	122	70	130			
Calcium		0.107	0.300	0.100	0	107	70	130			

Sample ID	CCV3-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 12:57:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.218	0.0300	0.200	0	109	90	110			
Calcium		5.14	0.300	5.00	0	103	90	110			

Sample ID	LCVL3-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 1:09:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron		0.0246	0.0300	0.0200	0	123	70	130			
Calcium		0.102	0.300	0.100	0	102	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1710037
Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171009C

Sample ID	CCV4-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 1:22:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.220	0.0300	0.200	0	110	90	110			
Calcium	5.14	0.300	5.00	0	103	90	110			

Sample ID	LCVL4-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 1:28:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron	0.0246	0.0300	0.0200	0	123	70	130			
Calcium	0.0999	0.300	0.100	0	99.9	70	130			

Sample ID	CCV5-171009			Batch ID:	R94582		TestNo:	SW6020A		Units:	mg/L	
SampType:	CCV			Run ID:	ICP-MS4_171009C		Analysis Date:	10/9/2017 2:15:00 PM		Prep Date:		
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Calcium	5.07	0.300	5.00	0	101	90	110			

Sample ID	LCVL5-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 2:19:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0965	0.300	0.100	0	96.5	70	130			

Sample ID	CCV6-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 2:33:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.07	0.300	5.00	0	101	90	110			

Sample ID	LCVL6-171009	Batch ID:	R94582	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171009C	Analysis Date:	10/9/2017 2:37:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0994	0.300	0.100	0	99.4	70	130			

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1710037

Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171006A

The QC data in batch 82690 applies to the following samples: 1710037-05B

Sample ID	MB-82690		Batch ID:	82690		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC4_171006A		Analysis Date:	10/6/2017 11:30:46 AM		Prep Date:	10/6/2017	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID	LCS-82690			Batch ID:	82690		TestNo:	E300		Units:	mg/L	
SampType:	LCS			Run ID:	IC4_171006A		Analysis Date:	10/6/2017 11:42:46 AM		Prep Date:	10/6/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.77	1.00	10.00	0	97.7	90	110
Fluoride	3.95	0.400	4.000	0	98.9	90	110
Sulfate	29.4	3.00	30.00	0	97.8	90	110

Sample ID	LCSD-82690	Batch ID:	82690	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC4_171006A	Analysis Date:	10/6/2017 11:54:46 AM	Prep Date:	10/6/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.80	1.00	10.00	0	98.0	90	110	0.332	20
Fluoride	4.01	0.400	4.000	0	100	90	110	1.29	20
Sulfate	29.4	3.00	30.00	0	98.0	90	110	0.116	20

Sample ID	1710037-05BMS	Batch ID:	82690	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_171006A	Analysis Date:	10/6/2017 12:27:42 PM	Prep Date:	10/6/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	35.2	1.00	20.00	15.80	96.8	90	110
Fluoride	20.3	0.400	20.00	0.1780	101	90	110
Sulfate	58.4	3.00	20.00	38.40	99.9	90	110

Sample ID	1710037-05BMSD			Batch ID:	82690		TestNo:	E300		Units:	mg/L	
SampType:	MSD			Run ID:	IC4_171006A		Analysis Date:	10/6/2017 12:39:42 PM		Prep Date:	10/6/2017	
Analyte	Result			RL	SPK value		Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Chloride	35.4	1.00	20.00	15.80	98.2	90	110	0.794	20
Fluoride	20.6	0.400	20.00	0.1780	102	90	110	1.28	20
Sulfate	58.6	3.00	20.00	38.40	101	90	110	0.402	20

Qualifiers:

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

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1710037
Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171006A

Sample ID	ICV-171006	Batch ID:	R94565		TestNo:	E300		Units:	mg/L		
SampType:	ICV	Run ID:	IC4_171006A		Analysis Date:	10/6/2017 11:06:46 AM		Prep Date:			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		24.9	1.00	25.00	0	99.5	90	110			
Fluoride		9.91	0.400	10.00	0	99.1	90	110			
Sulfate		75.7	3.00	75.00	0	101	90	110			

Sample ID	CCV1-171006	Batch ID:	R94565	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171006A	Analysis Date:	10/6/2017 3:03:42 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.86	1.00	10.00	0	98.6	90	110			
Fluoride	4.01	0.400	4.000	0	100	90	110			
Sulfate	29.5	3.00	30.00	0	98.4	90	110			

LUMINANT

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 NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1710037

Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171009A

The QC data in batch 82704 applies to the following samples: 1710037-01B, 1710037-02B, 1710037-03B, 1710037-04B, 1710037-06B

Sample ID	MB-82704		Batch ID:	82704		TestNo:	E300		Units:	mg/L	
SampType:	MBLK		Run ID:	IC4_171009A		Analysis Date:	10/9/2017 10:35:35 AM		Prep Date:	10/9/2017	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	<0.300	1.00
Fluoride	<0.100	0.400
Sulfate	<1.00	3.00

Sample ID	LCS-82704			Batch ID:	82704		TestNo:	E300		Units:	mg/L	
SampType:	LCS			Run ID:	IC4_171009A		Analysis Date:	10/9/2017 10:47:35 AM		Prep Date:	10/9/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Chloride	9.62	1.00	10.00	0	96.2	90	110
Fluoride	3.86	0.400	4.000	0	96.6	90	110
Sulfate	28.6	3.00	30.00	0	95.5	90	110

Sample ID	LCSD-82704		Batch ID:	82704		TestNo:	E300		Units:	mg/L	
SampType:	LCSD		Run ID:	IC4_171009A		Analysis Date:	10/9/2017 10:59:35 AM		Prep Date:	10/9/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.63	1.00	10.00	0	96.3	90	110	0.094	20
Fluoride	3.93	0.400	4.000	0	98.3	90	110	1.74	20
Sulfate	28.6	3.00	30.00	0	95.5	90	110	0.009	20

Sample ID	1710037-06BMS	Batch ID:	82704	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_171009A	Analysis Date:	10/9/2017 1:06:48 PM	Prep Date:	10/9/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2070	100	2000	0	104	90	110
Fluoride	2010	40.0	2000	0	100	90	110
Sulfate	1990	300	2000	0	99.6	90	110

Sample ID	1710037-06BMSD			Batch ID:	82704			TestNo:	E300			Units:	mg/L		
SampType:	MSD			Run ID:	IC4_171009A			Analysis Date:	10/9/2017 1:18:48 PM			Prep Date:	10/9/2017		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Chloride	2080	100	2000	0	104	90	110	0.130	20
Fluoride	2010	40.0	2000	0	101	90	110	0.219	20
Sulfate	1990	300	2000	0	99.4	90	110	0.156	20

Qualifiers:

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

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler
Work Order: 1710037
Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171009A

Sample ID	ICV-171009	Batch ID:	R94591	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_171009A	Analysis Date:	10/9/2017 10:11:35 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.6	90	110			
Fluoride	9.63	0.400	10.00	0	96.3	90	110			
Sulfate	73.7	3.00	75.00	0	98.3	90	110			

Sample ID	CCV1-171009	Batch ID:	R94591	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171009A	Analysis Date:	10/9/2017 2:54:48 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.74	1.00	10.00	0	97.4	90	110			
Fluoride	3.98	0.400	4.000	0	99.4	90	110			
Sulfate	29.2	3.00	30.00	0	97.3	90	110			

Sample ID	CCV2-171009	Batch ID:	R94591	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171009A	Analysis Date:	10/9/2017 4:54:48 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.78	1.00	10.00	0	97.8	90	110			
Fluoride	4.05	0.400	4.000	0	101	90	110			
Sulfate	29.3	3.00	30.00	0	97.7	90	110			

Qualifiers:

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

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Pastor, Behling & Wheeler

Work Order: 1710037

Project: Luminant - Ash Landfill - Oak Grove

ANALYTICAL QC SUMMARY REPORT

RunID: WC_171006C

The QC data in batch 82694 applies to the following samples: 1710037-01B, 1710037-02B, 1710037-03B, 1710037-04B, 1710037-05B, 1710037-06B

Sample ID	MB-82694	Batch ID:	82694	TestNo:	M2540C	Units:	mg/L
SampType:	MBLK	Run ID:	WC_171006C	Analysis Date:	10/9/2017 9:05:00 AM	Prep Date:	10/6/2017
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID	LCS-82694	Batch ID:	82694	TestNo:	M2540C	Units:	mg/L
SampType:	LCS	Run ID:	WC_171006C	Analysis Date:	10/9/2017 9:05:00 AM	Prep Date:	10/6/2017
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 712 10.0 745.6 0 95.5 90 113

Sample ID	1710050-02A-DUP	Batch ID:	82694	TestNo:	M2540C	Units:	mg/L
SampType:	DUP	Run ID:	WC_171006C	Analysis Date:	10/9/2017 9:05:00 AM	Prep Date:	10/6/2017
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 551 10.0 0 547.0 0.729 5

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 NELAC certified