Texas Commission on Environmental Quality

Waste Permits Division Correspondence Cover Sheet

Date: 09/15/2023
Facility Name: Oak Grove Steam Electric Station
Permit or Registration No.: CCR106

Nature of Correspondence:
☐ Initial/New
☒ Response/Revision to TCEQ Tracking No.: 27237042 (from subject line of TCEQ letter regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
☐ New Notice of Intent	☐ Alternative Daily Cover Report
☐ Notice of Intent Revision	☐ Closure Report
☐ New Permit (including Subchapter T)	☐ Compost Report
☐ New Registration (including Subchapter T)	☐ Groundwater Alternate Source Demonstration
☐ Major Amendment	☐ Groundwater Corrective Action
☐ Minor Amendment	☐ Groundwater Monitoring Report
☐ Limited Scope Major Amendment	☐ Groundwater Background Evaluation
☐ Notice Modification	☐ Landfill Gas Corrective Action
☐ Non-Notice Modification	☐ Landfill Gas Monitoring
☐ Transfer/Name Change Modification	☐ Liner Evaluation Report
☐ Temporary Authorization	☐ Soil Boring Plan
☐ Voluntary Revocation	☐ Special Waste Request
☐ Subchapter T Disturbance Non-Enclosed Structure	☐ Other:
☐ Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
☐ New	☐ Annual/Biennial Site Activity Report
☐ Renewal	☐ CPT Plan/Result
☐ Post-Closure Order	☐ Closure Certification/Report
☐ Major Amendment	☐ Construction Certification/Report
☐ Minor Amendment	☐ CPT Plan/Result
☒ CCR Registration	☐ Extension Request
☐ CCR Registration Major Amendment	☐ Groundwater Monitoring Report
☐ CCR Registration Minor Amendment	☐ Interim Status Change
☐ Class 3 Modification	☐ Interim Status Closure Plan
☐ Class 2 Modification	☐ Soil Core Monitoring Report
☐ Class 1 ED Modification	☐ Treatability Study
☐ Class 1 Modification	☐ Trial Burn Plan/Result
☐ Endorsement	☐ Unsaturated Zone Monitoring Report
☐ Temporary Authorization	☐ Waste Minimization Report
☐ Voluntary Revocation	☐ Other:
☐ 335.6 Notification	
☐ Other:	

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September 15, 2023

Texas Commission on Environmental Quality
Industrial and Hazardous Waste Permits Section - MC-130
12100 Park 35 Circle
Austin, TX 78753

RE: Response to Email NOD New Registration No. CCR106
Oak Grove Management Company LLC – Franklin, Robertson County
Industrial Solid Waste Registration No. 32043
EPA Identification No. TXD000728956
Tracking No. 27237042; RN100216191/CN602881955

Oak Grove Management Company LLC has prepared written responses for the deficiencies identified in the "Email NOD - New Registration – Oak Grove Managements Company LLC – Registration No. CCR106" received via email from TCEQ on July 18, 2023. The written responses are in Table 1 and the attached technical memorandum titled "Response to TCEQ NOD No. 3". Updated application and appendix revisions are attached for review.

As previously discussed, the proposed design and corresponding documents for vertically expanding Ash Landfill 1 are also included in the application under the Landfill Criteria Section (IV.25.A.) and revised Appendix D.

If you have any questions or require any additional information, please contact Eric Chavers at 903-389-6062 or by e-mail at eric.chavers@luminant.com.

Sincerely,

Renee Collins

Attachments: Technical Memorandum "Response to TCEQ NOD No. 3"
CCR106 Application-Revision 3
CCR106 Application Revision 3 REDLINE
APPENDIX D-Revision 1
APPENDIX F-Revision 2

cc with attachments:

Umair Hassan (umair.hassan@tceq.texas.gov)
Daniella Ortiz de Montellano (daniela.ortiz-demontellano@tceq.texas.gov)

Table 1 - NOD Summary and Response
Registration No. CCR106 - Oak Grove Management Company LLC
Application Deficiencies - NOD 3

ID[1]	App. Section	App. Sub Section	Location[2]	Citation	Deficiency Description/Resolution	Response
1	II	22.A	Appendix B – Location Restriction and Geology	40 CFR 257.60(a) 30 TAC 352.601	Location Restriction Evaluation Reports state that the base of the clay liner of the FGD – B unit is 413 ft MSL. The report also states that the upper limit of the uppermost aquifer in the vicinity of the FGD Ponds is approximately 412.6. However, based on the monitoring event in June 2021, the groundwater elevations closest to the FGD – B Pond were between 413.55 ft MSL and 414.16 ft MSL. Provide detailed response and justification to demonstrate compliance with 40 CFR 257.60(a) which includes: a. Supporting documents to show that there is no sustained hydraulic connection between any portion of the base of the FGD – B and the uppermost aquifer. b. Groundwater elevation historical data for all FGD Pond Area wells from monitoring events starting from 11/03/2015.	Please see attached Technical Memorandum "Response to TCEQ NOD No. 3 - CCR106 Registration Application", Comment Item No. 1 in Section 2.0.
2	VI	29.C, 30.B	Appendix G – Annual Groundwater Monitoring and Corrective Action Reports	40 CFR 257.90(e)5 40 CFR 257.9(c) 30 TAC §352.901	2022 Annual Groundwater Monitoring and Corrective Action Reports provide potentiometric maps. Provide groundwater elevations data in a separate table.	Groundwater elevation summary tables for Ash Landfill 1 and FGD Ponds is included the attached Technical Memorandum "Response to TCEQ NOD No. 3 - CCR106 Registration Application", Comment Item No. 2 in Section 2.0. A groundwater elevation table will be included in all future Annual Groundwater Monitoring and Corrective Action Reports for all CCR units.
3	VI	27.E	Appendix F – Groundwater Monitoring Plan	Application Instructions 40 CFR §257.91 30 TAC §352.911	Provide an explanation on how it was determined that the number and spacing of downgradient monitoring wells for Ash Landfill Monitoring System are adequate to accurately represent the quality of the groundwater and detect potential groundwater contamination at the waste boundary. The distance between some of the downgradient wells ranges between 800 feet-1300 feet approximately.	Please see attached Technical Memorandum "Response to TCEQ NOD No. 3 - CCR106 Registration Application", Comment Item No. 3 in Section 2.0.
4	VI	28, 29.B, 30.B	Statistical Analysis Plan, Appendix F – Annual Groundwater Monitoring Report	40 CFR §257.93(d) 30 TAC 352.1421	Provide background evaluation reports in a separate attachment for Ash Landfill and FGD Pond Monitoring networks. Provide a detailed evaluation of how the background was established addressing the assumptions made, outliers, and distribution of the data, etc. Additionally, explain how the statistical evaluation was conducted for groundwater data since the establishment of the background values. While a detailed Statistical Analysis Plan has been submitted, the plan did not include how background and GWPSs which are not based on MCL or CCR regulatory limits were calculated.	Please see attached Technical Memorandum "Response to TCEQ NOD No. 3 - CCR106 Registration Application", Comment Item No. 4 in Section 2.0. The "Background Groundwater Monitoring and Statistical Analysis Summary Report" for the Ash Landfill and FGD Ponds have also been added to APPENDIX F. The reports are also referenced under item VI.29 of the registration application.

5	VI	29.C.4	Alternate Source Demonstration	40 CFR 257.94 (e)(2)	SSIs for Boron and Sulfate have been observed in the MW-07 since 2019. SSIs for Boron have also been observed in the MW-09 since 2019 and for Sulfate since May 2022. Alternate Source Demonstration (ASD) reports submitted annually since 2020 attribute the exceedances to the natural variation in the groundwater quality related to the heterogeneity of the uppermost aquifer at the site. However, the data indicates that the values are increasing for Boron and Sulfate in the MW-07 while staying constant in the uppermost aquifer. Provide a narrative explaining the cause of an increased trend of Boron and Sulfate in the MW-07 well. In your discussion include site-specific information and other information to demonstrate that this trend is not linked to the CCR waste affecting the groundwater.	Please see attached Technical Memorandum "Response to TCEQ NOD No. 3 - CCR106 Registration Application", Comment Item No. 5 in Section 2.0.
6	VI	27.E	Appendix F, Table I CCR Well Construction Summary	40 CFR 257.90(e)(2) 30 TAC §352.911	Provide well construction summary for Well ID MW-02. Explain why MW-04 is mentioned in this table and not in the groundwater reports.	Please see attached Technical Memorandum "Response to TCEQ NOD No. 3 - CCR106 Registration Application", Comment Item No. 6 in Section 2.0. "Groundwater Monitoring System Certification-Addendum No. 1" has also been provided in APPENDIX F.
7	VII	33	Table VIII.A.1, [Appendix G]	30 TAC 352.1101	Provide justification or supporting documentation on how it was determined that one annual mowing per year will be adequate to maintain the vegetative cover system for the closed unit during post-closure care considering local climate.	Please see attached Technical Memorandum "Response to TCEQ NOD No. 3 - CCR106 Registration Application", Comment Item No. 7 in Section 2.0.

[1] Deficiency ID – Key: Use this numbered ID to identify the NOD response.
[2] Location of deficiency in submittal/application. Items in square brackets [ ] refer to applicant's supplemental information submitted as attachments/appendices to the application form.

TECHNICAL MEMORANDUM

DATE September 15, 2023 **Project No.** 23643-01

TO Eric Chavers
Oak Grove Management Company LLC

FROM William Vienne, PG
Bullock, Bennett & Associates, LLC

OAK GROVE MANAGEMENT COMPANY LLC
OAK GROVE STEAM ELECTRIC STATION – ROBERTSON COUNTY, TEXAS
REGISTRATION NO. CCR106
RESPONSE TO TCEQ NOD NO. 3 ON CCR REGISTRATION APPLICATION

1.0 INTRODUCTION

Oak Grove Management Company LLC operates the Oak Grove Steam Electric Station (OGSES) located approximately 10 miles north of the city of Franklin in Robertson County, Texas. The OGSES consists of two lignite-fired units with a combined operating capacity of 1,796 megawatts. Coal Combustion Residuals (CCR) including fly ash, bottom ash, and gypsum are generated as part of OGSES operations. CCR generated at the OGSES are managed in the Ash Landfill 1 and the FGD Ponds (FGD-A, FGD-B, and FGD-C) located at the OGSES facility (the Site). Site plan maps of the Ash Landfill 1 and FGD Ponds are provided on Figures 1 and 2, respectively.

This report provides information to address Texas Commission on Environmental Quality (TCEQ) Notice of Deficiency (NOD) No. 3 on the CCR Registration Application for OGSES, which the TCEQ issued by email on July 18, 2023.

2.0 NOD NO. 3 COMMENTS AND RESPONSES

NOD No. 3 comments and responses are provided in this section.

1. **Comment ID No. 1, Appendix B Location Restriction and Geology**: *Location Restriction Evaluation Reports state that the base of the clay liner of the FGD – B unit is 413 ft MSL. The report also states that the upper limit of the uppermost aquifer in the vicinity of the FGD Ponds is approximately 412.6. However, based on the monitoring event in June 2021, the groundwater elevations closest to the FGD – B Pond were between 413.55 ft MSL and 414.16 ft MSL. Provide detailed response and justification to demonstrate compliance with 40 CFR 257.60(a) which includes:*

a) Supporting documents to show that there is no sustained hydraulic connection between any portion of the base of the FGD – B and the uppermost aquifer.

b) Groundwater elevation historical data for all FGD Pond Area wells from monitoring events starting from 11/03/2015.

Response: Groundwater elevation summary tables for the OGSES CCR monitoring wells are provided in Attachment 1, Table 1 (FGD Pond Area) and Table 2 (Ash Landfill 1). The groundwater elevation summary tables include data from the first CCR background groundwater monitoring event in November 2015 through the most recent monitoring event in May 2023. As shown on the FGD Pond groundwater elevation table and as stated in the TCEQ's Comment ID No. 1, the maximum groundwater elevations measured in the CCR monitoring wells located nearest to FGD-B (i.e., wells FGD-4 and FGD-6) were 414.16 feet above mean sea level (amsl) in FGD-4 and 413.55 feet amsl in FGD-6, which both occurred on June 16, 2021. The second highest groundwater elevations measured in FGD-4 and FGD-6 were 412.97 feet amsl in FGD-4 and 412.58 feet amsl in FGD-6, both on October 11, 2021. The average groundwater elevations in FGD-4 and FGD-6 during the CCR monitoring program period (2015-2023) have been 411.61 feet amsl in FGD-4 and 411.41 feet amsl in FGD-6. Except for the maximum groundwater elevations on June 16, 2021, all groundwater elevations measured at FGD-4 and FGD-6 have been below the 413 feet amsl base elevation of the FGD-B clay liner.

Groundwater elevations vary with the amount of rainfall and infiltration of rainfall into the unconfined aquifer at the Site. The OGSES maintains a rain gauge at the Site that has recorded daily rainfall amounts since 2009. A summary of the monthly and annual rainfall totals for the Site is provided in Attachment 2. The average annual rainfall for the years where the Site rain gauge has been operational the entire year (i.e., 2010-2011 and 2013-2022) is 38.12 inches. OGSES recorded 44.73 inches of annual rainfall in 2021, which is 6.61 inches above the average over the monitoring period. The Site had particularly high rainfall totals in May 2021 (12.16 inches) and July 2021 (9.71 inches). The total measured rainfall from May 2021 to October 2021 was 31.92 inches, which is higher than the rainfall total for those months during any other recorded year and approximately 1.7 times the average during those months over the period of record. The next highest rainfall total during the months of May through October was 22.79 inches (in 2019), and the average rainfall total during those months for the years where the rain gauge was operational for the entirety of those months is 18.79 inches, which is 13.13 inches less than the May through October rainfall total in 2021. Based on this information, the rainfall totals at the Site were abnormally high during the period from May to October in 2021, which corresponds to the abnormally high groundwater elevations observed at the Site during that period.

Groundwater elevation data collected as part of the CCR groundwater monitoring program demonstrate there is not a sustained hydraulic connection between the base of FGD-B liner system and the uppermost aquifer at the Site; therefore, FGD-B satisfies CCR Rule 40 C.F.R

§257.60(a) requirements for CCR unit placement above the uppermost aquifer.

2. **Comment ID No. 2, Appendix G – Annual Groundwater Monitoring and Corrective Action Reports**: *2022 Annual Groundwater Monitoring and Corrective Action Reports provide potentiometric maps. Provide groundwater elevations data in a separate table.*

   Response: Groundwater elevation summary tables for the Ash Landfill 1 and FGD Ponds are provided in Attachment 1 of this technical memorandum and will be included in future Annual Groundwater Monitoring and Corrective Action Reports for the CCR units.

3. **Comment ID No. 3, Appendix F – Groundwater Monitoring Plan**: *Provide an explanation on how it was determined that the number and spacing of downgradient monitoring wells for Ash Landfill Monitoring System are adequate to accurately represent the quality of the groundwater and detect potential groundwater contamination at the waste boundary. The distance between some of the downgradient wells ranges between 800 feet-1300 feet approximately.*

   Response: A qualified professional engineer has certified that the CCR groundwater monitoring systems at the Site were designed and constructed to meet the groundwater monitoring system requirements of the *Groundwater Monitoring Systems* section [40 C.F.R §257.91] of the CCR Rule (PBW, 2017a and 2017b).

   The CCR monitoring wells at the Site were installed by a water-well driller licensed by the State of Texas and under the direction of a geoscientist using recognized drilling methods. Soil samples were collected continuously to the base of each monitoring well boring and lithologically logged in the field. All sampling and aquifer characterization methods that were utilized are recognized and accepted methods that provided data at a spatial resolution necessary to adequately characterize the variability of subsurface conditions that control contaminant transport.

   The Site is located in the outcrop area of the Eocene-aged Wilcox Group, which regionally consists of interbedded sand, silt, clay, and lignite deposited in paleofluvial-deltaic channel complexes and interchannel flood basins (Barnes, 1970). As described in the Groundwater Monitoring System Certification for the Ash Landfill 1 (PBW, 2017a), the geology near the Ash Landfill 1 consists of relatively thick, interbedded sand and clay strata. The sand strata in the vicinity of the Ash Landfill 1 is generally composed of unconsolidated, poorly sorted, silty to clayey sand. The uppermost aquifer occurs under unconfined conditions within the shallow sand strata at the Site. The Ash Landfill 1 CCR monitoring system wells were preferentially screened near the top of the wet, sand strata that lies stratigraphically below the CCR unit. The wells were installed in the sand strata because that is where the water table was typically encountered during well drilling operations and because unconsolidated sand is generally more permeable and constitutes a preferential flow pathway compared to silt or clay-rich strata.

As described in the Groundwater Monitoring System Certification for the Ash Landfill 1 (PBW, 2017a), single-well aquifer tests (slug tests) were performed at three CCR monitoring well locations around the Ash Landfill 1 to assess the hydraulic conductivity (i.e., the relative ease at which a fluid moves through a medium) and groundwater flow rates within the sand stratum of the uppermost aquifer at the Site. The slug tests were performed at upgradient/background CCR well MW-02 located on the west side of the CCR unit, downgradient well MW-05 located on the east side of the CCR unit, and downgradient well MW-09 located on the north side of the CCR unit (Figure 1). The hydraulic conductivity results were similar for each of the test wells, with values ranging from $7.66E10^{-3}$ cm/s to $2.74E10^{-4}$ cm/s, which are typical of sand and silty sand aquifers (Domenico and Schwartz, 1990). The similarity in hydraulic conductivities in the uppermost aquifer across the Site suggests low spatial variability in permeability and groundwater flow pathways within the uppermost aquifer.

Regular groundwater monitoring activities were performed at the Ash Landfill 1 prior to the 2015 effective date of the CCR Rule in accordance with the groundwater monitoring program established as part of the landfill registration with the TCEQ Industrial and Hazardous Waste Permits Section (Solid Waste Registration No. 32043). The Registration Package for the Ash Landfill 1 was submitted to TCEQ Industrial and Hazardous Waste (IHW) Permits Section in July 2008. Cell 1 of the Ash Landfill 1 was constructed in 2009 and the landfill was expanded within its original registered footprint in 2011 (Golder, 2016). Notification of the landfill expansion was submitted to the TCEQ in January 2011. TCEQ issued approval of the updated landfill Registration Package in May 2012. Nine monitoring wells were historically and are still monitored at the Ash Landfill 1 on a semi-annual basis for boron, selenium, and sulfate in accordance with the landfill Registration Package groundwater monitoring program. They include wells MW-01, MW-02, MW-03, MW-04, MW-05, MW-06, MW-07, MW-08R (which replaced damaged well MW-08 in 2016), and MW-09. The locations of these wells are shown on the groundwater potentiometric surface maps that were included in the 2022 Annual Groundwater Monitoring and Corrective Action Report (WSP Golder, 2023), which are also reproduced in Attachment 3 of this technical memorandum.

The CCR groundwater monitoring system uses the same number of monitoring wells located upgradient and directly downgradient of the Ash Landfill 1 and the same general well spacing as the IHW groundwater monitoring system. One of the IHW upgradient wells (MW-02) and the four IHW wells located directly downgradient of the Ash Landfill 1 (MW-05, MW-07, MW-08, and MW-09) are included in the CCR groundwater monitoring program. A new background well (AL-10) was installed near the upgradient boundary of the Ash Landfill 1 before initiation of the CCR groundwater monitoring program and is used in the CCR groundwater monitoring program instead of IHW background well MW-01. IHW wells MW-03 and MW-04 were not selected for use in the CCR groundwater monitoring program because these wells are located more cross-gradient to the groundwater flow direction than the downgradient wells that were selected for use in the CCR groundwater monitoring program. IHW well MW-06 was not selected for use in the CCR groundwater monitoring program

because it is near CCR/IHW well MW-05 but is about 700 feet farther from the CCR unit than MW-05.

Oak Grove Management Company provided a summary of CCR groundwater monitoring data to the TCEQ Remediation Division on April 8, 2019, in response to a TCEQ letter requesting the data on March 22, 2019. The TCEQ issued a letter dated April 24, 2019, requiring the submittal of a Drinking Water Survey Report for the OGSES CCR units. A final Drinking Water Survey Report (Golder 2019) was submitted to the TCEQ on July 25, 2019, which described the CCR groundwater monitoring well network, summarized the CCR groundwater monitoring data, and inventoried drinking water wells in the area. The Drinking Water Survey Report concluded that no imminent threats to water wells or potentially affected drinking water wells were identified at or in the vicinity of the Ash Landfill 1. The Drinking Water Survey Report was approved by the TCEQ in a letter dated August 15, 2019.

TCEQ has reviewed the Ash Landfill 1 monitoring well network on several occasions and has approved the monitoring well network as adequate to assess groundwater quality and potential releases from the Ash Landfill 1. The CCR Rule does not specify a required well spacing or number of wells beyond the minimum of one upgradient and three downgradient wells. Based on the extensive hydrogeologic evaluations conducted at the Site, the existing CCR groundwater monitoring network is adequate to affectively address spatial variability, accurately represent the quality of groundwater, and detect potential groundwater contamination at the Site.

4. **Comment ID No. 4, Statistical Analysis Plan, Appendix F – Annual Groundwater Monitoring Report**: *Provide background evaluation reports in a separate attachment for Ash Landfill and FGD Pond Monitoring networks. Provide a detailed evaluation of how the background was established addressing the assumptions made, outliers, and distribution of the data, etc. Additionally, explain how the statistical evaluation was conducted for groundwater data since the establishment of the background values. While a detailed Statistical Analysis Plan has been submitted, the plan did not include how background and GWPSs which are not based on MCL or CCR regulatory limits were calculated.*

   Response: Background Groundwater Monitoring and Statistical Analysis Summary Reports for the Ash Landfill 1 and FGD Ponds are provided in Attachments 4.1 and 4.2, respectively.

5. **Comment ID No. 5, Alternate Source Demonstration**: *SSIs for Boron and Sulfate have been observed in the MW-07 since 2019. SSIs for Boron have also been observed in the MW-09 since 2019 and for Sulfate since May 2022. Alternate Source Demonstration (ASD) reports submitted annually since 2020 attribute the exceedances to the natural variation in the groundwater quality related to the heterogeneity of the uppermost aquifer at the site. However, the data indicates that the values are increasing for Boron and Sulfate in the MW-07 while staying constant in the uppermost aquifer. Provide a narrative explaining the cause of an increased trend of Boron and Sulfate in the MW-07 well. In your discussion include site-specific information and other information to demonstrate that this trend is not linked to*

the CCR waste affecting the groundwater.

Response: As discussed in the Background Groundwater Monitoring and Statistical Analysis Summary Report for the Ash Landfill 1 in Attachment 4.1, Appendix III background concentrations for the Ash Landfill 1 have been updated to address the recurring Appendix III statistically significant (SSIs) for which alternate source demonstrations have been successfully completed in the past. The updated background concentrations are based on upgradient CCR well sampling data collected from the initial baseline groundwater monitoring event in November 2015 through the latest reported CCR groundwater monitoring event in September 2022. The revised background concentrations for boron and sulfate are 0.16 mg/L and 190 mg/L, respectively. After updating the background concentrations, SSIs over background concentrations are no longer observed for boron at MW-09 or sulfate at MW-07. The boron concentrations at MW-07 are still slightly higher than the boron background concentration; however, the boron concentrations at MW-07 remain generally low and appear to be influenced by trends observed in the background wells.

Plots of boron concentrations over time and by well suggest that MW-07 has similar boron concentration trends as the two upgradient/background wells, AL-10 and MW-02 (see boron time series plot in Attachment 5). Long-term increasing trends in boron concentrations are evident in data from AL-10, MW-02, and MW-07. Additionally, the peaks and valleys in boron data from MW-07 match well with the peaks and valleys in boron data from AL-10 and MW-02 during specific sampling events, particularly after 2017.

The Pearson's correlation coefficient, which is used to measure linear correlation between data sets, was estimated and tested for statistical significance to evaluate whether a linear relationship exists and to quantify the strength of the potential linear relationship between boron data from MW-07 and AL-10 and between boron data from MW-07 and MW-02. Paired by sampling event, boron concentrations from November 2015 through September 2022 were used in the evaluation. A total of 20 paired samples were used in the evaluation for each case.

The correlations between the boron concentrations at the background wells and MW-07 are statistically significant based on a 95% level of confidence (i.e., the p-value is less than 0.05). The correlation coefficient for boron between MW-07 and AL-10 is 0.69, with a p-value of 0.00082. The correlation coefficient for boron between MW-07 and MW-02 is 0.49, with a p-value is 0.027. For both cases, the correlations are positive, which indicates that as boron concentrations increase in the upgradient wells the boron concentrations also increase in MW-07. The strength of the linear relationship is indicated by how close the correlation coefficient is to +/- 1. As such, the correlation between MW-07 and AL-10 is stronger than the correlation between MW-07 and MW-02; however, the correlation between the boron data from MW-07 and both background wells is statistically significant.

The boron concentrations from MW-07 are slightly higher than the boron concentrations observed in the background wells; however, it is important to note that the boron concentrations observed at MW-07 remain low. Although not directly applicable to the CCR monitoring program, the TCEQ has established health-based groundwater ingestion protective concentration levels (PCLs) for boron as part of the TCEQ Texas Risk Reduction Program. The TCEQ groundwater ingestion PCL for boron is 4.9 mg/L for residential land use properties and 15 mg/L for commercial-industrial land use properties (TCEQ, 2023). The maximum observed boron concentration at MW-07 is 0.302 mg/L, which is approximately 16 times lower than the residential PCL and approximately 50 times lower than the commercial-industrial PCL established by the TCEQ.

The statistically significant correlations between the boron data from MW-07 and background wells AL-10 and MW-02 suggest that the general increase in boron concentrations over time in all three wells is the result of natural conditions in the uppermost aquifer and is not attributed to a release from the Ash Landfill 1. Boron in all CCR wells will continue to be monitored and concentrations and trends in the data will continue to be evaluated on an ongoing basis as part of the CCR groundwater monitoring program.

6. **Comment ID No. 6, Appendix F, Table 1 CCR Well Construction Summary**: *Provide well construction summary for Well ID MW-02. Explain why MW-04 is mentioned in this table and not in the groundwater reports.*

   Response: As discussed in the response to Comment ID No. 3, well MW-04 is not part of the CCR groundwater monitoring system. An addendum to the Ash Landfill 1 Groundwater Monitoring System Certification, which is provided in Attachment 6 of this technical memorandum, includes a revised CCR well construction summary table. The revised well construction summary table presents the well construction summary information for CCR well MW-02 and removes the well construction summary information for non-CCR well MW-04.

7. **Comment ID No. 7, Table VIII.A.1 Appendix G**: *Provide justification or supporting documentation on how it was determined that one annual mowing per year will be adequate to maintain the vegetative cover system for the closed unit during post-closure care considering local climate*.

   Response: The vegetative cover system for the landfill/impoundment caps will consist primarily of herbaceous (soft-stemmed) grasses. The primary purpose of mowing a vegetative cover system is to prevent perennial, non-herbaceous (hard-stemmed) species, which can penetrate and damage the cap system, from developing. Mowing once per year is generally sufficient in the region to prevent the growth of these perennial, woody species.

   Turner and Seastedt (1993) found that frequent mowing of tallgrass prairie vegetation limited accumulation of belowground nitrogen reserves and biomass. Frequently mowed or grazed grasses preferentially use their photosynthate (energy acquired from photosynthesis) to replace their lost aboveground biomass (foliage) as opposed to sending this energy to

their roots or reproductive systems. This suggests that less frequent mowing of vegetative cover grasses will develop stronger root systems, which will lead to less erosion of cap systems.

3.0 REFERENCES

Barnes, Virgil E., 1970. Geologic Atlas of Texas, Waco Sheet. Texas Bureau of Economic Geology.

Domenico, P.A. and F.W. Schwartz, 1990. *Physical and Chemical Hydrogeology*, John Wiley & Sons, New York, 824 p.

Golder, 2016. History of Construction – CCR Surface Impoundments, Oak Grove Steam Electric Station. October.

Golder, 2019. Drinking Water Survey Report – Revision No. 1, Martin Lake Steam Electric Station – Ash Pond Area and PDP 5, Rusk County, Texas. July 25.

Pastor, Behling & Wheeler, LLC (PBW), 2017a. CCR Groundwater Monitoring System Certification – Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas. August.

Pastor, Behling & Wheeler, LLC (PBW), 2017b. CCR Groundwater Monitoring System Certification – Oak Grove Steam Electric Station, FGD Pond Area, Robertson County, Texas. August.

TCEQ, 2023. TRRP Protective Concentration Levels, accessed at www.tceq.texas.gov/remediation/trrp/trrppcls.html on September 7, 2023.

Turner, C.L. and Seastedt, M.I., 1993. Maximization of Aboveground Grassland Production: The Role of Defoliation Frequency, Intensity, and History. *Ecological Applications*, Journal of the Ecological Society of America, Volume 3, Issue 1, pp. 175-186.

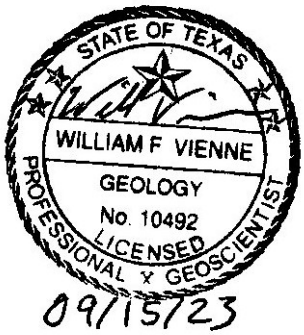
WSP Golder, 2023. 2022 Annual Groundwater Monitoring and Corrective Action Report, Oak Grove Steam Electric Station Ash Landfill 1 – Robertson County, Texas.

SIGNATURE PAGE

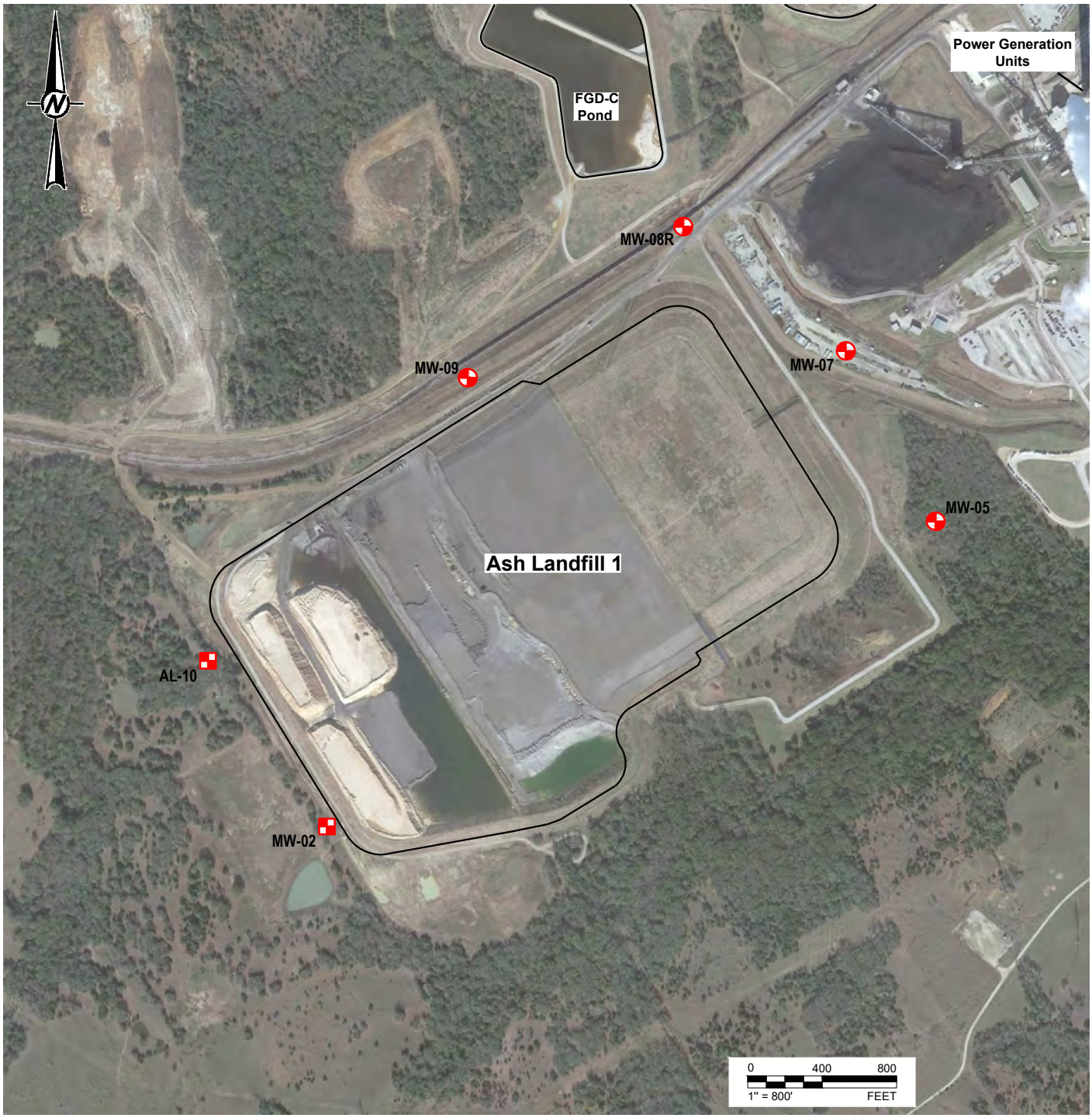
Bullock, Bennett & Associates, LLC

Teresa Shaw
Senior Statistician

William Vienne, P.G.
Senior Hydrogeologist



Figures



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL

OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

FIGURE 1

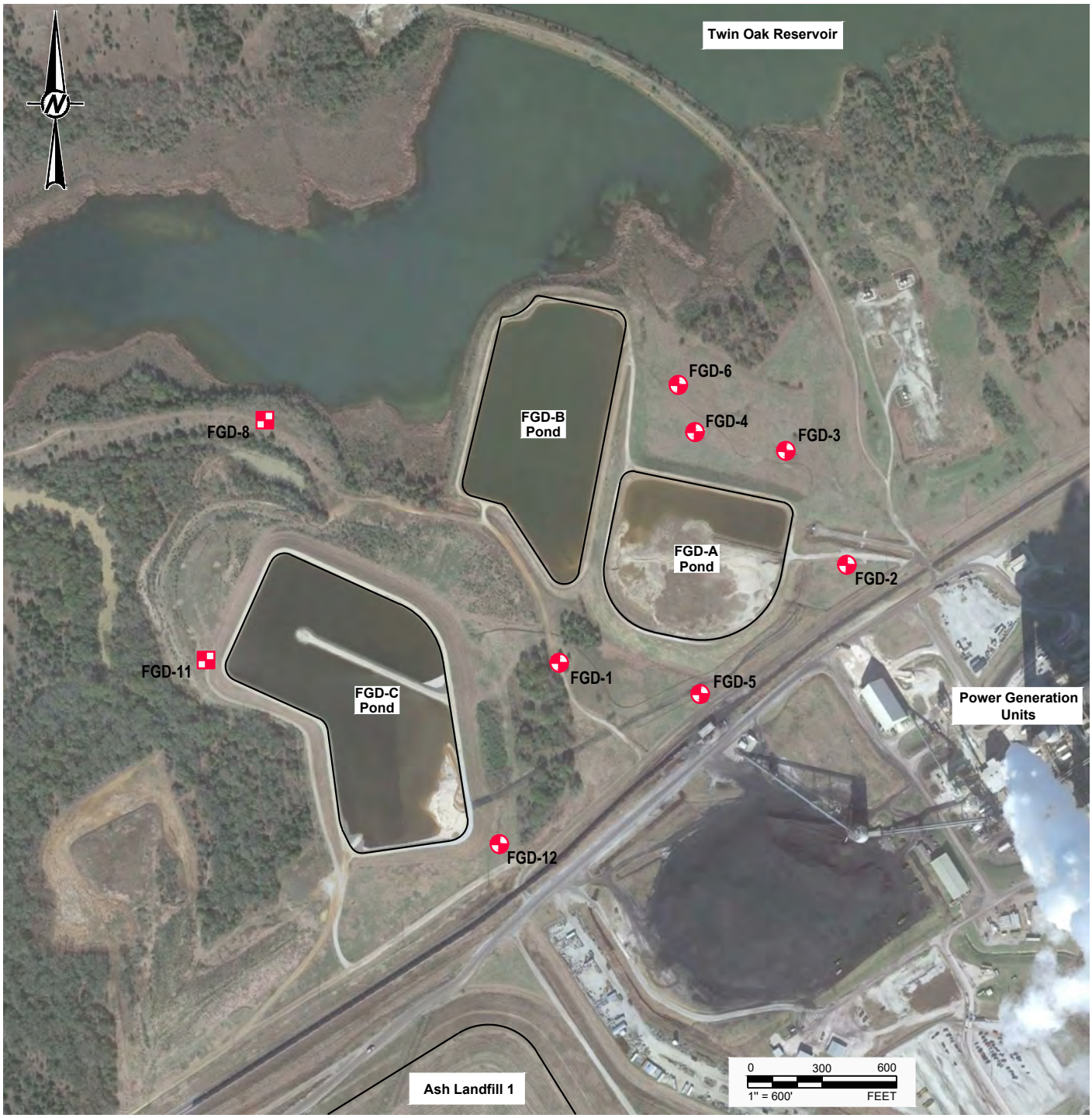
ASH LANDFILL 1 SITE PLAN

PROJECT: 23643.01	BY: SLB	DATE: 8/16/2023	CHECKED: WV

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

REFERENCE(S)

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



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- BACKGROUND CCR MONITORING WELL

OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

FIGURE 2

FGD PONDS SITE PLAN

PROJECT: 23643.01	BY: SLB	DATE: 8/16/2023	CHECKED: WV

REFERENCE(S)

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

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

Attachment 1

CCR Groundwater Monitoring Program
Groundwater Elevation Summary Tables

ATTACHMENT 1, TABLE 1
GROUNDWATER ELEVATION SUMMARY
FGD POND AREA

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
FGD-1	424.44	11/03/15	14.27	410.17
		12/17/15	14.22	410.22
		02/09/16	13.89	410.55
		04/14/16	13.79	410.65
		06/14/16	13.54	410.90
		08/24/16	13.37	411.07
		10/04/16	13.28	411.16
		12/19/16	13.25	411.19
		10/03/17	13.64	410.80
		06/04/18	12.96	411.48
		06/07/18	12.76	411.68
		09/15/18	13.40	411.04
		05/16/19	12.34	412.10
		08/19/19	16.72	407.72
		05/06/20	11.59	412.85
		09/09/20	12.12	412.32
		06/16/21	10.11	414.33
		10/11/21	10.82	413.62
		05/10/22	11.13	413.31
		05/25/23	11.28	413.16
FGD-2	439.36	11/03/15	29.31	410.05
		12/17/15	29.39	409.97
		02/09/16	29.03	410.33
		04/14/16	28.89	410.47
		06/14/16	28.21	411.15
		08/24/16	28.22	411.14
		10/04/16	28.06	411.30
		12/19/16	28.50	410.86
		10/03/17	28.56	410.80
		06/04/18	28.58	410.78
		06/07/18	27.89	411.47
		09/15/18	29.11	410.25
		05/16/19	27.97	411.39
		08/19/19	26.71	412.65
		05/06/20	26.98	412.38
		09/09/20	27.49	411.87
		06/16/21	25.58	413.78
		10/11/21	25.72	413.64
		05/11/22	26.76	412.60
		05/25/23	27.17	412.19

ATTACHMENT 1, TABLE 1
GROUNDWATER ELEVATION SUMMARY
FGD POND AREA

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
FGD-3	434.90	11/03/15	24.76	410.14
		12/17/15	24.33	410.57
		02/09/16	24.08	410.82
		04/14/16	24.11	410.79
		06/14/16	23.21	411.69
		08/24/16	23.74	411.16
		10/04/16	23.39	411.51
		12/19/16	23.69	411.21
		10/03/17	23.97	410.93
		06/04/18	23.89	411.01
		06/07/18	23.25	411.65
		09/15/18	24.43	410.47
		05/16/19	22.13	412.77
		08/19/19	22.19	412.71
		05/06/20	22.64	412.26
		09/09/20	22.83	412.07
		06/16/21	20.86	414.04
		10/11/21	21.72	413.18
		05/10/22	22.51	412.39
		05/25/23	26.58	408.32
FGD-4	432.03	11/03/15	21.84	410.19
		12/17/15	21.89	410.14
		02/09/16	21.31	410.72
		04/14/16	21.21	410.82
		06/14/16	20.47	411.56
		08/24/16	20.99	411.04
		10/04/16	20.79	411.24
		12/19/16	21.02	411.01
		10/03/17	21.09	410.94
		06/04/18	20.91	411.12
		06/07/18	20.43	411.60
		09/15/18	21.43	410.60
		05/16/19	19.52	412.51
		08/19/19	19.44	412.59
		05/06/20	19.78	412.25
		09/09/20	20.04	411.99
		06/16/21	17.87	414.16
		10/11/21	19.06	412.97
		05/10/22	19.62	412.41
		05/25/23	19.62	412.41

ATTACHMENT 1, TABLE 1
GROUNDWATER ELEVATION SUMMARY
FGD POND AREA

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
FGD-5	433.01	11/03/15	22.81	410.20
		12/17/15	22.58	410.43
		02/09/16	22.73	410.28
		04/14/16	22.27	410.74
		06/14/16	21.81	411.20
		08/24/16	21.68	411.33
		10/04/16	21.68	411.33
		12/19/16	21.69	411.32
		10/03/17	21.54	411.47
		06/04/18	21.33	411.68
		06/07/18	21.15	411.86
		09/15/18	21.85	411.16
		05/16/19	20.41	412.60
		08/19/19	20.23	412.78
		05/06/20	20.09	412.92
		09/09/20	20.48	412.53
		06/16/21	18.76	414.25
		10/11/21	18.91	414.10
		05/10/22	19.39	413.62
		05/25/23	19.59	413.42
FGD-6	428.62	11/03/15	18.44	410.18
		12/17/15	18.04	410.58
		02/09/16	17.96	410.66
		04/14/16	17.89	410.73
		06/14/16	17.22	411.40
		08/24/16	17.51	411.11
		10/04/16	17.37	411.25
		12/19/16	17.72	410.90
		10/03/17	17.88	410.74
		06/04/18	17.65	410.97
		06/07/18	17.15	411.47
		09/15/18	18.14	410.48
		05/16/19	16.37	412.25
		08/19/19	16.61	412.01
		05/06/20	16.84	411.78
		09/09/20	16.91	411.71
		06/16/21	15.07	413.55
		10/11/21	16.04	412.58
		05/10/22	16.57	412.05
		05/25/23	16.74	411.88

ATTACHMENT 1, TABLE 1
GROUNDWATER ELEVATION SUMMARY
FGD POND AREA

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
FGD-8	440.15	11/03/15	16.39	423.76
		12/17/15	16.26	423.89
		02/09/16	29.64	410.51
		04/14/16	29.54	410.61
		06/14/16	29.37	410.78
		08/24/16	29.16	410.99
		10/04/16	28.81	411.34
		12/19/16	29.21	410.94
		10/03/17	29.31	410.84
		06/04/18	29.15	411.00
		06/07/18	28.63	411.52
		09/15/18	29.61	410.54
		05/16/19	29.11	411.04
		08/19/19	28.72	411.43
		05/06/20	28.99	411.16
		09/09/20	29.06	411.09
		06/16/21	25.78	414.37
		10/11/21	28.41	411.74
		05/10/22	29.33	410.82
		05/25/23	28.79	411.36
FGD-11	452.22	11/03/15	20.67	431.55
		12/17/15	20.61	431.61
		02/09/16	41.62	410.60
		04/14/16	40.04	412.18
		06/14/16	39.81	412.41
		08/24/16	39.59	412.63
		10/04/16	41.59	410.63
		12/19/16	42.01	410.21
		10/03/17	40.97	411.25
		06/04/18	40.40	411.82
		06/07/18	39.79	412.43
		09/15/18	41.65	410.57
		05/16/19	38.72	413.50
		08/19/19	39.08	413.14
		05/06/20	38.91	413.31
		09/09/20	39.97	412.25
		06/16/21	38.09	414.13
		10/11/21	38.52	413.70
		05/10/22	38.22	414.00
		05/25/23	40.79	411.43

ATTACHMENT 1, TABLE 1
GROUNDWATER ELEVATION SUMMARY
FGD POND AREA

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)
FGD-12	443.16	11/03/15	33.82	409.34
		12/17/15	33.69	409.47
		02/09/16	32.42	410.74
		04/14/16	32.04	411.12
		06/14/16	32.02	411.14
		08/24/16	31.89	411.27
		10/04/16	31.77	411.39
		12/19/16	31.96	411.20
		10/03/17	31.31	411.85
		06/04/18	31.19	411.97
		06/07/18	29.61	413.55
		09/15/18	31.58	411.58
		05/16/19	30.18	412.98
		08/19/19	30.11	413.05
		05/06/20	29.97	413.19
		09/09/20	30.31	412.85
		06/16/21	29.12	414.04
		10/11/21	28.91	414.25
		05/10/22	29.06	414.10
		05/25/23	29.61	413.55

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

ATTACHMENT 1, TABLE 2
GROUNDWATER ELEVATION SUMMARY
ASH LANDFILL 1

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
		10/02/17	45.54	418.11
		06/04/18	45.48	418.17
		06/07/18	45.06	418.59
		09/15/18	42.68	420.97
		05/17/19	42.16	421.49
		05/06/20	42.29	421.36
		09/09/20	44.57	419.08
		06/16/21	43.58	420.07
		10/11/21	43.08	420.57
		05/11/22	43.54	420.11
		05/25/23	44.27	419.38
MW-05	436.98	11/03/15	29.94	407.04
		12/17/15	29.71	407.27
		02/10/16	28.93	408.05
		04/15/16	28.02	408.96
		06/14/16	27.57	409.41
		08/24/16	28.38	408.60
		10/04/16	27.94	409.04
		12/19/16	30.02	406.96
		10/02/17	29.06	407.92
		06/04/18	28.17	408.81
		06/07/18	27.67	409.31
		09/15/18	29.26	407.72
		05/17/19	26.29	410.69
		05/06/20	26.68	410.30
		09/09/20	27.09	409.89
		06/16/21	26.21	410.77
		10/11/21	26.46	410.52
		05/11/22	26.09	410.89
		05/25/23	26.51	410.47

ATTACHMENT 1, TABLE 2
GROUNDWATER ELEVATION SUMMARY
ASH LANDFILL 1

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Water Elevation (ft amsl)
MW-07	438.84	11/03/15	28.54	410.30
		12/17/15	28.07	410.77
		02/09/16	27.71	411.13
		04/15/16	27.43	411.41
		06/14/16	27.11	411.73
		08/24/16	27.11	411.73
		10/04/16	27.62	411.22
		12/19/16	26.79	412.05
		10/02/17	26.21	412.63
		06/04/18	26.71	412.13
		06/07/18	26.38	412.46
		09/15/18	27.33	411.51
		05/17/19	25.72	413.12
		05/06/20	25.82	413.02
		09/09/20	25.78	413.06
		06/16/21	25.79	413.05
		10/11/21	27.86	410.98
		05/11/22	25.09	413.75
		05/25/23	25.08	413.76
MW-08	443.38	11/03/15	32.77	410.61
		12/17/15	32.63	410.75
		02/09/16	32.47	410.91
		04/15/16	32.12	411.26
		06/14/16	29.96	413.42
		Well Damaged and Replaced by MW-08R		
MW-08R	443.84	12/19/16	33.97	409.87
		03/21/17	31.89	411.95
		04/20/17	31.80	412.04
		10/02/17	31.66	412.18
		06/04/18	31.74	412.10
		06/07/18	31.68	412.16
		09/15/18	32.09	411.75
		05/17/19	30.77	413.07
		05/06/20	33.62	410.22
		09/09/20	30.68	413.16
		06/16/21	29.61	414.23
		10/11/21	29.41	414.43
		05/11/22	42.26	401.58
		05/25/23	29.77	414.07

ATTACHMENT 1, TABLE 2
GROUNDWATER ELEVATION SUMMARY
ASH LANDFILL 1

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Water Elevation (ft amsl)
MW-09	461.46	11/03/15	48.43	413.03
		12/17/15	48.71	412.75
		02/09/16	48.20	413.26
		04/15/16	47.69	413.77
		06/14/16	47.31	414.15
		08/24/16	47.56	413.90
		10/04/16	47.22	414.24
		12/19/16	50.38	411.08
		10/02/17	47.11	414.35
		06/04/18	47.21	414.25
		06/07/18	47.87	413.59
		09/15/18	47.63	413.83
		05/17/19	45.51	415.95
		05/06/20	38.62	422.84
		09/09/20	46.07	415.39
		06/16/21	45.71	415.75
		10/11/21	44.89	416.57
		05/11/22	45.21	416.25
		05/25/23	45.77	415.69
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
		10/02/17	42.37	418.44
		06/04/18	42.32	418.49
		09/15/18	43.01	417.80
		05/17/19	41.04	419.77
		05/06/20	40.80	420.01
		09/09/20	41.46	419.35
		06/16/21	40.61	420.20
		10/11/21	39.02	421.79
		05/11/22	40.32	420.49
		05/25/23	41.17	419.64

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

Attachment 2

OGSES Rain Gauge Data

ATTACHMENT 2

RAIN GAUGE DATA
OAK GROVE STEAM ELECTRIC STATION

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total	Total May through October
2009	NA	NA	NA	NA	NA	NA	NA	NA	6.84	11.77	2.30	1.66	NA	NA
2010	1.98	2.85	4.90	1.01	2.24	3.90	3.69	0.51	2.47	0.19	1.16	0.79	25.69	13.00
2011	4.02	1.07	1.23	0.33	4.65	1.96	0.25	0.17	2.46	0.77	2.18	6.69	25.78	10.26
2012	NA	NA	NA	NA	NA	2.10	2.12	2.58	0.94	0.39	0.45	2.06	NA	NA
2013	3.33	1.91	1.57	1.29	5.92	0.41	2.04	0.01	5.05	7.61	3.91	1.50	34.55	21.04
2014	0.45	0.87	2.50	1.04	8.15	3.56	2.04	0.85	0.91	3.17	4.30	1.83	29.67	18.68
2015	6.48	0.94	6.07	6.76	7.72	4.39	0.12	0.00	0.38	9.52	9.01	6.41	57.80	22.13
2016	0.91	1.13	7.14	7.88	9.58	1.29	1.30	7.95	0.94	0.69	3.47	1.87	44.15	21.75
2017	3.71	2.79	3.78	5.46	4.45	1.48	1.09	5.96	0.15	1.66	2.64	2.69	35.86	14.79
2018	1.71	3.35	4.82	2.32	1.75	0.83	1.55	0.83	6.56	6.81	1.08	8.12	39.73	18.33
2019	3.75	1.82	2.13	13.08	9.34	5.85	1.40	0.31	0.44	5.45	1.13	1.00	45.70	22.79
2020	2.56	3.83	4.51	4.55	3.77	2.23	0.82	0.91	12.63	0.94	1.19	5.78	43.72	21.30
2021	3.27	0.75	1.68	3.65	12.16	2.21	9.71	2.60	1.44	3.80	1.02	2.44	44.73	31.92
2022	0.77	3.84	4.34	4.02	2.66	0.88	0.00	4.11	0.72	1.15	4.62	2.95	30.06	9.52
2023	2.37	2.83	1.67	4.37	2.92	1.77	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA
Min	0.45	0.75	1.23	0.33	1.75	0.41	0.00	0.00	0.15	0.19	0.45	0.79	25.69	9.52
Max	6.48	3.84	7.14	13.08	12.16	5.85	9.71	7.95	12.63	11.77	9.01	8.12	57.80	31.92
Avg	2.75	2.10	3.72	4.28	6.03	2.39	2.01	2.06	3.00	3.85	2.75	3.27	38.12	18.79

Notes:

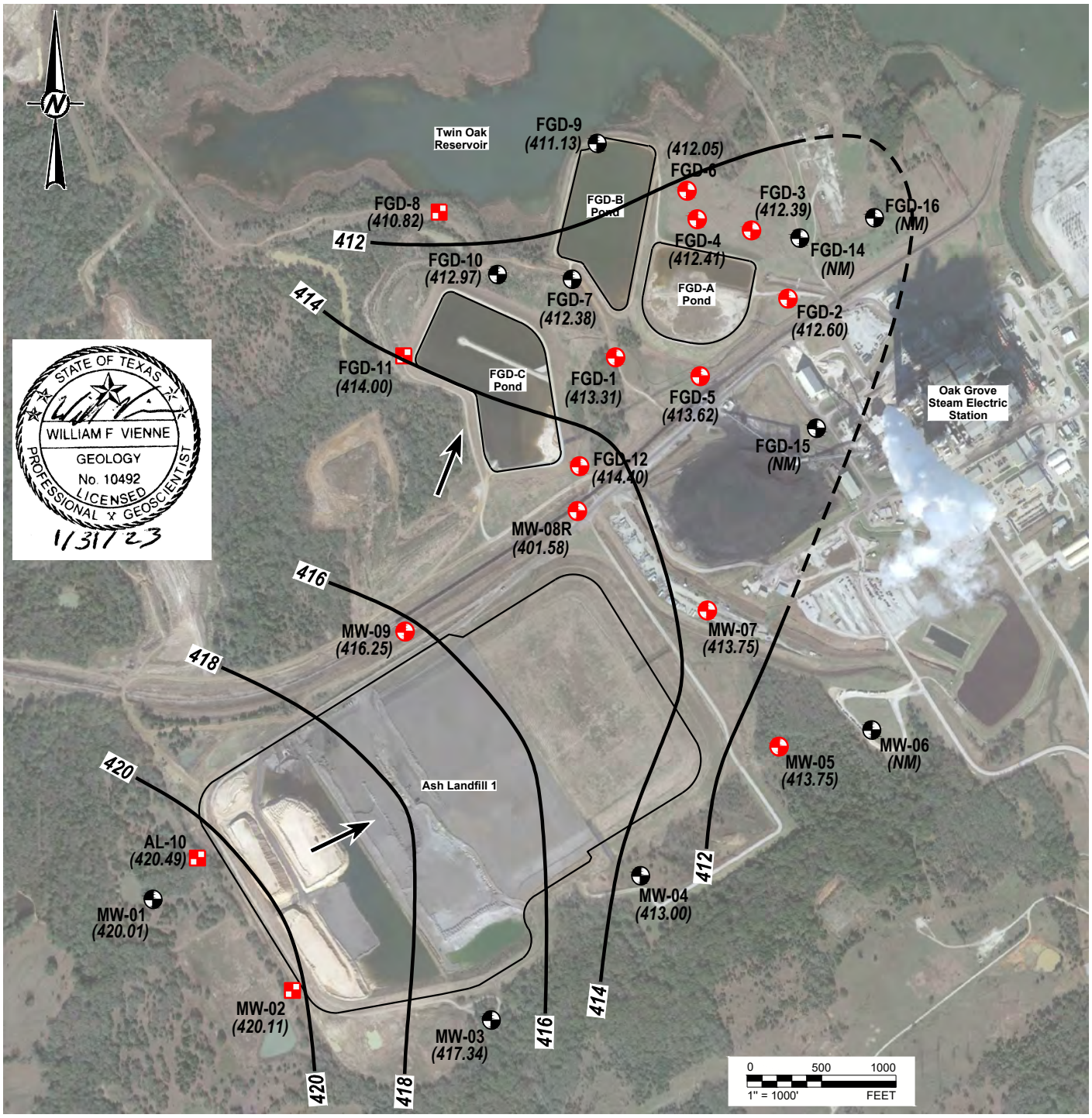
NA Not applicable; these are months or years where the rain gauge was not operational the entire period.

The rain gauge is located at the OGSES facility and is maintained by plant personnel.

All values in inches.

Attachment 3

2022 Groundwater Potentiometric Surface Maps (WSP Golder, 2023)



STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
11/31/23

LEGEND

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

REFERENCE(S)

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

CLIENT
LUMINANT

PROJECT
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

TITLE
ASH LANDFILL AND FGD PONDS POTENTIOMETRIC SURFACE MAP MAY 2022

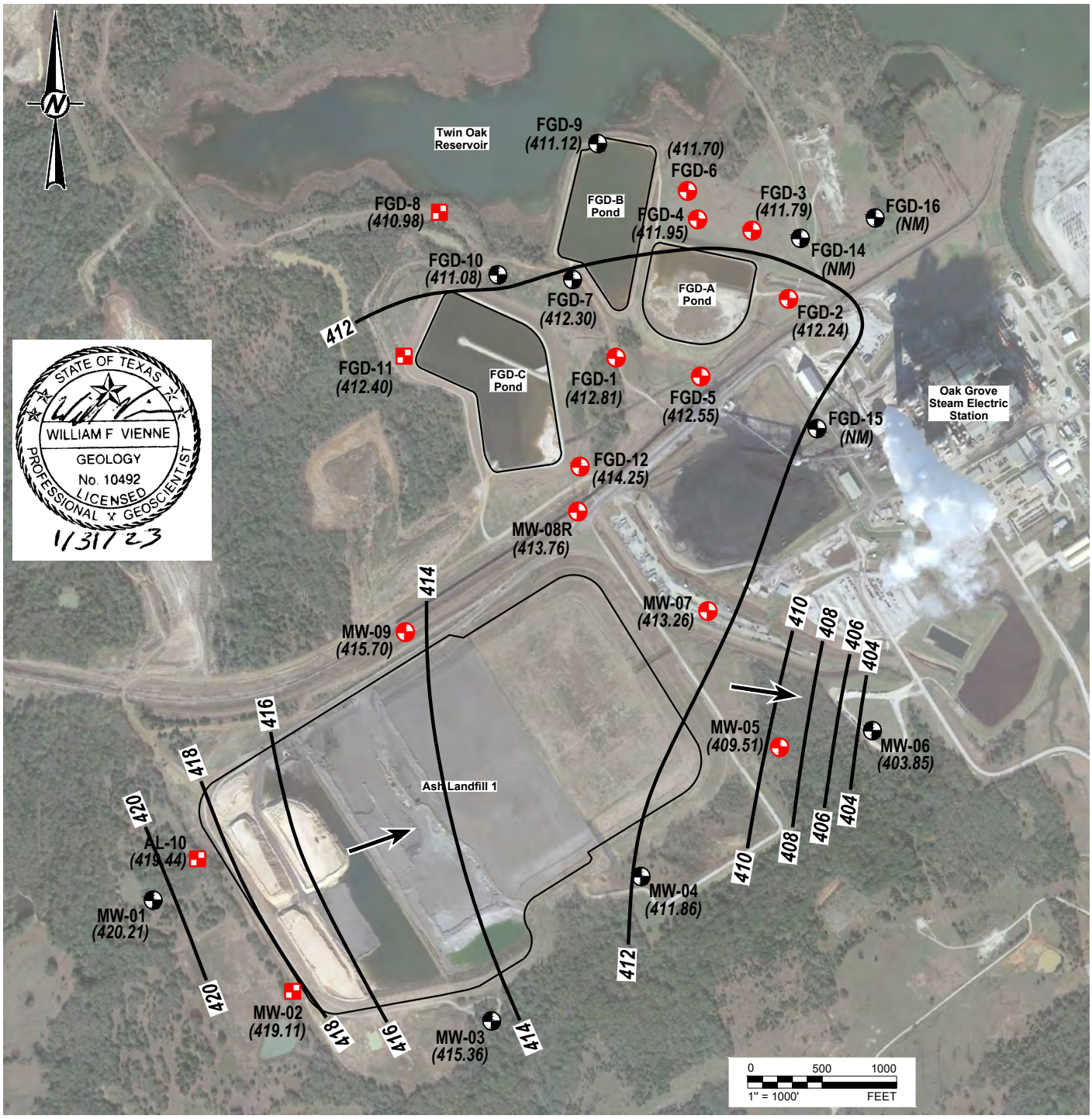
CONSULTANT
wsp

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

PROJECT NO. 31404097.007 | REV. 0 | FIGURE 1

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

Last Edited By: usad701305 Date: 2023-01-10 Time:2:23:22 PM | Printed By: USAD701305 Date: 2023-01-10 Time:2:34:23 PM
Path: \\golder.gds\complexdata\office\Texarkana\Projects - Round Rock_2022\31404097 - Luminant CCR\Oak Grove\PRODUCTION\2023-01\ | File Name: 1 - POT Surface Map (May 2022).dwg



STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
11/31/23

LEGEND

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

REFERENCE(S)

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

CLIENT
LUMINANT

PROJECT
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

TITLE
ASH LANDFILL AND FGD PONDS POTENTIOMETRIC SURFACE MAP SEPTEMBER 2022

CONSULTANT
wsp

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

PROJECT NO. 31404097.007 | REV. 0 | FIGURE 2

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Attachment 4

Background Groundwater Monitoring and Statistical Analysis Summary Reports

Attachment 4.1

Ash Landfill 1
Background Groundwater Monitoring and Statistical Analysis Summary Report

Bullock, Bennett & Associates, LLC

www.bbaengineering.com
165 N. Lampasas St. • Bertram, Texas 78605 • (512) 355-9198

COAL COMBUSTION RESIDUAL RULE BACKGROUND GROUNDWATER MONITORING AND STATISTICAL ANALYSIS SUMMARY REPORT

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

September 15, 2023

Prepared For:

Oak Grove Management Company LLC

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TABLE OF CONTENTS

LIST OF TABLES iii
LIST OF FIGURES iii
LIST OF APPENDICES iii
1.0 INTRODUCTION 1
1.1 Description of Ash Landfill 1 2
1.2 Ash Landfill 1 Groundwater Monitoring System 2
2.0 BACKGROUND GROUNDWATER MONITORING PROGRAM 3
2.1 Groundwater Sampling Procedures 3
2.2 Analytes and Analytical Procedures 3
2.3 Background Groundwater Monitoring Sampling Results 4
2.4 Establishing Background Assessment Levels 4
2.5 Updating Background Assessment Levels 4
3.0 DETECTION AND ASSESSMENT MONITORING DATA EVALUATION PROCEDURES 6
3.1 Detection Monitoring Data Evaluation 7
3.2 Assessment Monitoring Data Evaluation 8
4.0 REFERENCES 11
SIGNATURE PAGE 12

LIST OF TABLES

Table No.	Title
1	Appendix III Groundwater Background Upper Prediction Limits
2	Appendix IV Groundwater Protection Standards

LIST OF FIGURES

Figure No.	Title
1	Site Plan

LIST OF APPENDICES

Appendix	Title
A	Groundwater Potentiometric Surface Maps
B	Laboratory Analytical Reports
C	Statistical Approach to Establishing Baseline Concentrations

1.0 INTRODUCTION

The Oak Grove Steam Electric Station (OGSES) is located approximately 10 miles north of Franklin, Robertson County, Texas (Figure 1). The OGSES consists of two lignite-fired units with a combined operating capacity of 1,796 megawatts. 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 at the Site in three surface impoundments (FGD-A, FGD-B, and FGD-C) or in the Ash Landfill 1. This report discusses the background groundwater monitoring and statistical analysis program for the Ash Landfill 1 (the Site).

The federal CCR Rule (Title 40 Code of Federal Regulations (CFR) Section 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) has been promulgated by the United States Environmental Protection Agency (USEPA) to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. The final CCR Rule was published in the Federal Register on April 17, 2015. The effective date of the CCR Rule is October 19, 2015. TCEQ adopted portions of the Federal CCR Rule at Title 30 Texas Administrative Code (TAC) Chapter 352 (Texas CCR Rule). The USEPA published its final approval of the Texas CCR Rule on June 28, 2021 and the Texas CCR Rule became effective on July 28, 2021. It adopts and incorporates by reference the Federal CCR Program requirements for groundwater monitoring at 30 TAC Sections 352.901 through 352.951.

The CCR Rule establishes national minimum criteria for existing and new CCR landfills, existing and new CCR surface impoundments, and lateral expansions to landfills/impoundments. 40 C.F.R § 257.93(d) of the CCR Rule requires that the owner or operator of the CCR unit must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the constituents required in the particular groundwater monitoring program that applies to the CCR unit as determined under 40 C.F.R § 257.94(a) (*Detection Monitoring Program)* and 40 C.F.R § 257.95(a) (*Assessment Monitoring Program)*. 40 C.F.R § 257.94(b) of the CCR Rule requires that a minimum of eight independent groundwater samples from each background and downgradient well associated with a CCR unit be collected and analyzed for the constituents listed in Appendix III and IV to Part 257 no later than October 17, 2017. This report presents a summary of the sampling and analytical activities performed to establish background

groundwater quality at the Site.

1.1 Description of Ash Landfill 1

Ash Landfill 1 is located approximately 3,500 feet southwest of the OGSES power plant (Figure 1). CCRs generated at the OGSES, including fly ash, bottom ash, and gypsum, are transported and managed/disposed in the Ash Landfill 1. The Ash Landfill 1 consists of four landfill cells (Cells 1 through 4), each constructed with a 3-foot thick compacted clay liner (hydraulic conductivity ≤ 1×10^{-7} cm/sec). The landfill is constructed above-grade and is surrounded by an earthen perimeter berm that are also provided with a 3-foot-thick compacted clay liner. CCR placement extends above the top of the perimeter berms and the sides of the CCR placed above the berms are graded to slopes of approximately 3H:1V.

Ash Landfill 1 has been in operation since 2008. Final cover was constructed on Cells 1 and 2 in 2015 and 2019, respectively. Cells 3 and 4 are currently active. Cell 3 is primarily used for bottom ash disposal and Cell 4 is primarily used for gypsum disposal.

1.2 Ash Landfill 1 Groundwater Monitoring System

The CCR groundwater monitoring system for the Ash Landfill 1 consists of the following si monitoring wells:

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

A detailed Site Plan of the Ash Landfill 1 showing the location of the CCR monitoring wells is provided as Figure 1. The Ash Landfill 1 CCR groundwater monitoring system was certified by a professional engineer in accordance with 40 C.F.R § 257.91 of the CCR Rule (PBW, 2017).

2.0 BACKGROUND GROUNDWATER MONITORING PROGRAM

This section describes groundwater sampling and analysis procedures used for the background monitoring events.

2.1 Groundwater Sampling Procedures

Groundwater sampling was performed in accordance with the Site Groundwater Monitoring Plan (WSP Golder, 2022a). Water levels were measured in each well to the nearest 0.01-foot prior to purging or sampling the wells. The wells were purged using low-flow methods until field water quality parameters stabilized, after which a groundwater sample was collected in a laboratory-supplied container. After the samples were collected, the sample containers were placed in a cooler or similar container, preserved with ice, and delivered to the laboratory for analysis.

2.2 Analytes and Analytical Procedures

Groundwater samples collected during the background period were analyzed for the constituents listed in Appendix III and IV to Part 257, including:

Appendix III Constituents	Appendix IV Constituents
Boron	Arsenic
Calcium	Barium
Chloride	Beryllium
Fluoride	Cadmium
pH	Chromium
Sulfate	Cobalt
Total Dissolved Solids (TDS)	Fluoride
	Lead
	Lithium
	Mercury
	Molybdenum
	Selenium
	Thallium
	Radium 226 and 228 (combined)

The laboratory methods used to analyze the background samples were as follows:

Appendix III Constituents

- Boron and calcium by USEPA Method SW6020;
- Chloride, fluoride, and sulfate by USEPA Method E300;
- pH by Standard Method M4500-H + B (field measurement); and
- TDS by Standard Method M2540.

Appendix IV Constituents

- Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, lithium, molybdenum, selenium, and thallium by USEPA Method SW6020;
- Fluoride USEPA Method E300;
- Mercury by USEPA Method SW7470; and
- Radium 226 and 228 by USEPA Methods 904.0/SW9320 Modified and 903.1 Modified.

All metals analyses were reported as "total recoverable metals" in accordance with 40 C.F.R § 257.93(1) of the CCR Rule. Samples were not filtered prior to analysis.

2.3 Background Groundwater Monitoring Sampling Results

Eight initial background groundwater monitoring events were performed using the monitoring well system from November 2015 through December 2016. The laboratory analytical reports for the initial background samples are presented in Appendix B and the background sample data are summarized in Appendix C, Table C-1 (Appendix III) and Table C-2 (Appendix IV).

2.4 Establishing Background Assessment Levels

The following statistical evaluation approach was selected to develop background groundwater quality assessment levels for the Site:

- Use of interwell data evaluations, which compare new sample data to data from upgradient or background monitoring wells.

- Use of upper prediction limits (UPLs) to develop site-specific background concentrations for all Appendix III and Appendix IV constituents. 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 evaluations under the CCR Rule.

Documentation on the statistical procedures used to establish background UPLs is presented in Appendix C.

2.5 Updating Background Assessment Levels

Ash Landfill 1 is currently in a Detection Monitoring Program. The initial Detection Monitoring Program groundwater samples were collected from the Ash Landfill 1 CCR monitoring well network in October 2017. Subsequent Detection Monitoring Program groundwater samples have been collected on a semi-annual basis since that time. Data evaluation is completed using procedures described in the Statistical Analysis Plan (WSP Golder, 2022b), which are discussed in Section 3.0, to identify statistically significant increases (SSIs) of Appendix III

parameters over background concentrations.

SSIs of Appendix III parameters were identified during the 2018 through 2022 sampling events. An initial Alternate Source Demonstration was completed in 2019, which indicated that a source other than the CCR unit caused SSIs observed in the 2018 sample data. Similarly, Alternate Source Demonstrations were completed each year from 2020 to 2022 based on the previous year's groundwater sample data and were included as an attachment to the Annual Groundwater Monitoring and Corrective Action Reports in accordance with 40 C.F.R. §257.94(e)(2).

Appendix III background concentrations have been updated as part of this report to address the recurring Appendix III SSIs for which alternate source demonstrations have been successfully completed in the past. The updated background concentrations are based on sampling data collected from the initial background monitoring event in November 2015 through the latest reported CCR monitoring event in September 2022. Appendix IV sample data have not been collected since the initial background monitoring period because the CCR unit has remained in the Detection Monitoring Program; therefore, only Appendix III background concentrations were updated in this report. Appendix C includes further discussion on the process used for updating the Appendix III background concentrations.

3.0 DETECTION AND ASSESSMENT MONITORING DATA EVALUATION PROCEDURES

Statistical analysis of groundwater monitoring data is required as part of detection monitoring and assessment monitoring under 40 C.F.R § 257.93 of the CCR Rule. 40 C.F.R § 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 40 C.F.R § 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 under the CCR Rule:

- Use of interwell data evaluations, which compare new sample data to data from upgradient or background monitoring wells.
- Use of UPLs to develop site-specific background concentrations for all Appendix III and Appendix IV constituents. 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 evaluations under the CCR Rule.
- After every detection monitoring event, Appendix III constituent concentrations from each well are compared to background UPLs to ascertain if a statistically significant increase above background exists. Background UPLs are based on a 1-of-2 resampling

approach, meaning that if one or more constituent concentrations in a compliance well are above their respective background concentration, a resample can be collected to validate or invalidate the background concentration exceedance.

- If in assessment monitoring, the 95% lower confidence limit of the mean (LCL) is calculated after each assessment monitoring event for each Appendix IV constituent. The data set used to calculate LCLs is based on current and historical constituent concentrations. A statistically significant increase over the Groundwater Protection Standard (GWPS) has occurred at a CCR unit when the LCL for at least one assessment monitoring constituent at a well is greater than the appropriate GWPS. Development of the GWPSs is discussed in Section 3.2 and statistical methods used to develop LCLs are discussed in Appendix C.

The proposed statistical evaluation procedures conform with the CCR Rule requirements, as well as the Statistical Analysis Plan for the Site (WSP Golder, 2022b), USEPA's *Unified Guidance: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (USEPA, 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).

3.1 Detection Monitoring Data Evaluation

After every detection monitoring event, the constituent concentrations from each downgradient well are compared to the background UPLs to ascertain if a statistically significant increase above background exists. The Appendix III detection monitoring prediction limits are summarized in Table 1. Documentation on the statistical procedures used to establish background groundwater quality prediction limits is presented in Appendix C. Background UPLs are based on a 1-of-2 resampling approach, meaning that if zero or one concentration measurements from a series of two independent samples collected from a well do not exceed the appropriate UPL, then a statistically significant increase over background has not occurred at the CCR unit. This conclusion will be reached if the data indicate either of the following:

- All detection monitoring constituent concentrations in a compliance well are less than or equal to their respective background UPL; or

- At least one detection monitoring constituent concentration in a well is above the respective background UPL. If this occurs, the well or wells with constituent concentration(s) above the background UPL(s) may be resampled and analyzed for the detection monitoring constituent(s) with exceedances. If the resample indicates that the target detection monitoring constituent concentration(s) in the well or wells is less than or equal to their respective background UPL(s), then it can be concluded that a statistically significant increase over background for all detection monitoring constituents has not

occurred since concentrations in one sample of the two independent samples do not exceed the appropriate background UPL(s).

If the groundwater monitoring data indicate that a statistically significant increase over background has not occurred at the CCR wells, then detection monitoring at all CCR wells will continue on a semi-annual basis.

If one or more detection monitoring constituent concentration in any well is above the respective background UPL in both the original detection monitoring sample and the resample, then a statistically significant increase over background for the target detection monitoring constituents can be concluded. In accordance with 40 C.F.R. § 257.94(e), if a statistically significant increase is indicated, within 90 days the owner/operator shall:

- Establish an assessment monitoring program, or
- Demonstrate that a source other than the CCR unit caused the statistically significant increase over the background UPL for a constituent, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Per 30 TAC § 352.941, in making an alternative source demonstration, the owner or operator must:
    - Notify the TCEQ executive director, and any local pollution agency with jurisdiction that has requested to be notified, in writing within 14 days that the owner or operator intends to make an alternative source demonstration; and
    - Within 90 days of making a determination of a statistically significant increase over the background value for any Appendix III constituent, submit a report prepared and certified in accordance with 30 TAC § 352.4 (relating to Engineering and Geoscientific Information) to the TCEQ executive director and any local pollution agency with jurisdiction that has requested to be notified, demonstrating that a source other than a CCR unit caused the statistically significant increase or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

3.2 Assessment Monitoring Data Evaluation

Assessment monitoring will be performed at a CCR unit's groundwater monitoring system after a statistically significant increase over background has been confirmed for one or more of the detection monitoring constituents and the statistically significant increase cannot be attributed to a source other than the CCR unit. Within 90 days of obtaining the results from the initial assessment monitoring sampling event, GWPSs will be established for all Appendix IV assessment monitoring constituents as follows:

- For constituents for which an MCL has been established, the GWPS is the highest of the MCL, UPL, or reporting limit for each constituent; or

- For constituents for which an MCL has not been established, the GWPS is the higher of the UPL, reporting limit, or the EPA regional screening level (RSL) for each constituent.

The GWPS for each Appendix IV constituent is presented in Table 2.

The 95% LCL for each Appendix IV constituent concentration at each is compared to the GWPS established for each constituent to ascertain if a statistically significant increase above the GWPS does or does not exist. A statistically significant increase is indicated if the LCL exceeds the GWPS. Additional information on the development of Appendix IV constituent LCLs is provided in Appendix C.

In accordance with 40 C.F.R. § 257.95(g)(3), if a statistically significant increase over GWPSs for any Appendix IV assessment monitoring constituent is confirmed, within 90 days of the initial assessment monitoring event, the owner/operator will either:

- Initiate an assessment of corrective measures for the CCR unit in accordance with 40 C.F.R. § 257.96; or

- Demonstrate that a source other than the CCR unit caused the statistically significant level over the background UPL for a constituent, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Per 30 TAC § 352.951, in making an alternative source demonstration, the owner or operator must:

    - Notify the TCEQ executive director, and any local pollution agency with jurisdiction that has requested to be notified, in writing within 14 days that the owner or operator intends to make an alternative source demonstration; and

    - Within 90 days of making a determination of a statistically significant increase over the GWPS of any Appendix IV constituent, submit a report prepared and certified in accordance with 30 TAC § 352.4 (relating to Engineering and Geoscientific Information) to the TCEQ executive director, and any local pollution agency with jurisdiction that has requested to be notified, demonstrating that a source other than a CCR unit caused the exceedance or that the exceedance resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

If one or more Appendix IV assessment monitoring constituents are detected at statistically significant levels above their respective GWPS in any sampling event, and if a source other than

the CCR unit cannot be demonstrated to have caused the exceedance, the nature and extent of the release should be further characterized as follows in accordance with 40 C.F.R § 257.95(g)(1):

- Install additional monitoring wells necessary to define the contaminant plume(s);
- Collect data on the nature and estimated quantity of material released including specific information on the Appendix IV assessment monitoring constituents and the levels at which they are present in the material released;
- Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well for all Appendix III detection monitoring parameters and for those Appendix IV assessment monitoring constituents that have been detected as part of assessment monitoring. This monitoring must be performed on at least a semi-annual basis thereafter; and
- Sample all wells in accordance with 40 C.F.R § 257.95(d)(1) to characterize the nature and extent of the release.

4.0 REFERENCES

ASTM, 2017. Standard Guide for Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs at Waste Disposal Facilities - D6312-17.

Pastor, Behling & Wheeler, LLC (PBW), 2017. CCR Groundwater Monitoring System Certification – Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas. August.

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

WSP Golder, 2022a. Groundwater Monitoring Plan – Revision 2, Oak Grove Steam Electric Station – Ash Landfill 1, Robertson, County.

WSP Golder, 2022b. Statistical Analysis Plan – Revision 1, Oak Grove Steam Electric Station – Ash Landfill 1, Robertson, Count

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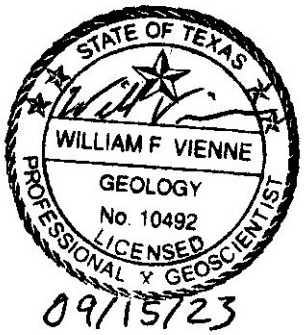


Tables

Table 1
Appendix III Groundwater Background Upper Prediction Limits
OGSES Ash Landfill 1

Parameter	Statistical Background Value
Boron (mg/L)	0.16
Calcium (mg/L)	81
Chloride (mg/L)	440
Fluoride (mg/L)	0.59
field pH (s.u.)	6.3 7.0
Sulfate (mg/L)	190
Total Dissolved Solids (mg/L)	900

Table 2
Appendix IV Groundwater Protection Standards
OGSES Ash Landfill 1

Parameter	Groundwater Protection Standard
Antimony (mg/L)	0.0060
Arsenic (mg/L)	0.010
Barium (mg/L)	2.0
Beryllium (mg/L)	0.0040
Cadmium (mg/L)	0.0050
Chromium (mg/L)	0.10
Cobalt (mg/L)	0.0060
Fluoride (mg/L)	4.0
Lead (mg/L)	0.015
Lithium (mg/L)	0.10
Mercury (mg/L)	0.0020
Molybdenum (mg/L)	0.10
Selenium (mg/L)	0.050
Thallium (mg/L)	0.0020
Radium 226+228 (pCi/L)	5.1

Figures

LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- UPGRADIENT CCR MONITORING WELL

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

FIGURE 1

SITE PLAN

PROJECT: 23643.01	BY: SLB	DATE: 8/16/2023	CHECKED: WV

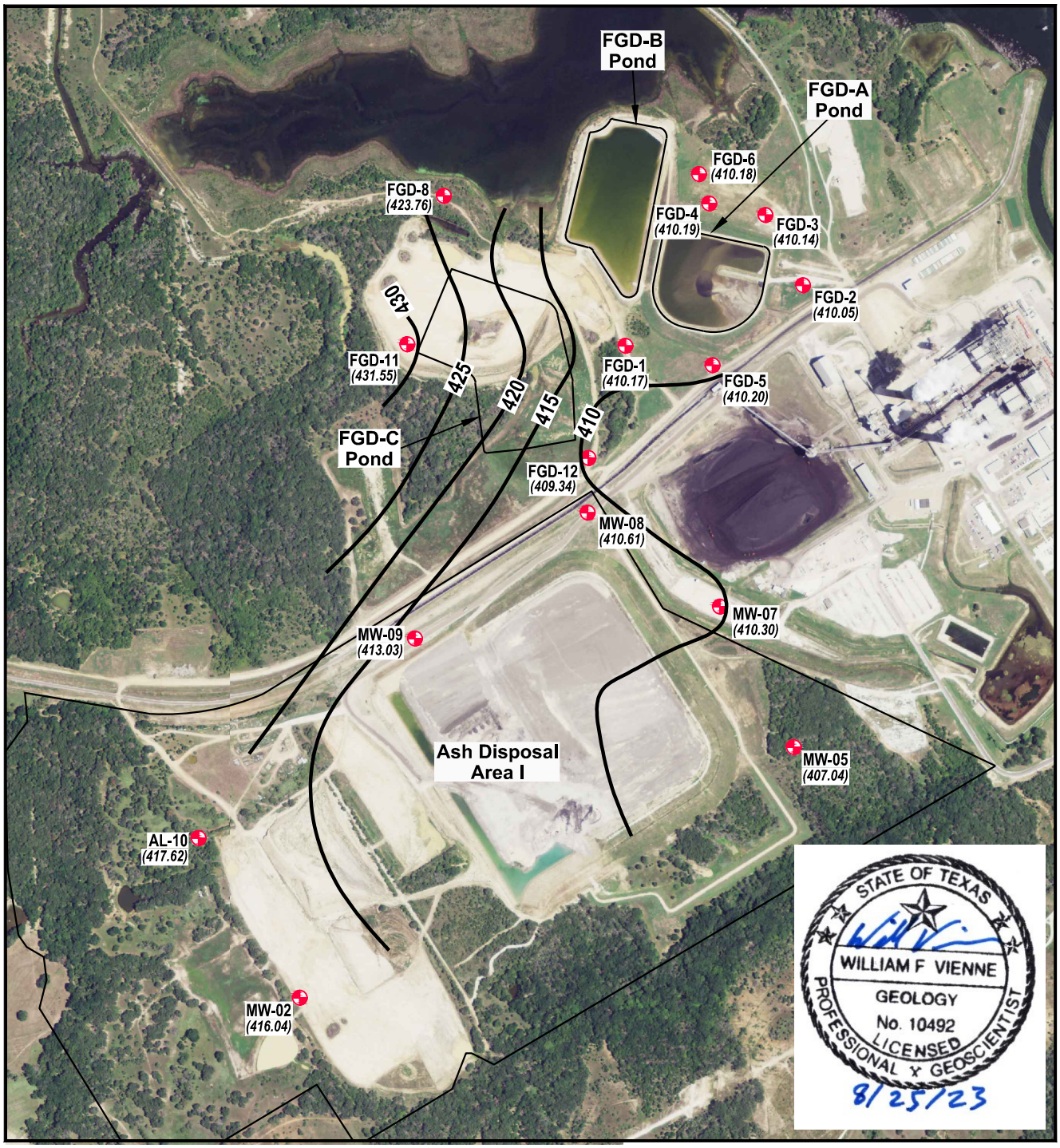
Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

REFERENCE(S)

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

Appendix A

Groundwater Potentiometric Surface Maps



EXPLANATION

- CCR Monitoring Well Location
- (410.06) Groundwater Potentiometric Surface (ft. MSL)
- 400 Groundwater Potentiometric Surface Contour (C.I. = 5 ft.)

N

Scale in Feet

0 500 1000

SOURCE:
Imagery from www.tnris.gov, Robertson Co., aerial photographs, 2012.

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 1

GROUNDWATER POTENTIOMETRIC SURFACE MAP NOVEMBER 3, 2015

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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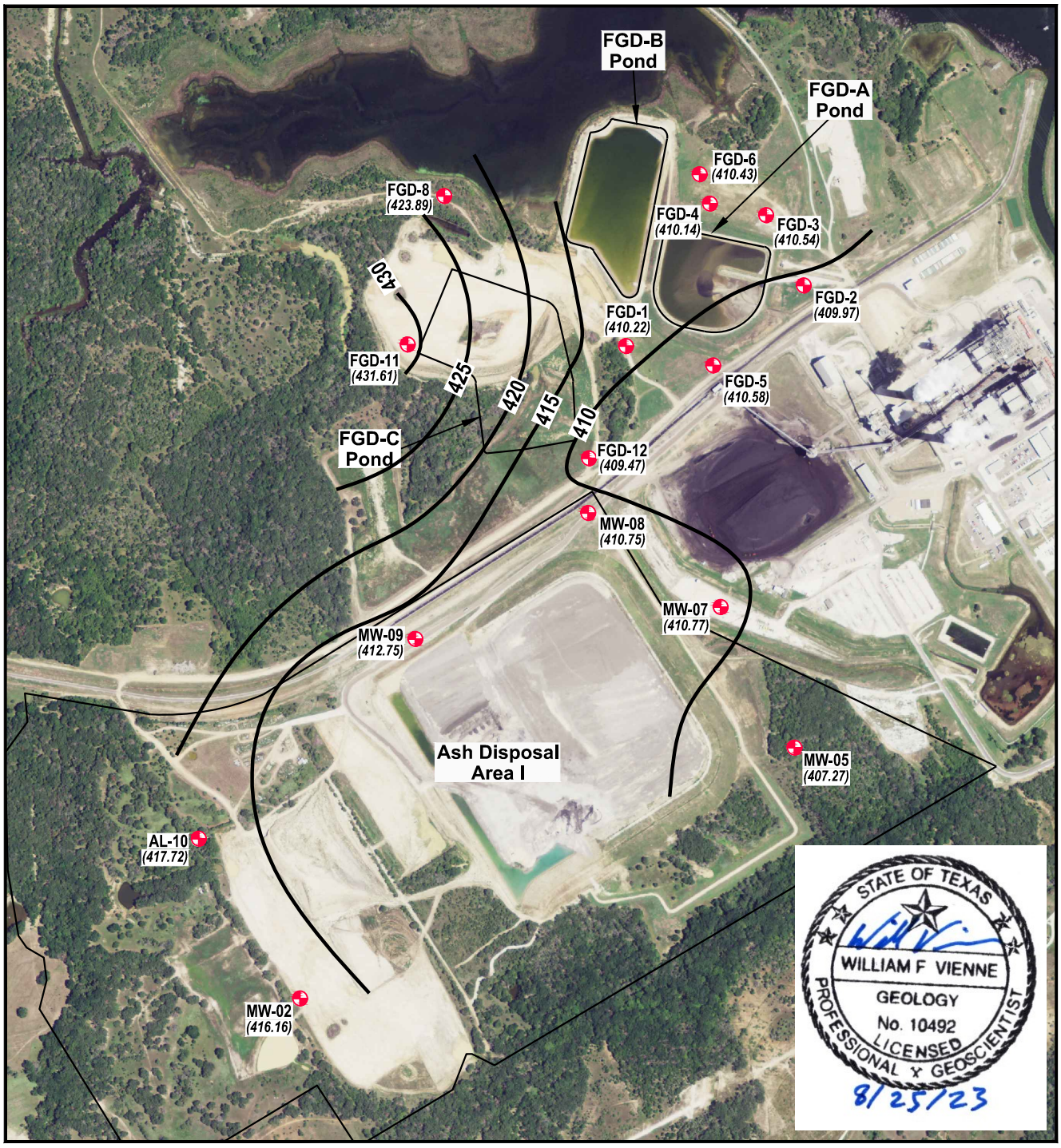
CONSULTING ENGINEERS AND SCIENTISTS



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No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
8/25/23

EXPLANATION

- CCR Monitoring Well Location
- (410.06) Groundwater Potentiometric Surface (ft. MSL)
- 400 Groundwater Potentiometric Surface Contour (C.I. = 5 ft.)

N

Scale in Feet

0 500 1000

SOURCE:
Imagery from www.tnris.gov, Robertson Co., aerial photographs, 2012.

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 2

GROUNDWATER POTENTIOMETRIC SURFACE MAP DECEMBER 12, 2015

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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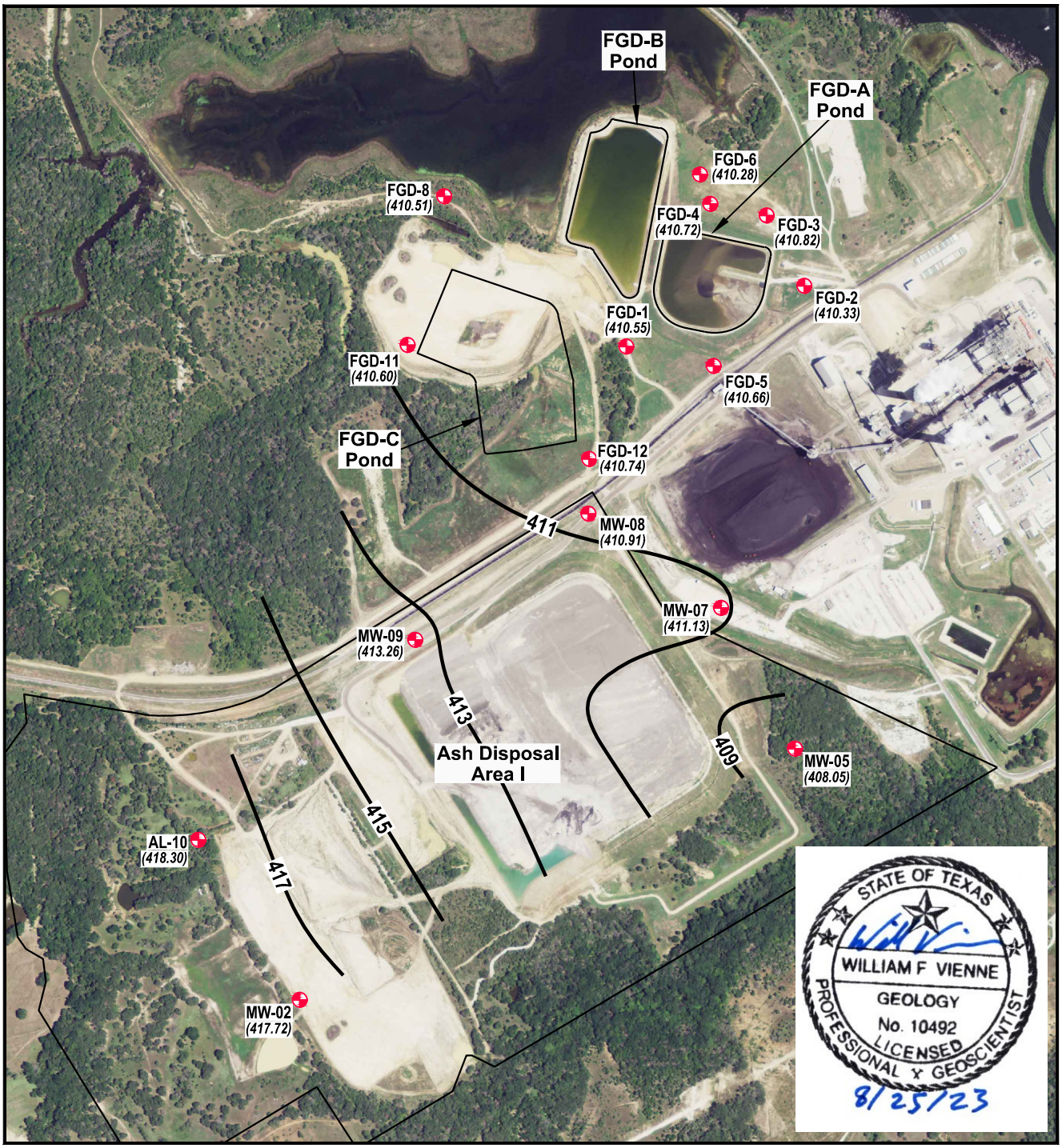
CONSULTING ENGINEERS AND SCIENTISTS



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8/25/23

EXPLANATION

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

N

Scale in Feet

0 500 1000

SOURCE:
Imagery from www.tnris.gov, Robertson Co., aerial photographs, 2012.

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 3

GROUNDWATER POTENTIOMETRIC SURFACE MAP FEBRUARY 9-10, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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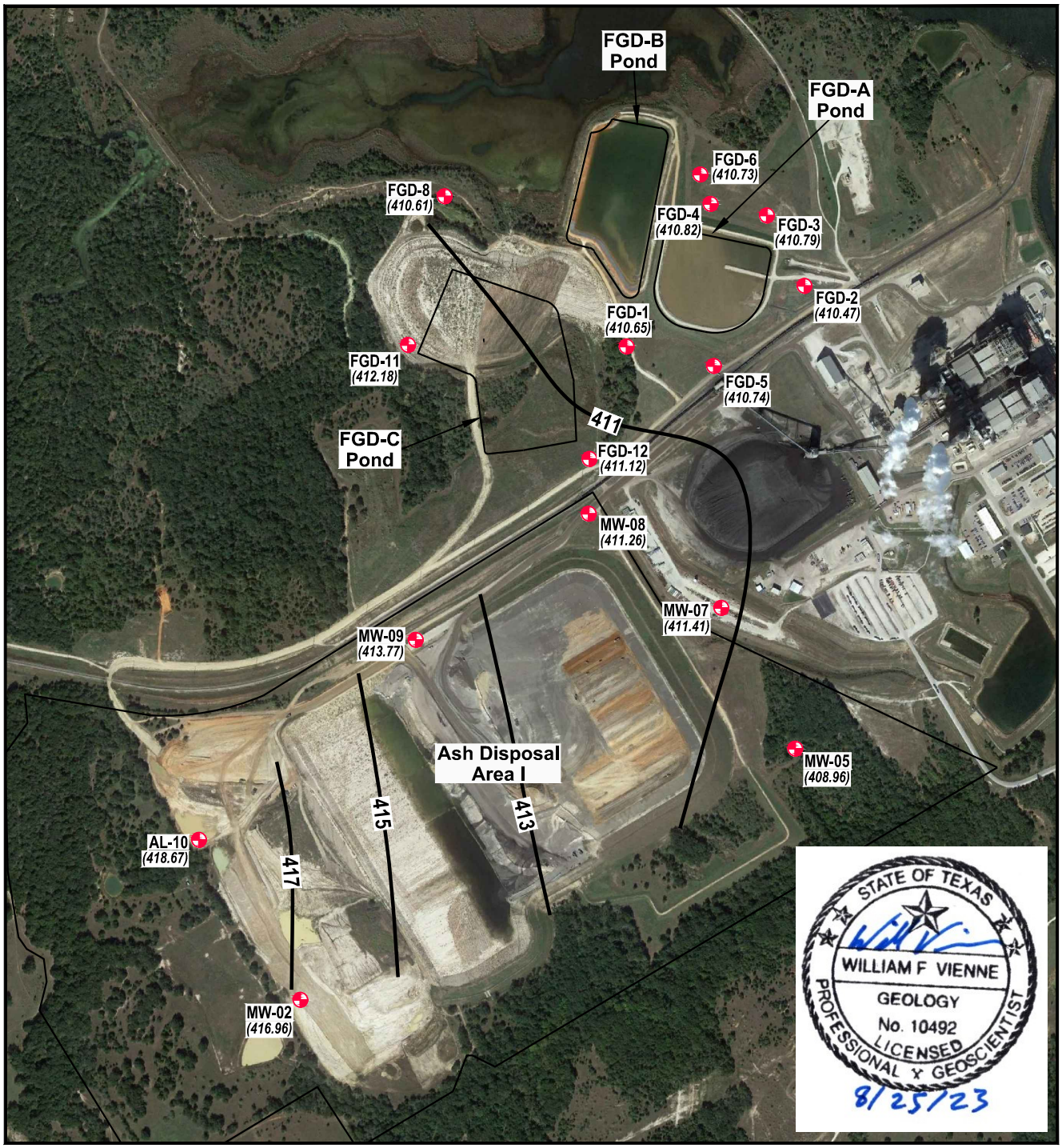
CONSULTING ENGINEERS AND SCIENTISTS



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8/25/23

EXPLANATION

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

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 4

GROUNDWATER POTENTIOMETRIC SURFACE MAP APRIL 14-15, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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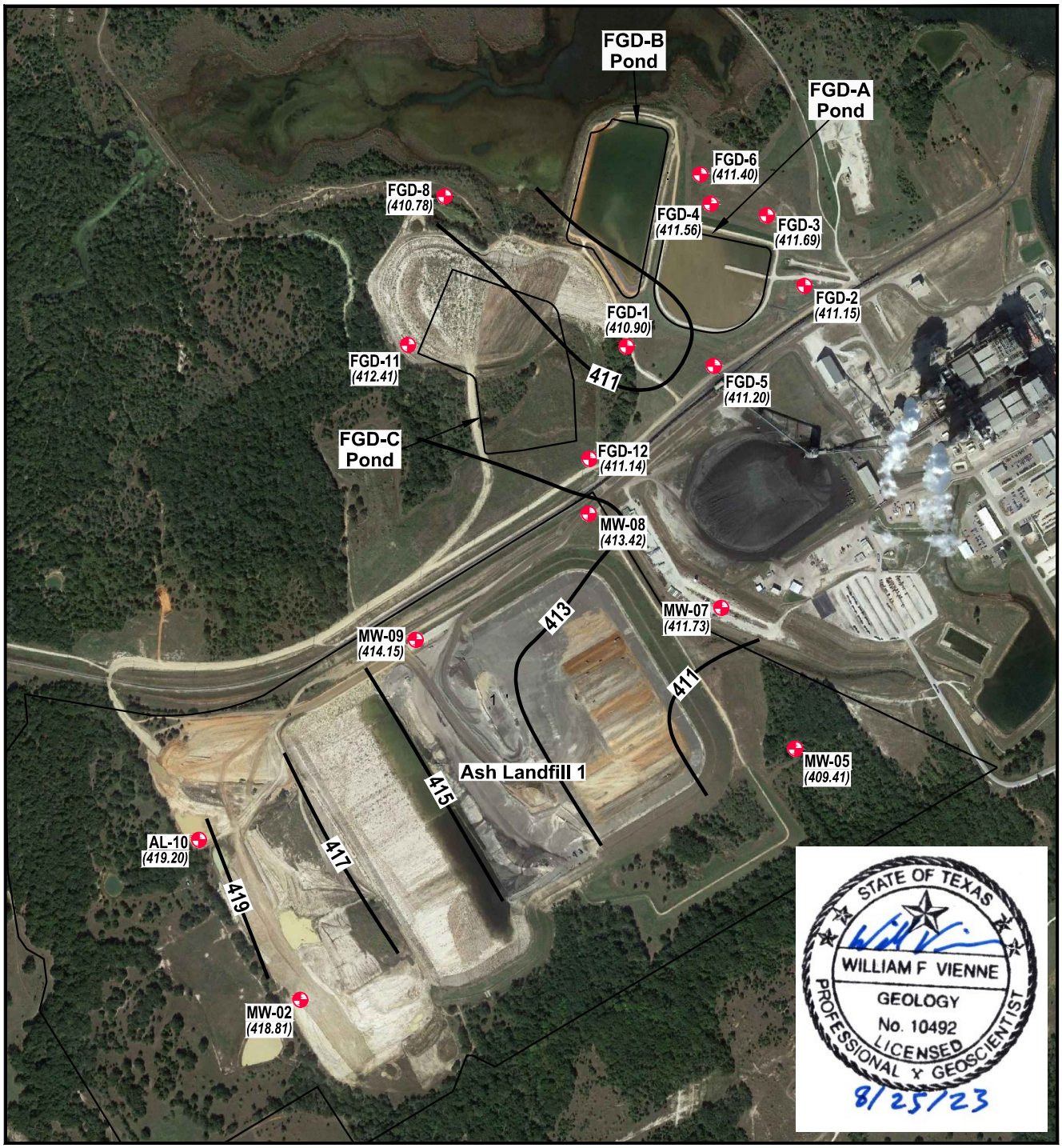
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

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

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 5

GROUNDWATER POTENTIOMETRIC SURFACE MAP JUNE 16, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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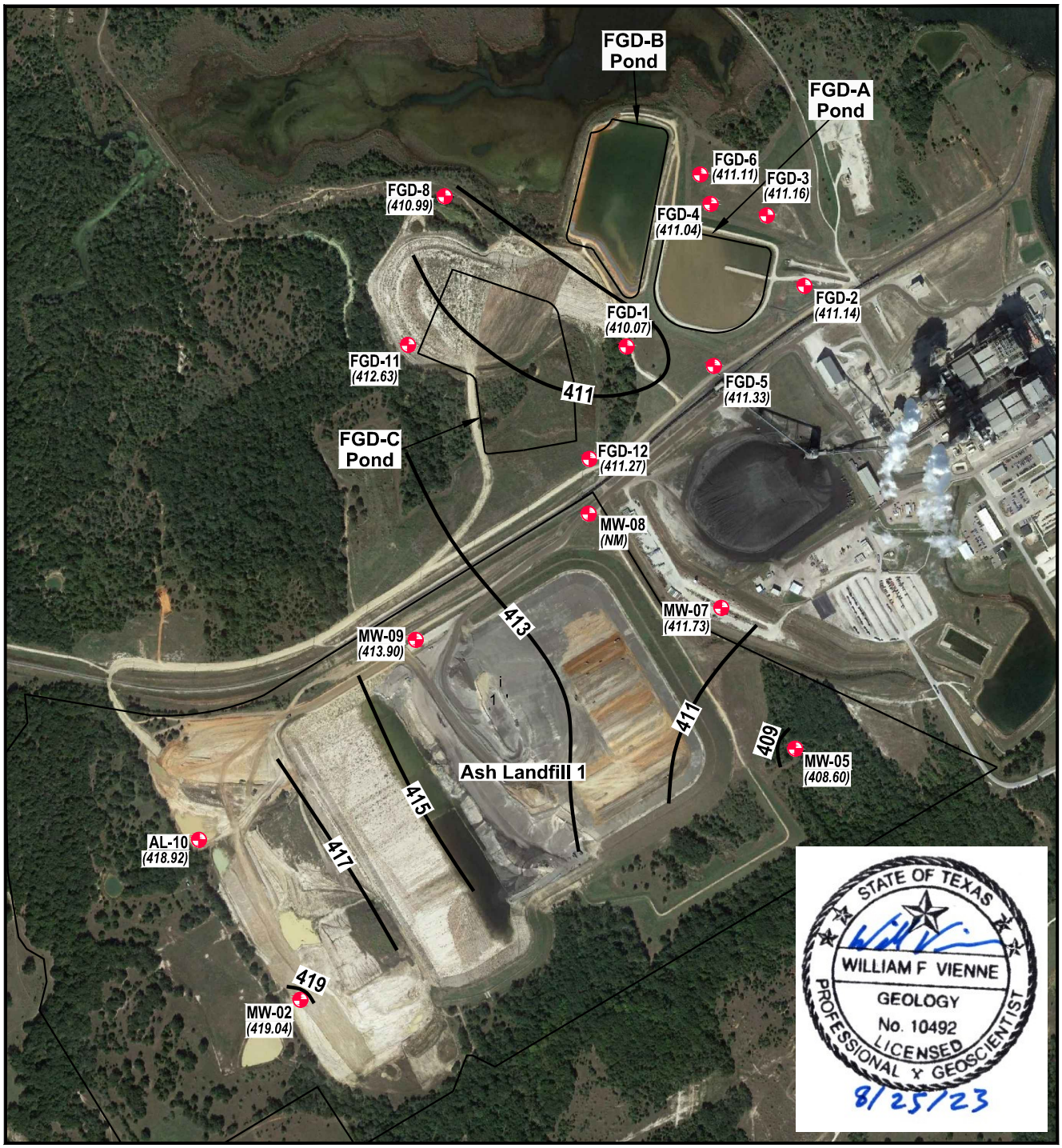


EXPLANATION

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

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

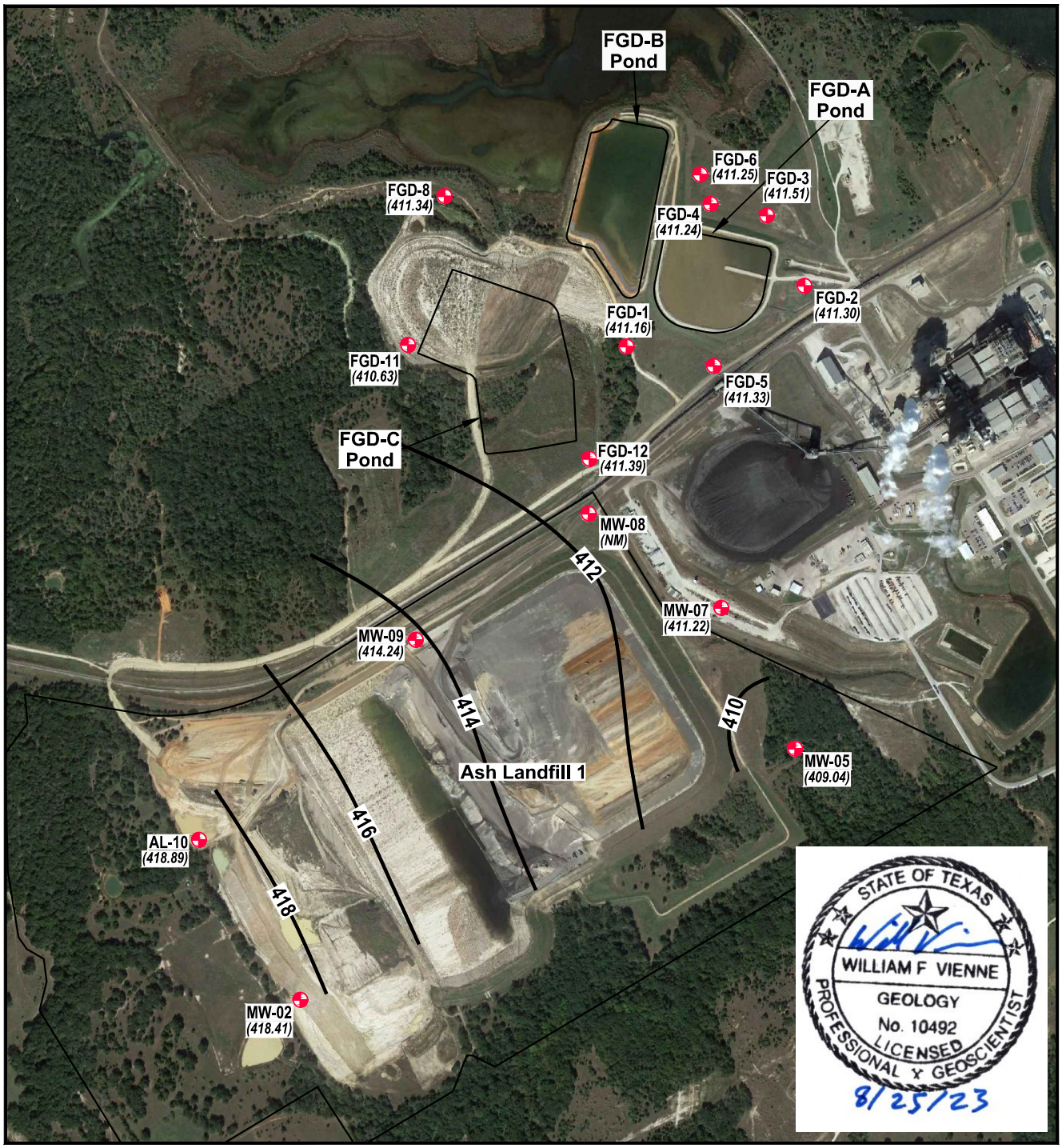
Figure 6

GROUNDWATER POTENTIOMETRIC SURFACE MAP AUGUST 24, 2016

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.)

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

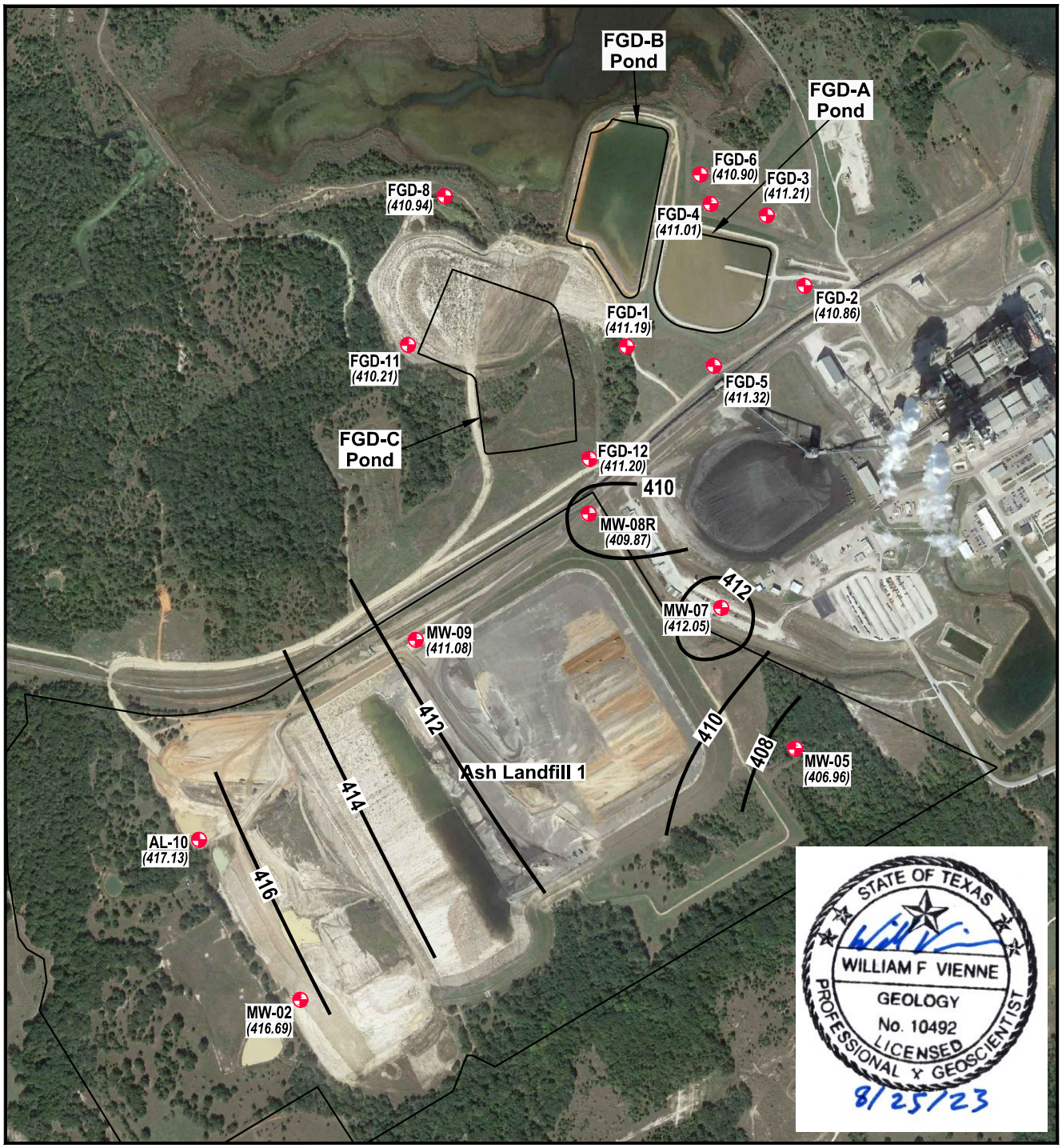
Figure 7

GROUNDWATER POTENTIOMETRIC SURFACE MAP OCTOBER 4, 2016

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. = 5 ft.)

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 8

GROUNDWATER POTENTIOMETRIC SURFACE MAP DECEMBER 19, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS

Appendix B

Laboratory Analytical Reports

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

Order No.: 1511075

RE: Luminant - Oak Grove

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,

John DuPont
General Manager

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

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1511075 ..... **7**

WorkOrderSampleSummary 1511075 ..... **8**

PrepDatesReport 1511075 ..... **9**

AnalyticalDatesReport 1511075 ..... **13**

Analytical Report 1511075 ..... **18**

AnalyticalQCSummaryReport 1511075 ..... **33**

Subcontract Report 1511075 ..... **53**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 68804

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: 11-4-15 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1511075
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BRAUTON

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

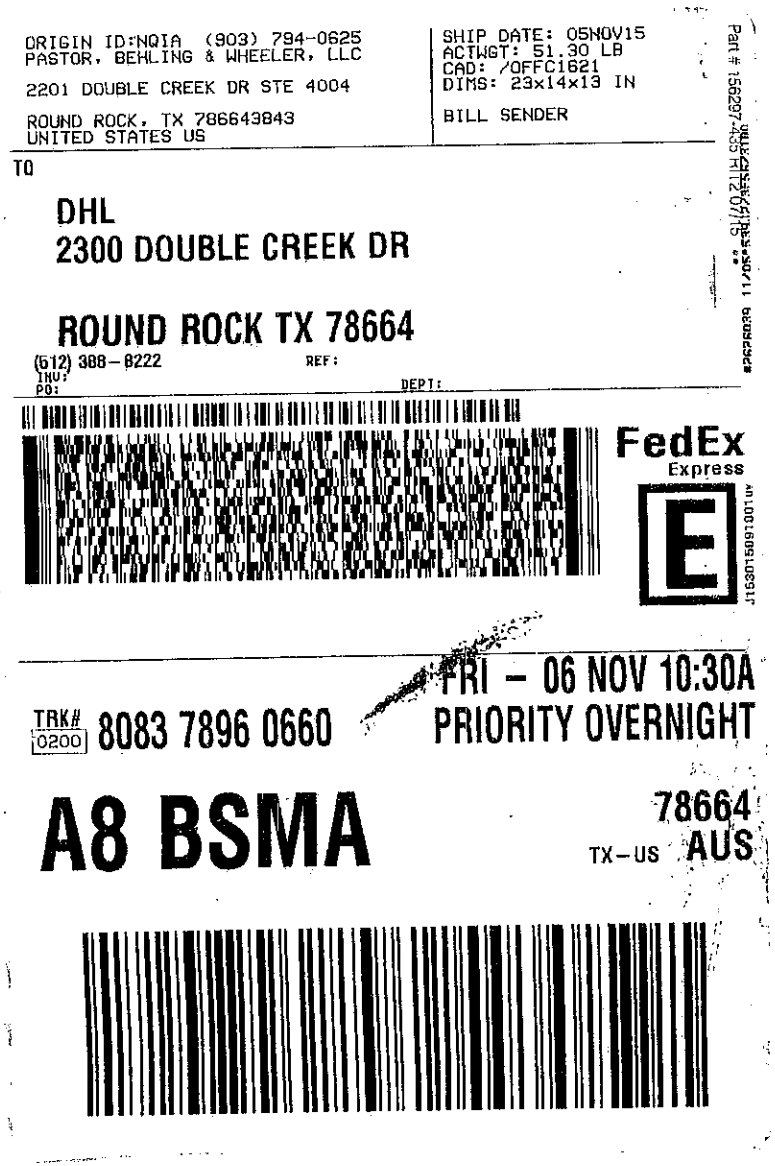
Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐	VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐	8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐	8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐	8321 HERB ☐ T PHOS, AMMONIA ☐	METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐	RCRA ☐ TX11 ☐	PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	CHLORIDE ☐ ANIONS ☐	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ FLASHPOINT ☐ DGAS ☐ CYANIDE ☐	TDS ☐ TSS ☐ % MOISTURE ☐ SEE ATTACHED	FIELD NOTES
FGD-1	01	11-3-15	1050	W	P	4																					X	
MW-09	02		1150	W	P	4																					X	
MW-07	03		1240	W	P	4																					X	
FGD-2	04		1415	W	P	4																					X	
FGD-3	05		1505	W	P	4																					X	
FGD-4	06		1600	W	P	4																					X	
FGD-5	07		1650	W	P	4																					X	
AL-10	08	11-4-15	0815	W	P	4																					X	
MW-02	09		0905	W	P	4																					X	
MW-08	10		1010	W	P	4																					X	
MW-05	11		1105	W	P	4																					X	
FGD-12	12		1155	W	P	4																					X	
FGD-11	13		1300	W	P	4																					X	
FGD-6	14		1355	W	P	4																					X	
FGD-8	15		1450	W	P	4																					X	

RELINQUISHED BY: (Signature) DATE/TIME 11-5-15 1815 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) DATE/TIME 11/6/15 915 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP 2.1, 2.8 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED


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

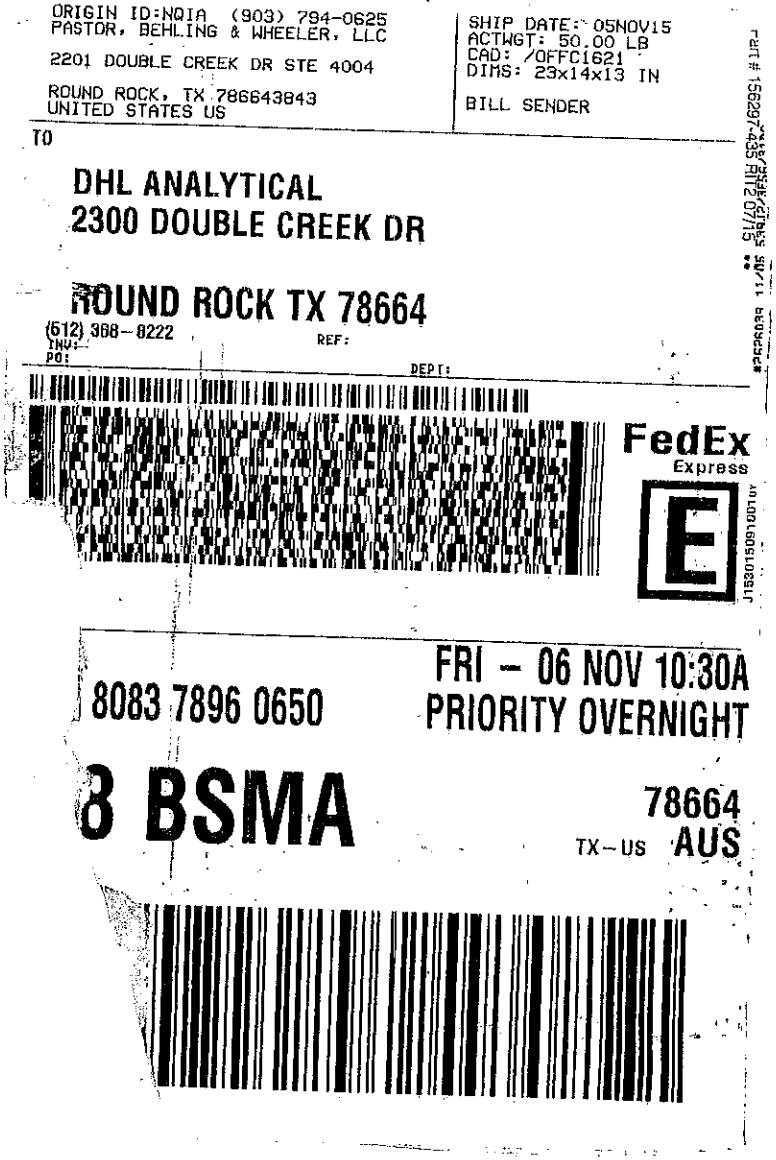
SHIP DATE: 05NOV15
ACTWGT: 51.30 LB
CAD: /OFFC1621
DIMS: 23x14x13 IN
BILL SENDER

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

FedEx Express

TRK# 0200 8083 7896 0660
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

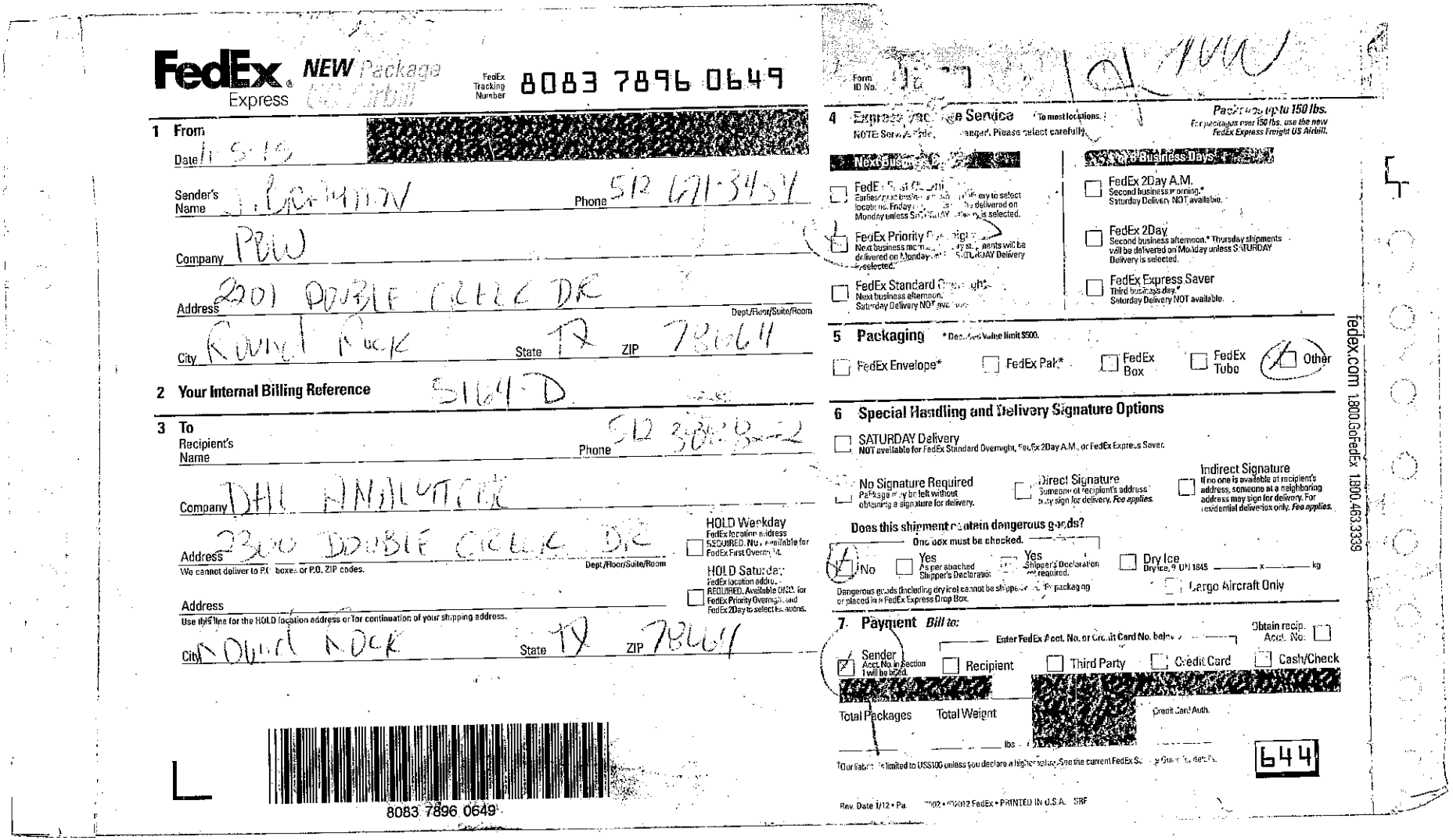
SHIP DATE: 05NOV15
ACTWGT: 50.00 LB
CAD: /OFFC1621
DIMS: 23x14x13 IN
BILL SENDER

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

FedEx Express

8083 7896 0650
FRI - 06 NOV 10:30A
PRIORITY OVERNIGHT

8 BSMA
78664
TX-US AUS



FedEx Express NEW Package

FedEx Tracking Number 8083 7896 0649

Form ID No.

1 From

Date 11-5-19

Sender's Name J. [redacted] Phone 512 671-3457

Company PBW

Address 201 DOUBLE CREEK DR

City ROUND ROCK State TX ZIP 78664

Dept/Floor/Suite/Room

2 Your Internal Billing Reference 5164-D

3 To

Recipient's Name Phone 512 380-8[redacted]2

Company DHL ANALYTICS

Address 2300 DOUBLE CREEK DR

We cannot deliver to P.O. 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

HOLD Weekday
FedEx location address REQUIRED. Not available for FedEx First Overnight.

HOLD Saturday
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4 Express Package Service * To most locations.

NOTE Service Guide. Please select carefully.

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

Next Business Day

- FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Standard Overnight — Next business afternoon. Saturday Delivery NOT available.

2nd 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 — Someone at recipient's address may 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?
One box must be checked.

No | Yes As per attached Shipper's Declaration | Yes Shipper's Declaration not required | Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

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

Cargo 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 ____ lbs. | Credit Card Auth.

644

Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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8083 7896 0649

DHL Analytical, Inc.

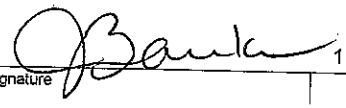
Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 11/6/2015

Work Order Number 1511075

Received by JB

Checklist completed by:  11/6/2015
Signature Date

Reviewed by 11/6/2015
Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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? No		Checked by
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *14-Dec-15*

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.

DHL Analytical, Inc.

Date: *14-Dec-15*

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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C

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_151113C
	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-01
Project No:	5164-D	**Collection Date:**	11/03/15 10:50 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-02
Project No:	5164-D	**Collection Date:**	11/03/15 11:50 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-03
Project No:	5164-D	**Collection Date:**	11/03/15 12:40 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-04
Project No:	5164-D	**Collection Date:**	11/03/15 02:15 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-05
Project No:	5164-D	**Collection Date:**	11/03/15 03:05 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-06
Project No:	5164-D	**Collection Date:**	11/03/15 04:00 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-07
Project No:	5164-D	**Collection Date:**	11/03/15 04:50 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-08
Project No:	5164-D	**Collection Date:**	11/04/15 08:15 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-09
Project No:	5164-D	**Collection Date:**	11/04/15 09:05 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-08
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-10
Project No:	5164-D	**Collection Date:**	11/04/15 10:10 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-11
Project No:	5164-D	**Collection Date:**	11/04/15 11:05 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-12
Project No:	5164-D	**Collection Date:**	11/04/15 11:55 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-13
Project No:	5164-D	**Collection Date:**	11/04/15 01:00 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-14
Project No:	5164-D	**Collection Date:**	11/04/15 01:55 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-15
Project No:	5164-D	**Collection Date:**	11/04/15 02:50 PM
Lab Order:	1511075	**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℃	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	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	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: 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	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-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	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-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	

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-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	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-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			

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

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	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 **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	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 **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	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 **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	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 **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	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: 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	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: 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			

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: 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	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: 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	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

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℃**
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℃**
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	

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℃**
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℃**
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℃**
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	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: 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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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 C Day

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

385405

Work Order: 1511075

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

		Date/Time			Date/Time
Relinquished by:	[signature]	11/9/15 1730	**Received by:**	Fedex	11/9/15 1730
Relinquished by:			**Received by:**	B. Luthman	11/12/15 0840

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1511075

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:		11/9/15	**Received by:**	11/9/15 1733
Relinquished by:			**Received by:**	B. Luthman 11/12/15 0840

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DHLA	**SDG/AR/COC/Work Order:** 365404
Received By: Brielle Luthman	**Date Received:** 11/12/15 0840

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): Ø
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 20°
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): 150340071
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 7749 3118 2946

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AMD 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).

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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).

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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).

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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).

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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).

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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).

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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).

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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
Sample ID: 385405008
Matrix: Water
Collect Date: 04-NOV-15 08:15
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		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).

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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).

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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).

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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).

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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).

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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).

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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).

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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

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.

QC Summary

Workorder: **385405**

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

Order No.: 1512286

RE: Luminant - Oak Grove

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

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1512286 ..... **9**

WorkOrderSampleSummary 1512286 ..... **10**

PrepDatesReport 1512286 ..... **11**

AnalyticalDatesReport 1512286 ..... **15**

Analytical Report 1512286 ..... **20**

AnalyticalQCSummaryReport 1512286 ..... **35**

Subcontract Report 1512286 ..... **56**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 69463

CHAIN-OF-CUSTODY

CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3446
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

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

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

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ | METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ | RCRA ☐ TX11 ☐ _____ ☐ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS _____ ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	SEE ATTACHED	FIELD NOTES
FGD-3	01	12-17-15	0935	W	P	4						X	
FGD-4	02		1025	W	P	4						X	
FGD-5	03		1115	W	P	4						X	
FGD-2	04		1200	W	P	4						X	
FGD-1	05		1250	W	P	4						X	
FGD-6	06		1345	W	P	4						X	
FGD-8	07		1450	W	P	4						X	
FGD-12	08		1540	W	P	4						X	
FGD-11	09		1630	W	P	4						X	
MW07	10		1815	W	P	4						X	
MW05	11	12-18-15	0740	W	P	4						X	
MW02	12		0825	W	P	4						X	
AL-10	13		0920	W	P	4						X	
MW09	14		1020	W	P	4						X	
MW08	15		1115	W	P	4						X	

RELINQUISHED BY: (Signature) DATE/TIME 12-18-15 RECEIVED BY: (Signature) 1745
RELINQUISHED BY: (Signature) DATE/TIME 12/19/15 RECEIVED BY: (Signature) 1020
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 3.6, 4.6, 4.1 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

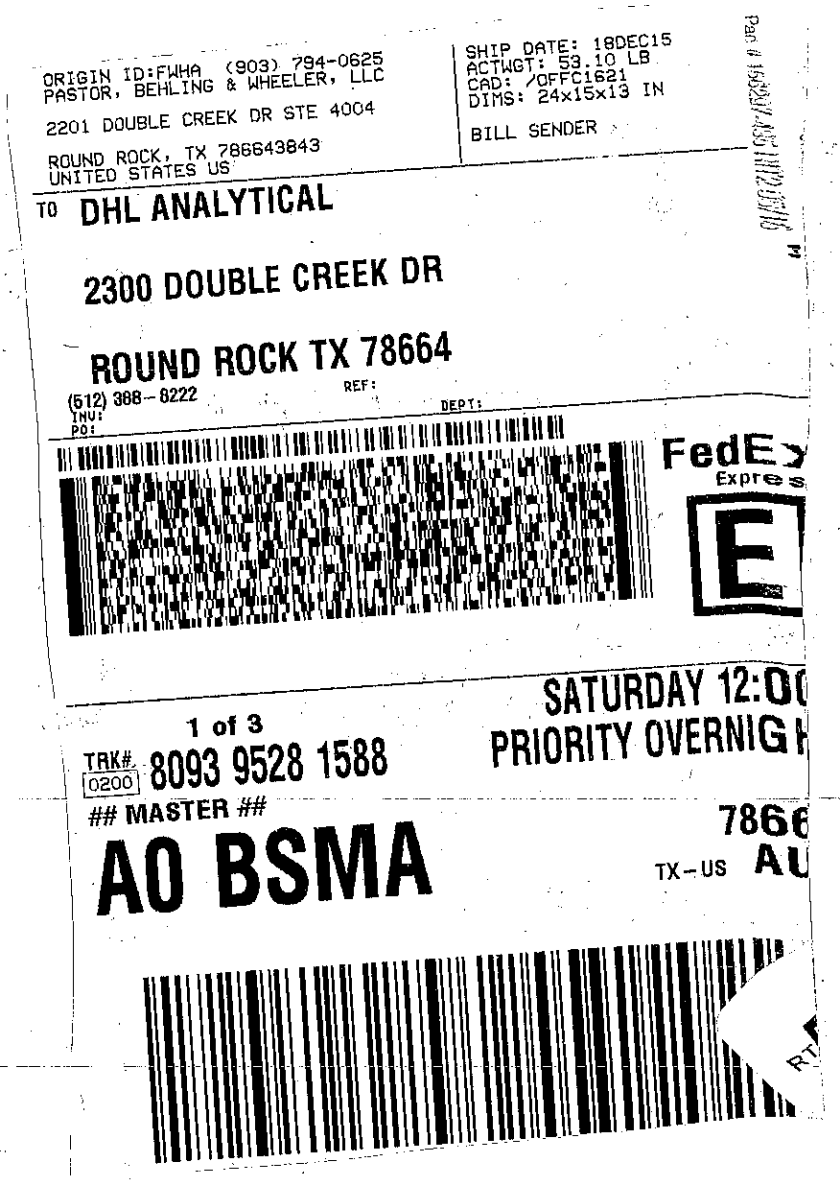
Appendix IV
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

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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ROUND ROCK, TX 786643843
UNITED STATES US
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ACTWGT: 53.10 LB
CAD: /OFFC1621
DIMS: 24x15x13 IN
BILL SENDER
TO DHL ANALYTICAL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 388-8222
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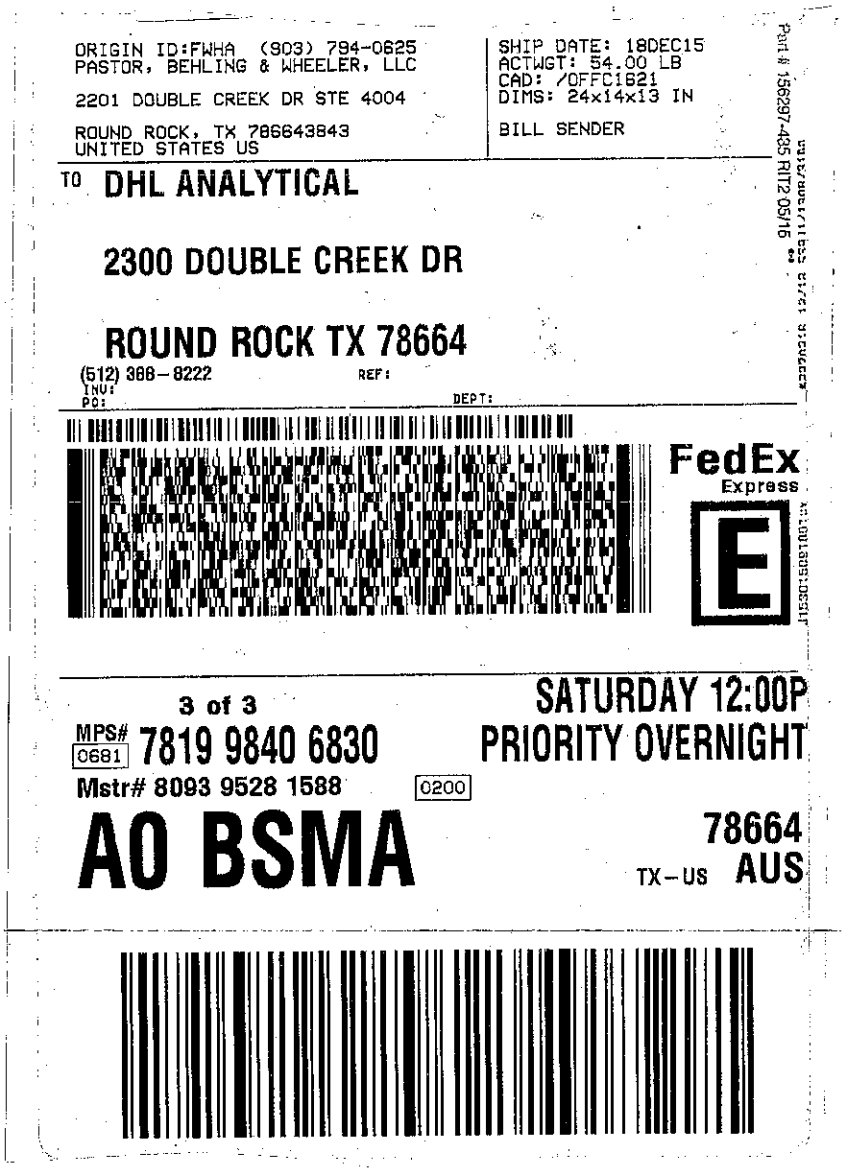

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PASTOR, BEHLING & WHEELER, LLC
2201 DOUBLE CREEK DR STE 4004
ROUND ROCK, TX 786643843
UNITED STATES US

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

Part # 156297-435 RIT2 05/16

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

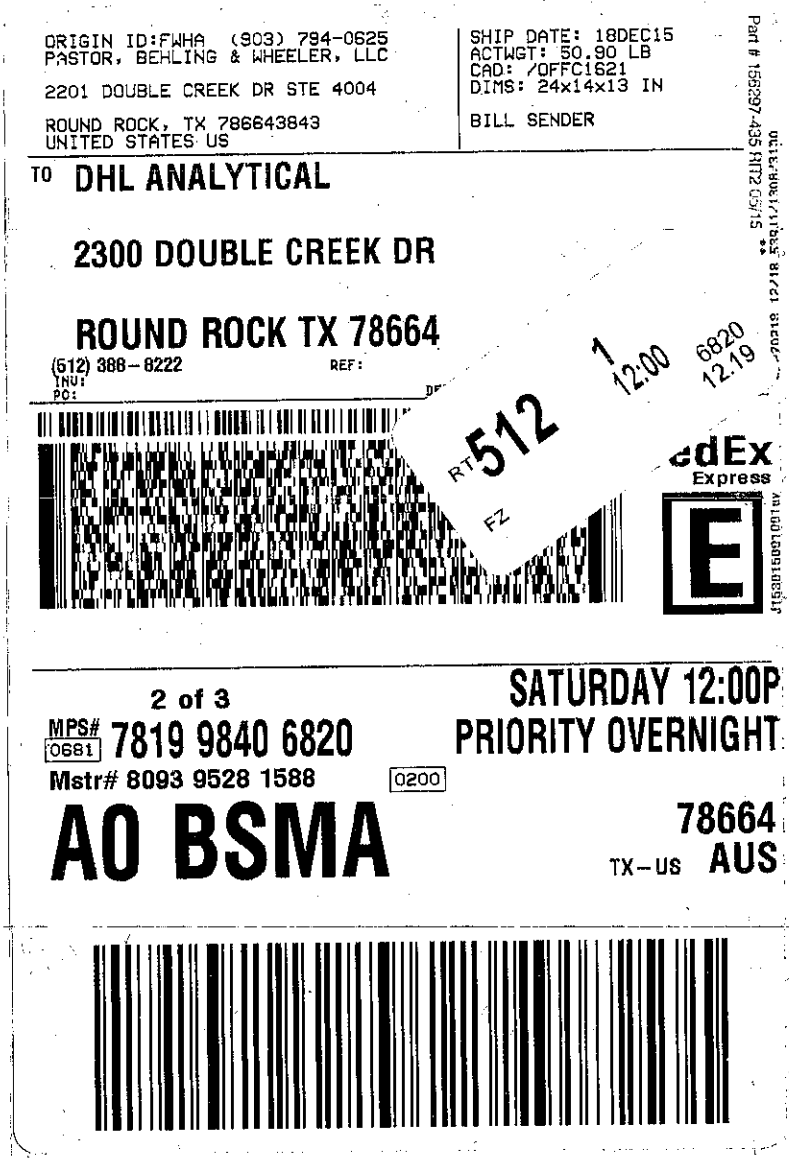
FedEx Express

3 of 3
MPS# 0681 7819 9840 6830
Mstr# 8093 9528 1588 0200

SATURDAY 12:00P
PRIORITY OVERNIGHT

AO BSMA

78664
TX-US AUS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ROUND ROCK, TX 786643843
UNITED STATES US
SHIP DATE: 18DEC15
ACTWGT: 50.90 LB
CAD: /OFFC1621
DIMS: 24x14x13 IN
BILL SENDER
TO DHL ANALYTICAL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 388-8222
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2 of 3
MPS# 0681 7819 9840 6820
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SATURDAY 12:00P
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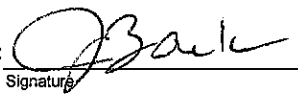
78664
TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Pastor, Behling & Wheeler** Date Received: **12/19/2015**

Work Order Number **1512286** Received by **JB**

Checklist completed by:  12/21/2015 Reviewed by 12/21/2015

Signature Date Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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? NO		Checked by
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 _____

DHL Analytical, Inc. **Date:** *25-Jan-16*

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.

DHL Analytical, Inc.

Date: *25-Jan-16*

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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-01
Project No:	5164-D	**Collection Date:**	12/17/15 09:35 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-02
Project No:	5164-D	**Collection Date:**	12/17/15 10:25 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-03
Project No:	5164-D	**Collection Date:**	12/17/15 11:15 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-04
Project No:	5164-D	**Collection Date:**	12/17/15 12:00 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-05
Project No:	5164-D	**Collection Date:**	12/17/15 12:50 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-06
Project No:	5164-D	**Collection Date:**	12/17/15 01:45 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-07
Project No:	5164-D	**Collection Date:**	12/17/15 02:50 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-08
Project No:	5164-D	**Collection Date:**	12/17/15 03:40 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-09
Project No:	5164-D	**Collection Date:**	12/17/15 04:30 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-10
Project No:	5164-D	**Collection Date:**	12/17/15 06:15 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-11
Project No:	5164-D	**Collection Date:**	12/18/15 07:40 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-12
Project No:	5164-D	**Collection Date:**	12/18/15 08:25 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-13
Project No:	5164-D	**Collection Date:**	12/18/15 09:20 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-14
Project No:	5164-D	**Collection Date:**	12/18/15 10:20 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-08
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-15
Project No:	5164-D	**Collection Date:**	12/18/15 11:15 AM
Lab Order:	1512286	**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℃	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	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	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: 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	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

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	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 **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	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 **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	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 **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			

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 **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	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 **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			

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_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	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

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	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_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			

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: 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	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: 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	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

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	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

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℃**
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℃**
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	

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℃**
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℃**
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	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_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	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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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 C Day

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).

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-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).

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-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).

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-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
Sample ID: 388114006
Matrix: Water
Collect Date: 17-DEC-15 13:45
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		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).

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-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).

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-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).

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-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).

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: MW-08
Sample ID: 388114015
Matrix: Water
Collect Date: 18-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		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).

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

QC Summary

Report Date: January 15, 2016

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.

QC Summary

Workorder: **388114**

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

388114

CHAIN-OF-CUSTODY RECORD

Work Order: 1512286

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

		Date/Time		Date/Time
Relinquished by:		12/21/15 1730	**Received by:**	12/21/15 1730
Relinquished by:			**Received by:**	12-24-15 0920

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1512286

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

		Date/Time			Date/Time
Relinquished by:		12/21/15 1733	**Received by:**		12/21/15 1233
Relinquished by:	FDX		**Received by:**		12-24-15 0920

GEL Laboratories LLC

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**	*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): Cpm0
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 20 C
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: 130X62962 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: 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: 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 (FedEx Ground) UPS Field Services Courier Other 7752 6232 9395

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials J.R. Date 12-24-15 Page 1 of 1 GL-CHL-SR-001 Rev 2

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

Order No.: 1602130

RE: Oak Grove CCR

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,

John DuPont
General Manager

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

Table of Contents

Miscellaneous Documents 3

CaseNarrative 1602130 6

WorkOrderSampleSummary 1602130 7

PrepDatesReport 1602130 8

AnalyticalDatesReport 1602130 13

Analytical Report 1602130 18

AnalyticalQCSummaryReport 1602130 33

Subcontract Report 1602130 65

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 70282

CHAIN-OF-CUSTODY

CLIENT: Pastor, Behling & Wheeler
ADDRESS: 2201 Double Creek Dr Ste 4004
PHONE: 512-671-3434 FAX/E-MAIL: will.vienne@pbwllc.com
DATA REPORTED TO: Will Vienne
ADDITIONAL REPORT COPIES TO: Karla Henson

DATE: 2/10/16 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 1602130
PROJECT LOCATION OR NAME: Oak Grove CCR
CLENT PROJECT #: 5164D COLLECTOR: MH/ST

Authorize 5% surcharge for TRRP Report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐	VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐	8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐	8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐	8321 HERB ☐ T PHOS, AMMONIA ☐	METALS 6020 ☐ METALS 2008 ☐ DISS. METALS ☐	RCRA ☐ TX11 ☐	PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	CHLORIDE ☐ ANIONS ☐	TCLP SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ FLASHPOINT ☐ DGAS ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	See attached (CCR)	FIELD NOTES
FGD-11	1	2/10/16	9:25	W		4		X		X																		X	
FGD-12	2	2/10/16	10:00	W		4		X		X																		X	
FGD-08	3	2/10/16	11:25	W		4		X		X																		X	
FGD-1	4	2/10/16	12:00	W		4		X		X																		X	
FGD-5	5	2/10/16	13:05	W		4		X		X																		X	
FGD-2	6	2/10/16	13:50	W		4		X		X																		X	
FGD-3	7	2/10/16	14:50	W		4		X		X																		X	
FGD-6	8	2/10/16	16:15	W		4		X		X																		X	
FGD-4	9	2/10/16	16:50	W		4		X		X																		X	
MW-08	10	2/10/16	17:55	W		4		X		X																		X	
MW-07	11	2/11/16	7:45	W		4		X		X																		X	
MW-09	12	2/11/16	8:30	W		4		X		X																		X	
AL-10	13	2/11/16	9:05	W		4		X		X																		X	
MW-02	14	2/11/16	9:35	W		4		X		X																		X	
MW-05	15	2/11/16	10:45	W		4		X		X																		X	

RELINQUISHED BY: (Signature) DATE/TIME 2/11/16 13:30 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

3

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 33.0+0.2 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

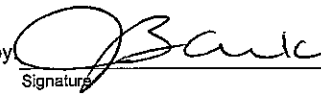
10/26/2015

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Pastor, Behling & Wheeler** Date Received: **2/11/2016**

Work Order Number **1602130** Received by **JB**

Checklist completed by  2/11/2016 (Signature / Date) Reviewed by 2/11/2016 (Initials / Date)

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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? WO		Checked by JB
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *15-Mar-16*

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.

DHL Analytical, Inc.

Date: *15-Mar-16*

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

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	**Client Sample ID:**	FGD-11
Project:	Oak Grove CCR	**Lab ID:**	1602130-01
Project No:	5164D	**Collection Date:**	02/10/16 09:25 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Oak Grove CCR	**Lab ID:**	1602130-02
Project No:	5164D	**Collection Date:**	02/10/16 10:00 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Oak Grove CCR	**Lab ID:**	1602130-03
Project No:	5164D	**Collection Date:**	02/10/16 11:25 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Oak Grove CCR	**Lab ID:**	1602130-04
Project No:	5164D	**Collection Date:**	02/10/16 12:00 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Oak Grove CCR	**Lab ID:**	1602130-05
Project No:	5164D	**Collection Date:**	02/10/16 01:05 PM
Lab Order:	1602130	**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	J	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℃	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	**Client Sample ID:**	FGD-2
Project:	Oak Grove CCR	**Lab ID:**	1602130-06
Project No:	5164D	**Collection Date:**	02/10/16 01:50 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Oak Grove CCR	**Lab ID:**	1602130-07
Project No:	5164D	**Collection Date:**	02/10/16 02:50 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Oak Grove CCR	**Lab ID:**	1602130-08
Project No:	5164D	**Collection Date:**	02/10/16 04:15 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Oak Grove CCR	**Lab ID:**	1602130-09
Project No:	5164D	**Collection Date:**	02/10/16 04:50 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-08
Project:	Oak Grove CCR	**Lab ID:**	1602130-10
Project No:	5164D	**Collection Date:**	02/10/16 05:55 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-07
Project:	Oak Grove CCR	**Lab ID:**	1602130-11
Project No:	5164D	**Collection Date:**	02/11/16 07:45 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-09
Project:	Oak Grove CCR	**Lab ID:**	1602130-12
Project No:	5164D	**Collection Date:**	02/11/16 08:30 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	AL-10
Project:	Oak Grove CCR	**Lab ID:**	1602130-13
Project No:	5164D	**Collection Date:**	02/11/16 09:05 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-02
Project:	Oak Grove CCR	**Lab ID:**	1602130-14
Project No:	5164D	**Collection Date:**	02/11/16 09:35 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-05
Project:	Oak Grove CCR	**Lab ID:**	1602130-15
Project No:	5164D	**Collection Date:**	02/11/16 10:45 AM
Lab Order:	1602130	**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℃	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	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	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: 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	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: 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	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	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: 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	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

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	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 **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	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 **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	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 **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	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 **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	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_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	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 **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	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 **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	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 **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
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 **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	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 **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	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 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	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

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			

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

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	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

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			

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: 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	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: 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			

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: 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	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: 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	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: 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℃**
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℃**
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	

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: TITRATOR_160212A

Sample ID **ICV-160212**	Batch ID: **R84145**	TestNo: **M4500-H+ B**	Units: **pH Units@22.4℃**
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℃**
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℃**
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	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_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	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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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 C Day

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 Anna C Day

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
Sample ID: 391437001
Matrix: Water
Collect Date: 10-FEB-16 09:25
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		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).

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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-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).

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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).

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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
Sample ID: 391437010
Matrix: Water
Collect Date: 10-FEB-16 17:55
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	0.450	+/-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	Project:	DHLA00112
Sample ID:	391437011	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	11-FEB-16 07:45		
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	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
Sample ID: 391437013
Matrix: Water
Collect Date: 11-FEB-16 09:05
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		1.19	+/-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
Sample ID: 391437014
Matrix: Water
Collect Date: 11-FEB-16 09:35
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		1.61	+/-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).

QC Summary

Report Date: March 15, 2016

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.

QC Summary

Workorder: **391437**

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

391437

CHAIN-OF-CUSTODY RECORD

Work Order: 1602130

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

		Date/Time			Date/Time
Relinquished by:	[signature]	2/11/16 1730	**Received by:**	Fed ex	2/11/16 1730
Relinquished by:			**Received by:**	[signature]	2/16/16 8:40

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1602130

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:	[signature]	2/11/16 1730	**Received by:**	Fed ex	2/11/16 1730
Relinquished by:			**Received by:**	[signature] mark	2/16/16 8:40

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DHLA		**SDG/AR/COC/Work Order:** 391437	
Received By: Shanta mack		**Date Received:** 2/16/16 8:40	
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): Background
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 14 C
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): ES03207585
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 7756 3067 8989

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials ADV Date 2/16/16 Page 1 of 1 GL-CHL-SR-001 Rev 2

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

Order No.: 1604175

RE: Luminant - Oak Grove

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1604175 ..... **8**

WorkOrderSampleSummary 1604175 ..... **9**

PrepDatesReport 1604175 ..... **10**

AnalyticalDatesReport 1604175 ..... **15**

Analytical Report 1604175 ..... **20**

AnalyticalQCSummaryReport 1604175 ..... **37**

Subcontract Report 1604175 ..... **66**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 70848

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: 4-15-16 PAGE 1 OF 2
PO #: 5164-D DHL WORK ORDER #: 1604175
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT 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: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO [METHOD 8015] ❑ DRO [METHOD 8105] ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8082 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | RCRA ❑ TX11 ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ❑ ANIONS ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
FGD-2	01	4-14-16	0815	W	P	4						X	
FGD-3	02	"	0905	W	P	4						X	
FGD-6	03	"	1000	W	P	4						X	
FGD-4	04	"	1050	W	P	4						X	
FGD-5	05	"	1140	W	P	4						X	
FGD-1	06	"	1235	W	P	4						X	
FGD-8	07	"	1450	W	P	4						X	
FGD-12	08	"	1540	W	P	4						X	
FGD-11	09	"	1630	W	P	4						X	
MW07	10	4-15-16	0750	W	P	4						X	
AL-10	11	"	0915	W	P	4						X	
MW02	12	"	1020	W	P	4						X	
MW09	13	"	1120	W	P	4						X	
MWD8	14	"	1225	W	P	4						X	
DUP-1	10	"	1225	W	P	4						X	

RELINQUISHED BY: (Signature) DATE/TIME 4/18/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☒
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 0.4 THERM #: 78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☒ NOT USED
CARRIER: ❑ LONE STAR ❑ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
☒ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

№ 70849

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 #: 1604175
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

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

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ T PHOS, AMMONIA ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ DISS. METALS ☐ | METALS 6020 ☐ METALS 200.8 ☐ _____ ☐ | RCRA ☐ TX11 ☐ _____ ☐ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS _____ ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	SEE ATTACHED	FIELD NOTES
EB-1	16	4-15-16	0825	W	P	4						X	
MW05	17	4-15-16	1340	W	P	4						X	

RELINQUISHED BY: (Signature) DATE/TIME 4/18/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 0.9 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

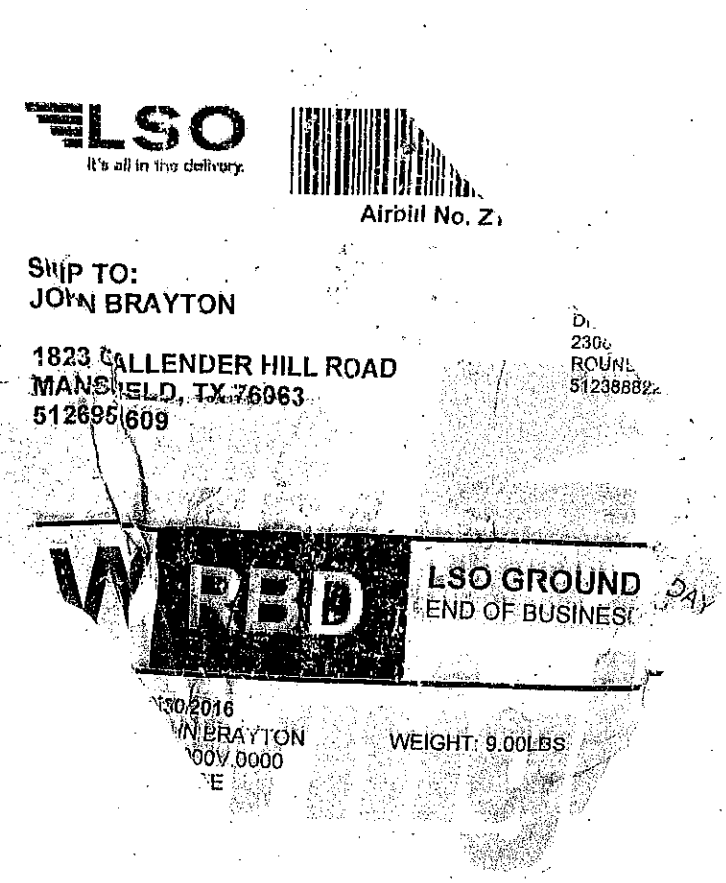
Appendix IV
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

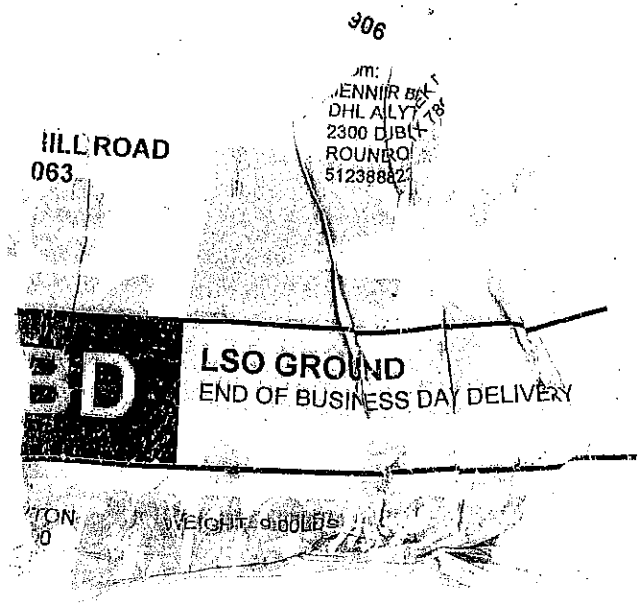
We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

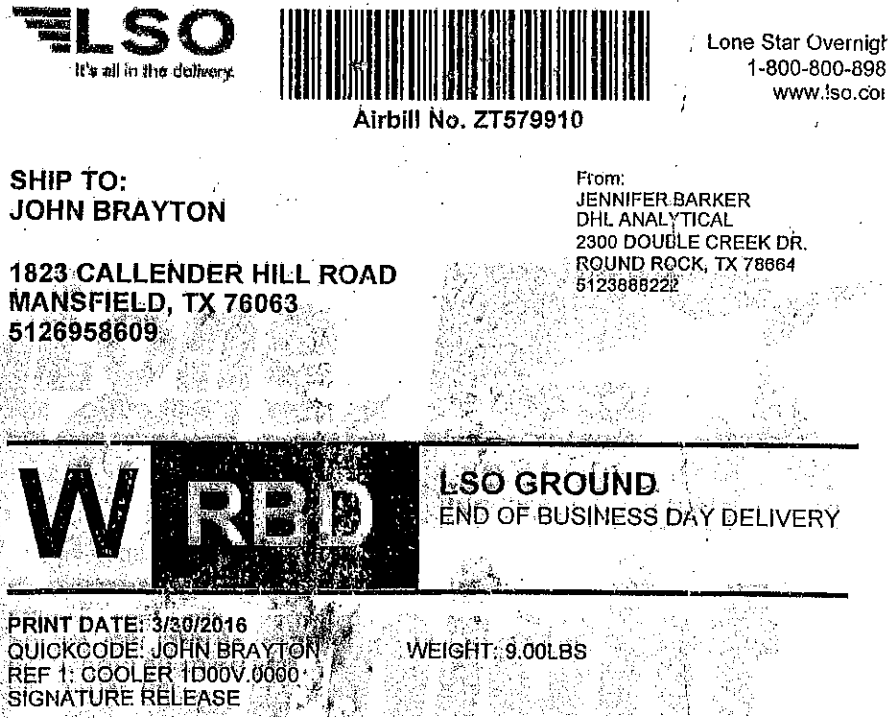
Cheers,

Sara

10/26/2015


LSO
It's all in the delivery.
Airbill No. Z
SHIP TO:
JOHN BRAYTON
1823 CALLENDER HILL ROAD
MANSFIELD, TX 76063
5126958609
WRBD
LSO GROUND
END OF BUSINES
WEIGHT: 9.00LBS


LSO GROUND
END OF BUSINESS DAY DELIVERY


LSO
It's all in the delivery.
Airbill No. ZT579910
Lone Star Overnigt
1-800-800-898
www.lso.co
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
5123868222
WRBD
LSO GROUND
END OF BUSINESS DAY DELIVERY
PRINT DATE: 3/30/2016
QUICKCODE: JOHN BRAYTON
REF 1: COOLER 1D00V.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: _____ 4/18/2016 Reviewed by _____ 4/18/2016
Signature Date Initials Date

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 10.6°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? NO		Checked by
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 _____

DHL Analytical, Inc. **Date:** *26-May-16*

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.

DHL Analytical, Inc.

Date: *26-May-16*

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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-01
Project No:	5164-D	**Collection Date:**	04/14/16 08:15 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-02
Project No:	5164-D	**Collection Date:**	04/14/16 09:05 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-03
Project No:	5164-D	**Collection Date:**	04/14/16 10:00 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-04
Project No:	5164-D	**Collection Date:**	04/14/16 10:50 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-05
Project No:	5164-D	**Collection Date:**	04/14/16 11:40 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-06
Project No:	5164-D	**Collection Date:**	04/14/16 12:35 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-07
Project No:	5164-D	**Collection Date:**	04/14/16 02:50 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-08
Project No:	5164-D	**Collection Date:**	04/14/16 03:40 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-09
Project No:	5164-D	**Collection Date:**	04/14/16 04:30 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-10
Project No:	5164-D	**Collection Date:**	04/15/16 07:50 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-11
Project No:	5164-D	**Collection Date:**	04/15/16 09:15 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-12
Project No:	5164-D	**Collection Date:**	04/15/16 10:20 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-13
Project No:	5164-D	**Collection Date:**	04/15/16 11:20 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-08
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-14
Project No:	5164-D	**Collection Date:**	04/15/16 12:25 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	DUP-1
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-15
Project No:	5164-D	**Collection Date:**	04/15/16 12:25 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	EB-1
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-16
Project No:	5164-D	**Collection Date:**	04/15/16 08:25 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-17
Project No:	5164-D	**Collection Date:**	04/15/16 01:40 PM
Lab Order:	1604175	**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℃	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	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: 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	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

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	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 **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	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 **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	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**

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	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 **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	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 **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	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 **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	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

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	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 **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			

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_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	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_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	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_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	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_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			

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_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	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_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	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_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	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: 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	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: 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	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: 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	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: 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	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: 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℃**

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℃**

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	

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: TITRATOR_160420A

Sample ID	**ICV-160420**	Batch ID:	**R85330**	TestNo:	**M4500-H+ B**	Units:	**pH Units@21.8℃**
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℃**
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℃**
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	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: 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	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

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:

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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.

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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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

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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

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

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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	LCSD RPD	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:

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 71 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

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				
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

		Date/Time			Date/Time
Relinquished by:	Jorge	4/18/16 17:30	**Received by:**	LoneStar	4/18/16 17:30
Relinquished by:			**Received by:**		4/20/16 10:38

2016037 4

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

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

L830741

		Date/Time			Date/Time
Relinquished by:	Jtower	4/18/16 17:30	**Received by:**	LoneStar	4/18/16 17:30
Relinquished by:			**Received by:**		4/20/16 1038

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** ND **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 04/20/16 pm labd with sample date "04/14/16" and a printed label (which matches coc) with "04/15/16" pm

Inspected By: _____ **DATE** 4/20/16

QA or Designee Review: Raymond Vaughn **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

Order No.: 1606193

RE: Oak Grove

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16

Table of Contents

Miscellaneous Documents 3

CaseNarrative 1606193 9

WorkOrderSampleSummary 1606193 10

PrepDatesReport 1606193 11

AnalyticalDatesReport 1606193 16

Analytical Report 1606193 22

AnalyticalQCSummaryReport 1606193 39

Subcontract Report 1606193 65

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 71585

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: 6-16-16 PAGE 1 OF 2
PO #: 5164-D DHL WORK ORDER #: 1606193
PROJECT LOCATION OR NAME: OAKGROVE-
CLENT 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: HCl, HNO_3, H_2SO_4 ❑ NaOH ❑, ICE, UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ (METHOD 8021); TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑; GRO (METHOD 8015) ❑ DRO (METHOD 8105) ❑; VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑; SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑; 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑; 8321 HERB ❑ T PHOS; AMMONIA ❑; METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑; RCRA ❑ TX11 ❑; PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑; CHLORIDE ❑ ANIONS ❑; TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑; TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑; RCI ❑ FLASHPOINT ❑ DGAS ❑; TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑; SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	FIELD NOTES
FGD-3	01	6-14-16	1100	W	P	4				X		
FGD-4	02		1155	W	P	4				X		
FGD-6	03		1255	W	P	4				X		
FGD-2	04		1350	W	P	4				X		
FGD-8	05		1500	W	P	4				X		
FGD-1	06	6-15-16	1555	W	P	4				X		
FGD-11	07		1005	W	P	4				X		
FGD-12	08		1105	W	P	4				X		
FGD-5	09		1200	W	P	4				X		
MW-07	10		1320	W	P	4				X		
MW-05	11		1415	W	P	4				X		
MW-09	12		1605	W	P	4				X		
BL-10	13	6-16-16	0835	W	P	4				X		
MW-02	14		1040	W	P	4				X		
MW-08	15		1250	W	P	4				X		

RELINQUISHED BY: (Signature) DATE/TIME 6-16-16 1730 RECEIVED BY: (Signature) FedEx
RELINQUISHED BY: (Signature) FedEx DATE/TIME 6/17/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return 3

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☑
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 5.3, 5.1.5.1 THERM #: -78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☒ NOT USED
CARRIER: ❑ LONE STAR ☒ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

DHL ANALYTICAL
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Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

№ 71586

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 2 OF 2
PO #: 5164-D DHL WORK ORDER #: 1606193
PROJECT LOCATION OR NAME: OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

PRESERVATION: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO [METHOD 8015] ❑ DRO [METHOD 8105] ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ ___ ❑ | RCRA ❑ TX11 ❑ ___ | PH ❑ HEX. CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ❑ ANIONS ___ ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	SEE ATTACHED	FIELD NOTES
DUP-1	16	6-16-16	1250	W	P	4				X		X	
EB-1	17	1	1330	W	P	4				X		X	

OK 6/17/16

RELINQUISHED BY: (Signature) DATE/TIME 6-16-16 1730 RECEIVED BY: (Signature) FedEx
RELINQUISHED BY: (Signature) FedEx DATE/TIME 6/17/16 10:20 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return 4

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☒
OTHER ❑ ___

LABORATORY USE ONLY:
RECEIVING TEMP: 5.3 5.1 THERM #: 76
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:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR
SUITE 4004
ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 16JUN16
ACTWGT: 52.90 LB
CAD: 6995323/SSFO1704
DIMS: 23x16x14 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

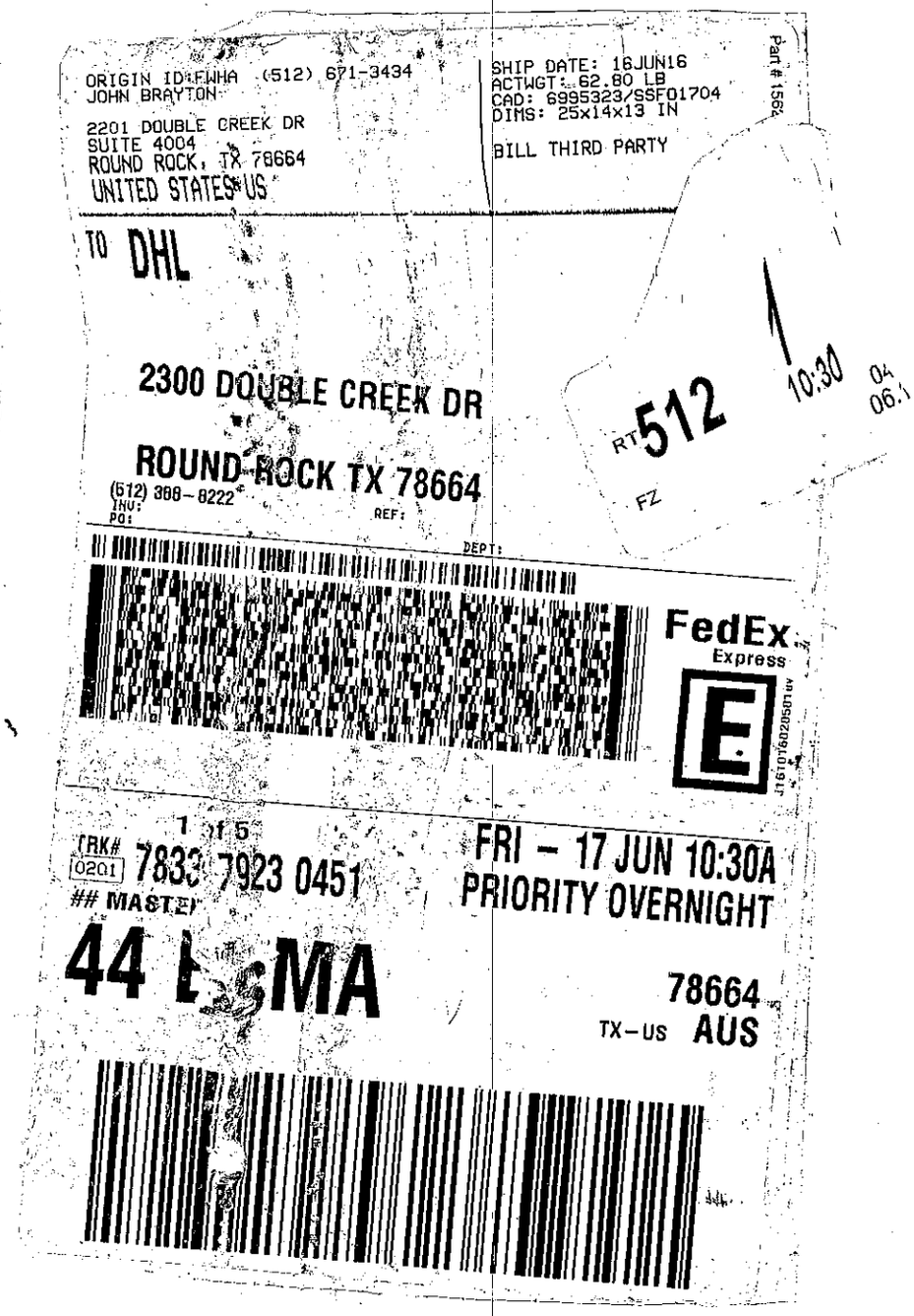
2 of 5
MPS# 0263 7833 7923 0462
Mstr# 7833 7923 0451

FRI - 17 JUN 10:30A
PRIORITY OVERNIGHT

44 BSMA

0201

78664
TX-US AUS



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: 62.80 LB
CAD: 6995323/SSFO1704
DIMS: 25x14x13 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

1 of 5
TRK# 0201 7833 7923 0451

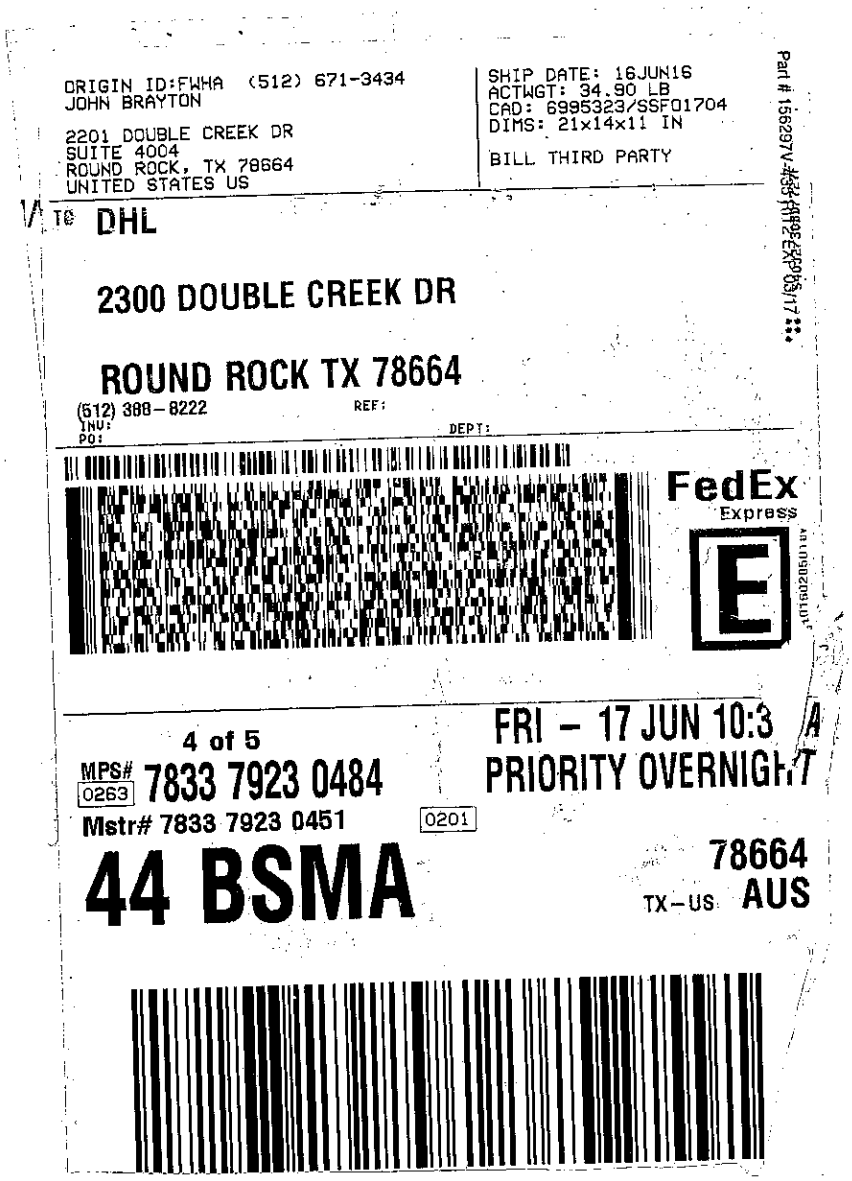
FRI - 17 JUN 10:30A
PRIORITY OVERNIGHT

MASTER

44 BSMA

78664
TX-US AUS

RT 512
FZ
10:30



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-##### EXP 06/17

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222 REF:

INV: DEPT:

PO:

FedEx Express

4 of 5

MPS# 0263 7833 7923 0484

Mstr# 7833 7923 0451

0201

FRI - 17 JUN 10:3 A

PRIORITY OVERNIGHT

44 BSMA

78664

TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Pastor, Behling & Wheeler** Date Received: **6/17/2016**

Work Order Number **1606193** Received by **JT**

Checklist completed by: _____ 6/17/2016 Reviewed by _____ 6/17/2016
Signature Date Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 5.1 5.1
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
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 _____

DHL Analytical, Inc. **Date:** *03-Aug-16*

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.

DHL Analytical, Inc.

Date: *03-Aug-16*

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

DHL Analytical, Inc.

Date: *03-Aug-16*

CLIENT:	Pastor, Behling & Wheeler	**Client Sample ID:**	FGD-3
Project:	Oak Grove	**Lab ID:**	1606193-01
Project No:	5164-D	**Collection Date:**	06/14/16 11:00 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Oak Grove	**Lab ID:**	1606193-02
Project No:	5164-D	**Collection Date:**	06/14/16 11:55 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Oak Grove	**Lab ID:**	1606193-03
Project No:	5164-D	**Collection Date:**	06/14/16 12:55 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Oak Grove	**Lab ID:**	1606193-04
Project No:	5164-D	**Collection Date:**	06/14/16 01:50 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Oak Grove	**Lab ID:**	1606193-05
Project No:	5164-D	**Collection Date:**	06/14/16 03:00 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Oak Grove	**Lab ID:**	1606193-06
Project No:	5164-D	**Collection Date:**	06/15/16 03:55 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Oak Grove	**Lab ID:**	1606193-07
Project No:	5164-D	**Collection Date:**	06/15/16 10:05 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Oak Grove	**Lab ID:**	1606193-08
Project No:	5164-D	**Collection Date:**	06/15/16 11:05 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Oak Grove	**Lab ID:**	1606193-09
Project No:	5164-D	**Collection Date:**	06/15/16 12:00 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-07
Project:	Oak Grove	**Lab ID:**	1606193-10
Project No:	5164-D	**Collection Date:**	06/15/16 01:20 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-05
Project:	Oak Grove	**Lab ID:**	1606193-11
Project No:	5164-D	**Collection Date:**	06/15/16 02:15 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-09
Project:	Oak Grove	**Lab ID:**	1606193-12
Project No:	5164-D	**Collection Date:**	06/15/16 04:05 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	AL-10
Project:	Oak Grove	**Lab ID:**	1606193-13
Project No:	5164-D	**Collection Date:**	06/16/16 08:35 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-02
Project:	Oak Grove	**Lab ID:**	1606193-14
Project No:	5164-D	**Collection Date:**	06/16/16 10:40 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-08
Project:	Oak Grove	**Lab ID:**	1606193-15
Project No:	5164-D	**Collection Date:**	06/16/16 12:50 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	DUP-1
Project:	Oak Grove	**Lab ID:**	1606193-16
Project No:	5164-D	**Collection Date:**	06/16/16 12:50 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	EB-1
Project:	Oak Grove	**Lab ID:**	1606193-17
Project No:	5164-D	**Collection Date:**	06/16/16 01:30 PM
Lab Order:	1606193	**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℃	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	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	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: 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	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: 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	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	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: 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	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

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	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 **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	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 **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	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 **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	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 **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	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_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			

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_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	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_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	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_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	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: 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	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: 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	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

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	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 **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	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

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℃**
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℃**
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	

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℃**
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℃**
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℃**
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℃**
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	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_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℃**
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	

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_160617B

Sample ID	**ICV-160617**	Batch ID:	**R86395**	TestNo:	**M4500-H+ B**	Units:	**pH Units@21.9℃**
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℃**
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℃**
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	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: 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	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: 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	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

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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 65 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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66

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

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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

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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

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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	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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:

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1606193

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

LR48016
1606589

		Date/Time			Date/Time
Relinquished by:		6/17/16 1730	**Received by:**		6/17/16 1730
Relinquished by:			**Received by:**		

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1606193

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

		Date/Time			Date/Time
Relinquished by:		6/17/16 1730	**Received by:**	Lonestar	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			SM 7500 Ra B M*						
Radium-228			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 1 **Custody Seals Broken** 0 ☐ **Temperature:** NA **C** **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken 0 **Chain of Custody Record** ☐ ✓ **Labels in Tact** ☐ ✓ **Radiation Survey Complete** ☐ NA

Anomalies

Inspected By: _____ **DATE** 6/21/16

QA or Designee Review: _____ **DATE** _____

Sample Custodian Review: _____ **DATE** 6/21/16

Project Notes:

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

Order No.: 1608276

RE: Luminant - Oak Grove

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1608276 ..... **8**

WorkOrderSampleSummary 1608276 ..... **9**

PrepDatesReport 1608276 ..... **10**

AnalyticalDatesReport 1608276 ..... **15**

Analytical Report 1608276 ..... **20**

AnalyticalQCSummaryReport 1608276 ..... **36**

Subcontract Report 1608276 ..... **70**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

Nº 72318
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 2
PO #: 5164-D DHL WORK ORDER #: 1608276
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BEAUTON

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: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ | METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ ___ ☐ | RCRA ☐ TX11 ☐ ___ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS ___ ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
FGD-2	01	8-24-16	1020	W	P	4		X		X	X	X	
FGD-3	02		1115	W	P	4		X		X	X	X	
FGD-4	03		1200	W	P	4		X		X	X	X	
FGD-6	04		1250	W	P	4		X		X	X	X	
FGD-5	05		1340	W	P	4		X		X	X	X	
FGD-1	06		1430	W	P	4		X		X	X	X	
MW-07	07		1520	W	P	4		X		X	X	X	
MW-05	08		1620	W	P	4		X		X	X	X	
DUP-01	09		1620	W	P	4		X		X	X	X	
EB-1	10		1640	W	P	4		X		X	X	X	
FGD-8	11		1735	W	P	4		X		X	X	X	
AL-10	12	8-25-16	0850	W	P	4		X		X	X	X	
MW-02	13		1000	W	P	4		X		X	X	X	
MW-09	14		1105	W	P	4		X		X	X	X	
FGD-11	15		1205	W	P	4		X		X	X	X	

RELINQUISHED BY: (Signature) DATE/TIME 8-26-16 1730 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) DATE/TIME 8/27/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ ___

LABORATORY USE ONLY:
RECEIVING TEMP: 1.8, 4.0, 3.5 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 72319

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 2 OF 2
PO #: 5164-D DHL WORK ORDER #: 1608276
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT 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: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO (METHOD 8015] ❑ DRO (METHOD 8105] ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ T PHOS, AMMONIA ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | RCRA ❑ TX11 ❑ ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ❑ ANIONS ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
FGD-12	14	8-25-16	1305	W	P	4		X		X	X	X	

RELINQUISHED BY: (Signature) DATE/TIME 8-26-16 RECEIVED BY: (Signature) 1730
RELINQUISHED BY: (Signature) DATE/TIME 8/27/16 RECEIVED BY: (Signature) 1000
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☒
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 1.5, 1.0, 3.5 THERM #: 28
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:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 26AUG16
ACTWGT: 56.00 LB
CAD: 6991003/SSFO1704
DIMS: 24x14x14 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

1 of 3

TRK# 0201 7839 3247 1021

MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BSMA

78664
TX-US AUS

ORIGIN ID:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 26AUG16
ACTWGT: 55.50 LB
CAD: 6991003/SSFO1704
DIMS: 24x14x14 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

2 of 3

MPS# 0263 7839 3247 1032

Mstr# 7839 3247 1021 0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BSMA

78664
TX-US AUS

MPS# 0263 7839 3247 1043

SATURDAY 12:00
PRIORITY OVERNIGH

XO BSMA

78664
TX-US
AUS

5169367 27Aug 00:46 MEMH 512C1/6323/0R60

Part # 156297V-496 RIT2 APV EXP 08/17

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 8/27/2016

Work Order Number 1608276

Received by JB

Checklist completed by: _____ 8/29/2016
Signature | Date

Reviewed by _____ 8/29/2016
Initials | Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *26-Sep-16*

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.

DHL Analytical, Inc.

Date: *26-Sep-16*

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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160906C
	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-01
Project No:	5164-D	**Collection Date:**	08/24/16 10:20 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-02
Project No:	5164-D	**Collection Date:**	08/24/16 11:15 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-03
Project No:	5164-D	**Collection Date:**	08/24/16 12:00 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-04
Project No:	5164-D	**Collection Date:**	08/24/16 12:50 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-05
Project No:	5164-D	**Collection Date:**	08/24/16 01:40 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-06
Project No:	5164-D	**Collection Date:**	08/24/16 02:30 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-07
Project No:	5164-D	**Collection Date:**	08/24/16 03:20 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-08
Project No:	5164-D	**Collection Date:**	08/24/16 04:20 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	DUP-01
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-09
Project No:	5164-D	**Collection Date:**	08/24/16 04:20 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	EB-1
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-10
Project No:	5164-D	**Collection Date:**	08/24/16 04:40 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-11
Project No:	5164-D	**Collection Date:**	08/24/16 05:35 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-12
Project No:	5164-D	**Collection Date:**	08/25/16 08:50 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-13
Project No:	5164-D	**Collection Date:**	08/25/16 10:00 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-14
Project No:	5164-D	**Collection Date:**	08/25/16 11:05 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-15
Project No:	5164-D	**Collection Date:**	08/25/16 12:05 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-16
Project No:	5164-D	**Collection Date:**	08/25/16 01:05 PM
Lab Order:	1608276	**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℃	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	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	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: 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	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: 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	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	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: 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			

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

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	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 **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	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 **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	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 **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: 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	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 **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	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 **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			

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_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	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_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	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_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			

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

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	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 **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	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 **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	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 **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	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 **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	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 **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			

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

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	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

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	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

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	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_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	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_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	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: 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℃**

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℃**

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	

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: 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℃**
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	

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: TITRATOR_160831A

Sample ID	**ICV-160831**	Batch ID:	**R87906**	TestNo:	**M4500-H+ B**	Units:	**pH Units@21.9℃**
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℃**
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℃**
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℃**
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℃**
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℃**
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	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: 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	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

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:

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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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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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

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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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1608276

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

2d60843 L857240

		Date/Time			Date/Time
Relinquished by:	[signature]	8/29/16 1735	Received by:	[signature]	8/29/16 1735
Relinquished by:			Received by:	[signature]	8/31/16 1045

CSL

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1608276

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

70160843

		Date/Time		Date/Time
Relinquished by:	Barla	8/29/16 1735	Received by:	8/29/16 1735
Relinquished by:			Received by:	Amber Taylor 8/31/16 1045

CSL

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	Plastic	500 ml	HNO3, pH < 2	✓	Yes	Yes

Radium-226	SM 7500 Ra B M*
Radium-228	EPA 904*/9320*

CONTAINER INSPECTION

 # Coolers 1 **Custody Seals Broken** N **Temperature:** Amb **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken N **Chain of Custody Record** ✓ **Labels in Tact** ✓ **Radiation Survey Complete** N/A

Anomalies

Inspected By: Amber Taylor **DATE** 8/31/16

QA or Designee Review: [signature] **DATE** 8/31/16

Sample Custodian Review: [signature] **DATE** 8/31/16

Project Notes:

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-17

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1610036 ..... **9**

WorkOrderSampleSummary 1610036 ..... **11**

PrepDatesReport 1610036 ..... **12**

AnalyticalDatesReport 1610036 ..... **16**

Analytical Report 1610036 ..... **20**

AnalyticalQCSummaryReport 1610036 ..... **36**

Subcontract Report 1610036 ..... **60**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 72887
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 MENNIE
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
CLENT 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

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES: BTEX ❑ MTBE ❑ (METHOD 8021)	TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑	GRO (METHOD 8015) ❑ DRO (METHOD 8105) ❑	VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑	SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑	8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑	8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑	8321 HERB ❑ T PHOS, AMMONIA ❑	METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑	RCRA ❑ TX11 ❑ _____ ❑	PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑	CHLORIDE ❑ ANIONS _____ ❑	TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑	TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑	RCI ❑ FLASHPOINT ❑ DGAS ❑	TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑	CCR SAMPLING	FIELD NOTES
MW-02	01	10-4-16	0950	W	P	4		X		X	X																	X	
AL-10	02		1050	W	P	4		X		X	X																	X	
MW-09	03		1145	W	P	4		X		X	X																	X	
MW-05	04		1240	W	P	4		X		X	X																	X	
DUP-01	05		1240	W	P	4		X		X	X																	X	
MW-07	06		1325	W	P	4		X		X	X																	X	

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	10-5-16	1730 Fedex
Fedex	10/6/16	9:25
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

3

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

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 72886

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: 10-5-16 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1610036
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE - FGD POND AREA
CLENT PROJECT #: 5164-D COLLECTOR: J. BEAMON

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

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: CCR SAMPLING	FIELD NOTES
FGD-11	07	10-4-16	1615	W	P	4		X		X	X	X	
FGD-12	08	10-4-16	1710	W	P	4		X		X	X	X	
FGD-8	09	10-5-16	0755	W	P	4		X		X	X	X	
FGD-1	10		0845	W	P	4		X		X	X	X	
FGD-5	11		0930	W	P	4		X		X	X	X	
FGD-2	12		1020	W	P	4		X		X	X	X	
FGD-4	13		1110	W	P	4		X		X	X	X	
FGD-6	14		1155	W	P	4		X		X	X	X	
FGD-3	15		1250	W	P	4		X		X	X	X	
EB-1	16		1320	W	P	4		X		X	X	X	

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ VOC [METHOD 8260] ☐ VOC 8260/5035 ☐ SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ VOC 624 ☐ VOC 8260 ☐ 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ 8321 HERB ☐ T PHOS, AMMONIA ☐ METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ RCRA ☐ TX11 ☐ PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ CHLORIDE ☐ ANIONS ☐ TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ RCI ☐ FLASHPOINT ☐ DGAS ☐ TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐

RELINQUISHED BY: (Signature) DATE/TIME 10-5-16 1730 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) Fedex DATE/TIME 10/6/16 9:30 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return 4

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐ X
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 4.9 | 3.4 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

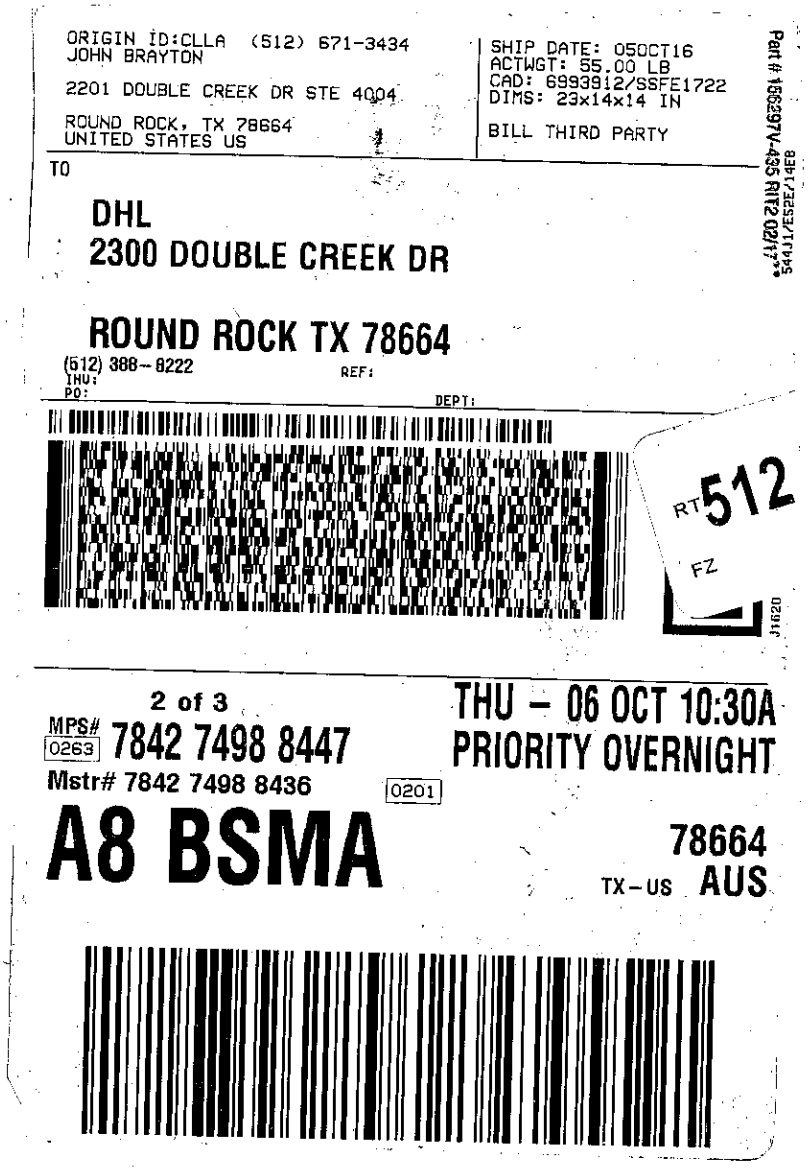
Appendix IV
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

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 # 156397V-435 RITZ 02/17
5441/E52E/14EB

TO
DHL
2300 DOUBLE CREEK DR

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

RT 512
FZ
J1620

2 of 3
MPS# 0263 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

TO

DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222

INV:
PO:

REF:

DEPT:

FedEx Express

1 of 3

TRK# 0201 7842 7498 8436

MASTER

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

RT 512 FZ

TO

DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222

INV:
PO:

REF:

DEPT:

FedEx Express

3 of 3

MPS# 0263 7842 7498 8458

Mstr# 7842 7498 8436 0201

THU - 06 OCT 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

DHL Analytical, Inc.

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 Date

Reviewed by Initials 10/6/2016 Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 4.9, 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
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *02-Nov-16*

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.

DHL Analytical, Inc.

Date: *02-Nov-16*

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_161012A
	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_161012A
	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_161012A
	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_161012A

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_161012A
	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_161012A
	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_161012A
	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-01
Project No:	5164-D	**Collection Date:**	10/04/16 09:50 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-02
Project No:	5164-D	**Collection Date:**	10/04/16 10:50 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-03
Project No:	5164-D	**Collection Date:**	10/04/16 11:45 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-04
Project No:	5164-D	**Collection Date:**	10/04/16 12:40 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	DUP-01
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-05
Project No:	5164-D	**Collection Date:**	10/04/16 12:40 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-06
Project No:	5164-D	**Collection Date:**	10/04/16 01:25 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-07
Project No:	5164-D	**Collection Date:**	10/04/16 04:15 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-08
Project No:	5164-D	**Collection Date:**	10/04/16 05:10 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-09
Project No:	5164-D	**Collection Date:**	10/05/16 07:55 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-10
Project No:	5164-D	**Collection Date:**	10/05/16 08:45 AM
Lab Order:	1610036	**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	J	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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-11
Project No:	5164-D	**Collection Date:**	10/05/16 09:30 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-12
Project No:	5164-D	**Collection Date:**	10/05/16 10:20 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-13
Project No:	5164-D	**Collection Date:**	10/05/16 11:10 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-14
Project No:	5164-D	**Collection Date:**	10/05/16 11:55 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-15
Project No:	5164-D	**Collection Date:**	10/05/16 12:50 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	EB-1
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-16
Project No:	5164-D	**Collection Date:**	10/05/16 01:20 PM
Lab Order:	1610036	**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℃	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
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

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	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	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: 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	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: 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	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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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			

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: 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℃**

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℃**

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	

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: 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℃**
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℃**
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℃**
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℃**
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	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: 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	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

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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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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

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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

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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

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1610036

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				

10/10/16

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
1610977

		Date/Time			Date/Time
Relinquished by:	J Banks	10/6/16 1730	**Received by:**	Lorestan	10/6/16 1730
Relinquished by:			**Received by:**		10/11/16 1010

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1610036

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					
	FGD-1	Aqueous	-10C	10/05/16 08:45 AM	500HDPEHNO3		1				
11	FGD-5	Aqueous	-11B	10/05/16 09:30 AM	500HDPEHNO3	1					
	FGD-5	Aqueous	-11C	10/05/16 09:30 AM	500HDPEHNO3		1				
12	FGD-2	Aqueous	-12B	10/05/16 10:20 AM	500HDPEHNO3	1					
	FGD-2	Aqueous	-12C	10/05/16 10:20 AM	500HDPEHNO3		1				
13	FGD-4	Aqueous	-13B	10/05/16 11:10 AM	500HDPEHNO3	1					
	FGD-4	Aqueous	-13C	10/05/16 11:10 AM	500HDPEHNO3		1				
14	FGD-6	Aqueous	-14B	10/05/16 11:55 AM	500HDPEHNO3	1					
	FGD-6	Aqueous	-14C	10/05/16 11:55 AM	500HDPEHNO3		1				
15	FGD-3	Aqueous	-15B	10/05/16 12:50 PM	500HDPEHNO3	1					
	FGD-3	Aqueous	-15C	10/05/16 12:50 PM	500HDPEHNO3		1				
16	EB-1	Equip Blank	-16B	10/05/16 01:20 PM	500HDPEHNO3	1					
	EB-1	Equip Blank	-16C	10/05/16 01:20 PM	500HDPEHNO3		1				

10/10/16

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

L865260
20160977

		Date/Time			Date/Time
Relinquished by:		10/6/16 1730	**Received by:**		10/6/16 1730
Relinquished by:			**Received by:**		10/10/16 0900

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

Radium-226
Radium-228

SM 7500 Ra B M*
EPA 904*/9320*

CONTAINER INSPECTION

Coolers 1 Custody Seals Broken Ø Temperature: 4.6/5.6 C Ice Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø Chain of Custody Record ✓ Labels in Tact ✓ Radiation Survey Complete N/A

Anomalies several labels had water damage making them illegible: FGD-4, FGD-6, FGD-3, FGD-11

Inspected By: _____ DATE 10/10/16

QA or Designee Review: Raymond Thomas DATE 10/10/16

Sample Custodian Review: Dawn 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

Order No.: 1612275

RE: Oak Grove Ash Landfill

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-17

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1612275 ..... **6**

WorkOrderSampleSummary 1612275 ..... **7**

PrepDatesReport 1612275 ..... **8**

AnalyticalDatesReport 1612275 ..... **11**

Analytical Report 1612275 ..... **14**

AnalyticalQCSummaryReport 1612275 ..... **22**

Subcontract Report 1612275 ..... **53**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 73691

CHAIN-OF-CUSTODY

CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX 78664
PHONE: 512-671-3434 FAX/E-MAIL:
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

DATE: 12-23-16 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 16/2275
PROJECT LOCATION OR NAME: OAK-GROVE - ASH LANDFILL
CLENT 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: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ (METHOD 8021) | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO (METHOD 8015) ☐ DRO (METHOD 8105) ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ 608 PCB ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ | METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ | RCRA ☐ TX11 ☐ ☐ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | CCR CHSIS VOLatiles SVOC

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	FIELD NOTES
MW-02	01	12-21-16	1310	W	P	4		X				
AL-10	02	12-22-16	0930	W	P	4		X				
MW-09	03	12-22-16	1035	W	P	4		X				
MW-08R	04	12-22-16	1145	W	P	4		X				
MW-05	05	12-22-16	1515	W	P	4		X				
DUP-01	06	12-22-16	1515	W	P	4		X				
EB-1	07	12-22-16	1645	W	P	4		X				
MW-07	08	12-22-16	1425	W	P	4		X				

RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) 12/22/16 1440 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 1.8 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 12:06 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

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Pastor, Behling & Wheeler** Date Received: 12/23/2016

Work Order Number **1612275** Received by **AL**

Checklist completed by _____ 12/27/2016 Reviewed by _____ 12/27/2016
Signature Date Initials Date

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 _____
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 _____

DHL Analytical, Inc. **Date:** *01-Feb-17*

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.

DHL Analytical, Inc.

Date: *01-Feb-17*

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

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_170105C
	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_170105C
	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_170105C
	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_170105C
	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	**Client Sample ID:**	MW-02
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-01
Project No:	5164-D	**Collection Date:**	12/21/16 01:10 PM
Lab Order:	1612275	**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℃	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	**Client Sample ID:**	AL-10
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-02
Project No:	5164-D	**Collection Date:**	12/22/16 09:30 AM
Lab Order:	1612275	**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℃	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	**Client Sample ID:**	MW-09
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-03
Project No:	5164-D	**Collection Date:**	12/22/16 10:35 AM
Lab Order:	1612275	**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℃	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	**Client Sample ID:**	MW-08R
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-04
Project No:	5164-D	**Collection Date:**	12/22/16 11:45 AM
Lab Order:	1612275	**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℃	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	**Client Sample ID:**	MW-05
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-05
Project No:	5164-D	**Collection Date:**	12/22/16 03:15 PM
Lab Order:	1612275	**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℃	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	**Client Sample ID:**	DUP-01
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-06
Project No:	5164-D	**Collection Date:**	12/22/16 03:15 PM
Lab Order:	1612275	**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℃	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	**Client Sample ID:**	EB-1
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-07
Project No:	5164-D	**Collection Date:**	12/22/16 04:45 PM
Lab Order:	1612275	**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℃	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	**Client Sample ID:**	MW-07
Project:	Oak Grove Ash Landfill	**Lab ID:**	1612275-08
Project No:	5164-D	**Collection Date:**	12/22/16 02:25 PM
Lab Order:	1612275	**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℃	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	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	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: 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			

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

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	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 **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	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 **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	

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 **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

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
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 **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			

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_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

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_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	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

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	

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 **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	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 **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	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 **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	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

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	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 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	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 **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	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 **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	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 **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			

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: 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	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: 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	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

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℃**
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℃**
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	

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℃**
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℃**
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℃**
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	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: 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	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

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:

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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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

53

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

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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

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QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1612275

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

761290
L881420

		Date/Time			Date/Time
Relinquished by:	Barker	12/27/16 1730	**Received by:**	Loresta	12/27/16 1730
Relinquished by:			**Received by:**		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	HNO3, pH < 2	✓	Yes	Yes
20161290-08 A	MW-07	NPW	12/22/16	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** Ø **Temperature:** 4.6 °C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø **Chain of Custody Record** ✓ **Labels in Tact** ✓ **Radiation Survey Complete** N/A

Anomalies

Inspected By: _____ **DATE** 12/29/16

QA or Designee Review: Raymond Thomas **DATE** 12/29/16

Sample Custodian Review: Christen Howard **DATE** 12/29/16

Project Notes:

Appendix C

Statistical Approach to Establishing Baseline Concentrations

Appendix C. STATISTICAL APPROACH TO ESTABLISHING BASELINE CONCENTRATIONS

This appendix summarizes the statistical approach used for establishing baseline groundwater quality concentrations for the Ash Landfill 1 Coal Combustion Residual (CCR) groundwater monitoring system. The following statistical approach was selected to demonstrate groundwater compliance under the CCR Rule:

- Use of interwell data evaluations, which compare new sample data to data from upgradient or background monitoring wells.

- Use of upper prediction limits (UPLs) to develop site-specific background concentrations for all Appendix III and Appendix IV constituents. 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 evaluations under the CCR Rule.

- After every detection monitoring event, Appendix III constituent concentrations from each compliance well are compared to background UPLs to ascertain if a statistically significant increase above background exists. Background UPLs are based on a 1-of-2 resampling approach, meaning that if one or more constituent concentrations in a compliance well are above their respective baseline concentration, a resample can be collected to validate or invalidate the baseline concentration exceedance.

- If assessment monitoring is required, the 95% lower confidence limit of the mean (LCL) is calculated after each assessment monitoring event for each Appendix IV constituent and compliance well. The data set used to calculate LCLs is based on current and historical constituent concentrations for a compliance well. A statistically significant increase over the Groundwater Protection Standard (GWPS) has occurred at a CCR unit when the LCL for at least one assessment monitoring constituent at a well is greater than the appropriate GWPS. Development of the GWPSs is discussed in Section C.4.

This approach follows the Statistical Analysis Plan (SAP) (Golder, 2022) and conforms to the 40 CFR 257 rules as well as EPA's *Unified Guidance: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (EPA, 2009) (hereafter, referred to as the Unified Guidance) 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 methodology is designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment.

Section 257.94(b) of the CCR Rule requires that a minimum of eight independent groundwater samples from each background and downgradient well be collected and analyzed for the constituents listed in

Appendix III and IV to Part 257 no later than October 17, 2017. To satisfy this requirement, eight groundwater monitoring events were performed from November 2015 through December 2016 using the two upgradient/background wells (AL-10 and MW-02) and the four downgradient compliance wells (MW-05, MW-07, MW-08/MW-08R, MW-09) in the Ash Landfill 1 CCR monitoring well system. MW-08 was damaged in August 2016 and was replaced with MW-08R in November 2016.

Prior to performing background data evaluations, data from the upgradient wells were prepared for analysis. Methods for handling field duplicate samples and handling non-detects were implemented during this data preparation phase, as presented in Section C.1. Since detection monitoring has been ongoing since 2017, additional data are available from upgradient wells for Appendix III constituents, and may be used with baseline data to establish background values (EPA, 2009). The baseline data (2015-2016) and newer detection monitoring data from 2017 through 2022 were compared to evaluate how baseline data and detection monitoring data from the upgradient wells may be used to establish background values, as discussed in Section C.2. Once the background data sets were determined, statistical assumptions were evaluated to assess the independence of background data prior to calculating the UPLs, as discussed in Section C.3. In order to calculate UPLs, the distribution of each data set was defined and a site-wide Type I experiment wise error rate was established. UPLs based on a 1-of-2 resampling approach were calculated for detected constituents to establish baseline values for wells hydraulically upgradient of the PAP, as further described in Section C.4. Details about the approach used to evaluate detection and assessment monitoring data after baseline concentrations were established are provided in Section C.5.

C.1 Data Preparation

Analytical data from wells in the groundwater monitoring network at a CCR unit during each sampling event are first reviewed for usability after final data packages are received from the laboratory. The analytical data are then prepared for statistical analysis. The raw sample data can be found in Tables C-1 and C-2 for the Appendix III and Appendix IV constituents, respectively.

Methods for handling duplicate and non-detect data are implemented during this data preparation phase to comply with the performance standards outlined in 40 CFR 257.93. Field duplicates and data rejected after data validation are removed from the data set. Only the primary samples are retained for the statistical evaluation.

In accordance with EPA guidance, non-detects were handled by using one of two approaches depending on the percentage of detected concentrations:

- If a constituent was detected in at least 85% of samples, a simple substitution method was used in which half of the sample detection limit was substituted as a proxy concentration (EPA, 2009; EPA, 2000).
- If a constituent was detected in at least 50% of the samples but no more than 85% of the samples, the Robust Regression Order Statistics (RROS) method was used to estimate summary statistics such as the mean and standard deviation (EPA, 2009).

If the constituent was detected in fewer than 50% of the samples, non-detects were handled by using nonparametric statistical approaches to evaluate the data and to prepare summary statistics (EPA, 2009; EPA, 2000). J-flagged data, estimated concentrations between the sample detection limit and the reporting limit, were defined as detected concentrations.

C.2 Establishing Appendix III Background Data Set

In accordance with Section 257.94(b), eight groundwater samples were collected from 2015 through 2016 from the upgradient wells AL-10 and MW-02 and analyzed for Appendix III and Appendix IV constituents. Since 2017, groundwater at both upgradient and downgradient wells has been sampled and Appendix III constituents have been analyzed as part of the detection monitoring program. The detection monitoring program does not include analyzing Appendix IV constituents, and so no additional data were available after 2016 for the Appendix IV constituents. Since there are a sufficient number of newer analytical data for the Appendix III constituents, background values may be estimated from the upgradient wells using the initial baseline data as well as the newer data. A two-way analysis of variance (ANOVA) or Kruskal-Wallis test was performed to identify statistical differences between the two upgradient wells and/or statistical differences between the baseline and newer sampling data. ANOVA and Kruskal-Wallis tests are appropriate to determine if, on average, there are statistical differences in concentrations between upgradient wells, between the sampling events (initial baseline vs. newer data), or between a combination of upgradient wells and sampling events. The Fligner or Levene test was performed to test for lack of equal variances between upgradient wells, using α=0.01 error rate. To maintain a 95% level of confidence for the ANOVA and Kruskal-Wallis tests, a statistical significant difference (between upgradient wells, or sampling events, and/or the interaction of upgradient wells and sampling events) was identified using a single test error rate of $1 - (1 - 0.05)^{1/3} = 0.017$.

Background data sets were identified based on the results of the ANOVA and Kruskal-Wallis tests. If a constituent's concentrations are statistically different between the upgradient wells, then data from the well that most represents upgradient concentrations were used. If a constituent's concentrations are statistically different between the sampling events (initial baseline vs. newer data), then data from the sampling event that most represents upgradient concentrations were used. If a constituent's concentrations are statistically different between the interaction of upgradient wells and sampling events, then data from the well and/or sampling event that most represents upgradient concentrations were used. Results of the ANOVA and Kruskal-Wallis tests are presented in Table C-3.

For Ash Landfill 1, no statistically significant spatial variability, called heteroscedasticity, was found between the upgradient wells, AL-10 and MW-02, based on the Levene or Fligner test. Based on the ANOVA and Kruskal-Wallis results, chloride, fluoride, and field pH were the Appendix III constituents that had no statistically significant differences identified between upgradient wells, between sampling events, or between the interaction of upgradient wells and sampling events. Since concentrations are similar between wells and between sampling events, data from both upgradient wells and both sampling events (data from 2015 through 2022) were used to estimate background for chloride, fluoride, and field pH.

Boron was the only constituent with a statistically significant difference between sampling events; on average, the initial baseline boron concentrations are less than newer concentrations from 2017 to 2022. Since the background wells are located upgradient of the CCR unit and reflect changes in background conditions over time, use of the initial baseline boron concentrations may cause the background value used to evaluate current conditions to be too low; therefore, only data from 2017 through 2022 were used to estimate background.

Calcium and total dissolved solids are the only two constituents with statistically significant interaction between upgradient wells and sampling events; on average, concentrations at AL-10 are higher than concentrations at MW-02 for the baseline events but concentrations at AL-10 are lower than concentrations at MW-02 for the newer sampling events. AL-10 appears to have decreasing trends for both calcium and total dissolved solids from 2015 through 2022. Because of this decreasing trend at AL-10 and the fluctuation of concentrations between wells and between sampling events, only data from MW-02 from 2015 through 2022 were used to estimate background for calcium and total dissolved solids.

Sulfate was the only Appendix III constituent with a statistically significant difference between the upgradient wells; on average, sulfate concentrations at AL-10 are less than sulfate concentrations at MW-02. Sulfate concentrations in the two wells were very similar during the baseline sampling events, but since 2017, concentrations at AL-10 have been less than most concentrations at MW-02. Since the sulfate concentrations at AL-10 may cause the background value to be too low, only data from MW-02 from 2015 through 2022 were used to estimate background for sulfate.

C.3 Statistical Assumptions

In accordance with Section 257.94(g)(6), the background groundwater sample data used in calculating the UPLs were evaluated for seasonal and spatial variability as well as temporal correlation in the data to assess the independence and usability of the background data to calculate UPLs. Statistical independence was checked by testing for:

- Spatial stationarity,
- Temporal stationarity,
- Lack of autocorrelation, and
- Lack of statistical data outliers.

The statistical software **R** (The R Foundation, 2023) and the EnvStats package (Envstats, 2023) were used to perform the statistical tests to check the validity of independent samples.

To identify the statistical significance across the wells and/or detected Appendix III or Appendix IV constituents, a Type I experiment wise error rate, α, of 0.05 was used and a single test error rate was defined for each statistical test. The single test error rate, was based on the number of constituents detected (d^*), and in some cases the number of constituents detected at least 50% of the time, for a given constituent list. For instance, the single test error rate associated with a statistical test for one of the seven detected Appendix III constituents at MW-02 ($d^*=7$) equals $1-(1-\alpha)^{1/d^*} = 1-(1-\alpha)^{1/7} = 0.0073$. Table C-4 provides a list of the single test error rates used when testing the statistical assumptions.

Spatial Stationarity

Spatial stationarity is defined as the lack of variability across upgradient well locations that are unaffected by the monitored CCR unit. The one-way analysis of variance (ANOVA) or Kruskal-Wallis test

was performed to identify spatial variability. The ANOVA and Kruskal-Wallis tests are appropriate only when there is no evidence of heteroscedasticity, meaning variances are equal across wells. The Fligner or Levene test was performed to test for heteroscedasticity, using α=0.01 error rate, as recommended by the Unified Guidance (EPA, 2009). The ANOVA and Kruskal-Wallis tests used a single test error rate based on the number of tests performed for each constituent list. Results of the ANOVA and Kruskal-Wallis tests are presented in Table C-5.

For Ash Landfill 1, none of the Appendix III and Appendix IV constituents among the upgradient wells in the background data sets had statistically significant spatial variability. Since background data sets for calcium, sulfate, and total dissolved solids only included data from MW-02, spatial stationarity was not a concern between upgradient wells and, therefore, was not evaluated. Heteroscedasticity was observed only for chloride, so spatial variability could not be identified for chloride. One explanation for this spatial variability could be that chloride concentrations from the more recent samplings events (2017-2022) for MW-02 appear to have greater variability than concentrations for AL-10. The background sample concentrations for chloride are generally within the natural range of concentrations in the downgradient and other upgradient wells. Furthermore, there is no obvious source of the spatial variability observed for chloride in the well samples other than natural chemical variability in the uppermost aquifer. As such, the background sample concentrations represent the natural range of Appendix III and Appendix IV constituent concentrations in the uppermost aquifer and are considered usable data for detecting a release from the CCR unit.

Temporal Stationarity and Lack of Autocorrelation

Temporal stationarity is the lack of temporal variability. Temporal variation refers to the concept that concentration levels vary over time, and can be present across a group of wells and/or constituents at an individual well or for a single constituent. The Mann-Kendall trend test was performed to identify linearly increasing or decreasing trends at each upgradient well. By definition temporal variability also includes autocorrelation. Autocorrelation is the statistical dependence between pairs of concentrations across a sequence of time. That means, pairs of consecutive concentrations exhibit stronger similarity in concentration levels than expected from pairs collected at random times (EPA, 2009). The rank von Neumann ratio test was performed to identify autocorrelation in the upgradient wells. This test was not designed to handle tied values such as non-detect concentrations, and so it was only performed for upgradient wells and constituents with at least 50% detected concentrations. Results of the Mann-Kendall test and rank von Neumann ratio test are presented in Table C-6.

For Ash Landfill 1, chloride at AL-10 was the only case with a statistically significant trend, decreasing trend, and observed autocorrelation. No statistically significant linear trend was identified at MW-02 for the Appendix III and Appendix IV constituents. Chloride concentrations at AL-10 are within the range of detected concentrations in the downgradient wells and other upgradient well and are, therefore, considered usable data.

Handling Outliers

Outliers are "extreme, unusual-looking measurements" and the Unified Guidance recommends testing for outliers to attempt to determine whether a suspect outlier was drawn from the same sample population as the rest of the data.

Before establishing baseline values for the detection monitoring or assessment monitoring programs, two steps were taken to check for suspect outliers for each detected constituent across the upgradient wells: a box plot was created to identify suspect outliers as a basis to identify suspect outliers, and if the constituent had at least 50% detected concentrations then the Dixon's or Rosner's test was performed as a formal test to check if a suspect outlier is also a statistical outlier. The Dixon's test was used for data sets with 25 or fewer samples, and the Rosner's test was used for data sets with more than 25 samples. Box plots and results for the Dixon's or Rosner's test were generated using the statistical software **R** (The R Foundation, 2023). Box plots are provided in Figures C-1 through C-17 and Table C-7 presents the suspect outliers based on the box plots and presents the results from the Dixon's or Rosner's test, based on a 95% level of confidence.

The suspect outliers based on box plots for Appendix III are chloride (two high concentrations of 298 and 444 mg/L), fluoride (two high concentrations 0.558 and 0.977 mg/L), and field pH (two low concentrations of 6.02 and 6.28 s.u.). The suspect outliers identified for Appendix IV are arsenic (two detected concentrations of 0.00218 J and 0.00364 J mg/L), barium (one high concentration of 0.306 mg/L), beryllium (one detected concentration of 0.000436 J mg/L), chromium (two detected concentrations of 0.0022 J and 0.00842 mg/ L), cobalt (one detected concentration of 0.00314 mg/ L), fluoride (one high concentration of 0.293 mg/ L), lead (two high concentrations, 0.00285 and 0.00339 mg/L), and selenium (one detected concentration of 0.00232 J mg/L). Since there were less than 50% detects for arsenic, beryllium, chromium, cobalt, lead, and selenium, an outlier test was not performed. The Dixon's test is appropriate for data sets of 25 or fewer samples, and so Dixon's test was used to evaluate outliers for chloride, barium, and Appendix IV fluoride. The Dixon's and Rosner's tests assume that a data set with the suspect outlier(s) removed is (are) normally distributed (or lognormally

distributed if the data are transformed to the natural-log scale). Since the Dixon's test can only test for one outlier and two high suspect outliers were identified for chloride, the Dixon's test was attempted only for the highest chloride detection. When the maximum chloride detection was removed, the remaining data could not be defined as normal or lognormal, and so Dixon's test could not be performed. When the maximum detection was removed for barium and Appendix IV fluoride, the remaining data could be defined as normal, and so the Dixon's test was used. The results of the Dixon's tests indicated that the suspect outlier for barium was a statistical outlier, and the suspect outlier for Appendix IV fluoride was not a statistical outlier. Since the Rosner's test is appropriate for data sets with more than 25 samples and can test for multiple outliers, the Rosner's test was used to evaluate outliers for Appendix III fluoride and field pH. The results of the Rosner's test indicated that the two highest detections for Appendix III fluoride were both statistical outliers, and only one of the two lowest detections for field pH was a statistical outlier.

The suspect outliers for chloride are within the range of baseline concentrations for downgradient wells. Although the high Appendix III fluoride concentrations were identified as statistical outliers, these concentrations are below the MCL. The lowest field pH concentration is within the range of baseline concentrations for downgradient wells. The suspect outliers for arsenic, beryllium, chromium, cobalt, and selenium are the only upgradient baseline detections, within the range of baseline concentrations for downgradient wells, and are below the appropriate MCL or RSL. The statistical outlier identified for barium is less than the MCL. The statistical outlier identified for Appendix IV fluoride is within the range of baseline concentrations for downgradient wells and is less than the MCL. The suspect outliers for lead are within the range of baseline concentrations for downgradient wells and are below the RSL. Therefore, all suspect and statistical outliers were kept in the background data sets.

C.4 Statistical Approach for Calculating UPLs

UPLs were calculated for each detected constituent across the upgradient wells to establish baseline values for background. UPLs were calculated to include a 1-of-2 retesting strategy to ensure comparisons are statistically powerful and to achieve the SWFPR. A 1-of-2 retesting strategy means that if one or more constituent concentrations in a compliance well are above their respective baseline concentration, a resample can be collected to validate or invalidate the baseline concentration exceedance.

Background data distributions were defined in accordance with EPA guidance (EPA, 2000; EPA, 2002; EPA, 2009; EPA, 2017; SWDIV, 1998). UPLs were calculated based on the site-wide false positive rate (SWFPR) and defined background data distribution. Power rates were defined for each calculated UPL. The open source, statistical software **R** (The R Foundation, 2023) was used to perform all statistical distribution tests and to calculate UPLs.

Achieving the SWFPR

UPLs were computed using a significance level that ensures a cumulative SWFPR or Type I experiment wise error rate for yearly monitoring that is no more than 10%. That means, a single test error rate for the UPLs must be considerably lower than 0.10. The single test error rate depends on the number of detected constituents and number of compliance wells evaluated in the CCR monitoring program, defined as: $1-(1-\alpha)^{1/cw}$, where

- α=0.10,
- c=7 or 13, the number detected constituents for the monitoring program for Appendix III and Appendix IV constituents, respectively; and
- w=47, the number of downgradient compliance wells at Ash Landfill 1.

The single test error rate for the UPLs is 0.0038 and 0.0020 for the detected Appendix III constituents and Appendix IV constituents, respectively. The Unified Guidance recommends defining the single test error rate for nonparametric UPLs as: $1-(1-\alpha)^{1/c}$, and so the single test error rate for nonparametric UPLs is 0.015 and 0.00081 for the detected Appendix III constituents and Appendix IV constituents, respectively. Since field pH has two bounds, a lower and upper prediction limit, the SWPFR for field pH is one-half of the appropriate SWFPR value shown above.

Defining a Distribution and Type of UPL

The type of UPL calculated is based on a data set's defined distribution. Figure C-18 outlines the steps that were taken to define whether a data set follows a normal, gamma, lognormal, or nonparametric distribution. Distributional test results and defined distributions are presented in Table C-8.

The type of UPL computed (e.g., parametric or nonparametric) was based on the detection frequency and the defined data distribution. For a constituent with no detections in the baseline data, the UPL was set to the reporting limit (EPA, 2009). For a constituent with at least 50% detections, the UPL was adjusted for non-detected concentration(s), as described previously in the Data Preparation section,

Section C.1, and the appropriate UPL calculation was based on results from the distributional tests. If no parametric distribution (normal, gamma, or lognormal) was appropriate, then a nonparametric UPL was estimated. The confidence level used for each UPL was based on the appropriate single test error rate.

Defining Power Rate associated with each UPL

The power of each UPL was evaluated and a power rate was defined as good, acceptable, or low. A power rate was defined as 'good' when the power at both 3 standard deviations and 4 standard deviations were above 85%; a power rate was defined as 'acceptable' when power at either 3 standard deviations or 4 standard deviations was between 59% and 85%; and a power rate was defined as 'low' occurs when power at both 3 standard deviations and 4 standard deviations were below 85%.

C.5 Detection and Assessment Monitoring Data Evaluations

Detection and assessment monitoring constituent concentrations are compared to the appropriate baseline value for background or GWPS to determine whether a significant difference exists between the initial and current site conditions. The appropriate baseline value for detection monitoring is the Appendix III constituent's UPL and the appropriate baseline value for assessment monitoring is the Appendix IV constituent's GWPS (Table C-9). The GWPS for each Appendix IV constituent is established as follows:

- For constituents with an established MCL, the GWPS is the highest of the MCL, UPL, or reporting limit for that constituent; or
- For constituents with no established MCL, the GWPS is the highest of the UPL, reporting limit, or the specified regional screening level (RSL) for that constituent (note: future revisions to the Rule may allow additional flexibility in establishing GWPS for states with EPA-approved CCR permit programs for Appendix IV constituents that do not have a MCL).

For detection monitoring, if any concentration exceeds the appropriate baseline value, then a resample may be collected, analyzed, and compared to the appropriate baseline value—if this resample exceeds the appropriate baseline value, then a statistically significant increase over background is indicated.

For assessment monitoring, a 95% confidence interval of the mean is estimated for each detected Appendix IV constituent in a downgradient well using the current and previous sampling event concentrations. The confidence interval contains both a LCL and an upper confidence limit (UCL). The Unified Guidance states that "for testing under compliance/assessment monitoring, a [LCL] around the true parameter is utilized. If the LCL exceeds the standard [GWPS], there is statistically significant

evidence in favor that the compliance standard has been violated." A constituent is in-compliance when the LCL for the constituent is less than the appropriate GWPS. (EPA, 2009).

The 95% confidence interval (i.e., the LCL and UCL) is based on the constituent concentrations from the current year's sampling events and historical sampling events at a given well. Confidence intervals are calculated based on the defined data distribution. The data distribution is defined in accordance with EPA guidance (EPA, 2000; EPA, 2002; EPA, 2009; EPA, 2017; SWDIV, 1998). The type of confidence interval computed (e.g., parametric or nonparametric) is based on the detection frequency and the defined data distribution for each data set, as described in Section C.3. For a constituent with no detected concentration measurements, the LCL (and UCL) is set to the reporting limit (EPA, 2009). For a constituent with at least 50% detections, the LCL (and UCL) calculation adjusts for non-detected concentration(s) as described in Section C.1, and the appropriate LCL (and UCL) calculation is used based on results from the distributional tests. If no parametric distribution (normal, lognormal, or gamma) can be defined for a data set or there are fewer than 50% detections, then a nonparametric, approximate 95% confidence interval of the median is estimated for the LCL and UCL.

C.6 REFERENCES

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Tables

Table C-1. CCR Groundwater Detection Monitoring
Data Summary - Ash Landfill

Sample Location	Date Sampled	B	Ca	Cl	Fl	field pH	SO_4	TDS
Upgradient Wells								
AL-10	11/4/2015	0.0682	34.5	149	0.149 J	6.86	72.6	590
	12/18/2015	0.0539	37.5	81	0.15 J	6.45	20.6	414
	2/10/2016	0.0637	48.6	108	0.197 J	6.75	34.9	599
	4/15/2016	0.0573	44.8	86	0.133	6.51	23.6	549
	6/16/2016	0.0915	34.7	66.7	0.155 J	6.44	23.5	436
	8/25/2016	0.105	87.5	444	<0.1	6.61	96.3	1,120
	10/4/2016	0.0756	35.1	57.3	0.278 J	6.92	20.1	507
	12/22/2016	0.0759	32.5	57.2	0.195 J	6.78	21.5	527
	10/2/2017	0.0973	27	50.6	0.120 J	6.85	12.2	398
	6/4/2018	0.0875	21.9	62.1	0.183 J	6.67	11.6	362
	9/6/2018	0.113	21.9	56.7	0.260 J	6.66	11.8	371
	5/17/2019	0.114	16.8	67.9	0.262 J	6.64	12.4	340
	8/20/2019	0.115	18.8	66.2	0.363 J	6.87	11.8	333
	5/7/2020	0.128	18.8	52.2	<0.100	6.78	11.1	317
	9/9/2020	0.139	16.8	49.2	0.208 J	6.86	10.6	301
	6/16/2021	0.107	15.2	41.9	0.27 J	6.82	9.92	267
	10/12/2021	0.0878	15.1	51.4	<0.1	6.82	9.84	269
	5/11/2022	0.0894	11.8	39.9	0.217 J	6.63	8.47	251
	9/26/2022	0.107	10.5	34.7	0.180 J	6.69	9.47	234
MW-02	11/4/2015	0.064	32.5	138	0.135 J	6.92	71.4	539
	12/18/2015	0.0476	29	61.7	0.118 J	6.83	15.9	308
	2/10/2016	0.0853	25.4	83.5	0.229 J	6.63	34	320
	4/15/2016	0.0597	39.6	68	0.102	6.51	18.1	440
	6/16/2016	0.106	26.5	87.8	0.161 J	6.89	34.8	343
	8/25/2016	0.0492	12.9	21.9	0.164 J	6.58	22.4	163
	10/4/2016	0.113	61.4	222	0.185 J	6.69	97.4	667
	12/21/2016	0.11	47.8	185	0.293 J	6.78	83.4	590
	10/2/2017	0.0567	22.2	42.4	<0.100	6.68	9.67	310
	6/4/2018	0.144	82.4	275	0.139 J	6.28	121	740
	9/6/2018	0.148	70.9	259	0.221 J	6.02	116	872
	5/17/2019	0.0981	20	67.6	0.321 J	6.63	31.1	306
	8/20/2019	0.0875	19.9	53.8	0.558	6.59	20.1	260
	5/7/2020	0.0996	11.5	2.87	<0.100	6.63	6.14	106
	9/9/2020	0.166	55.6	210	0.287 J	6.76	99.2	592
	6/16/2021	0.0756	48	164	0.977	6.62	35.9	646
	10/12/2021	0.0848	23.8	56.6	0.36	6.62	20.7	245
	5/11/2022	0.110	47.6	152	0.179	6.63	62.3	504
	9/26/2022	0.126	66.4	298	0.128 J	6.52	131	755
Downgradient Wells								
MW-05	11/4/2015	0.0628	15.4	64.8	0.272 J	7.11	13.6	285
	12/18/2015	0.0621	13	60.2	0.476	6.52	10.5	232
	2/10/2016	0.0447	14	59.7	0.397 J	6.67	11.9	235
	4/15/2016	0.0458	14.3	55.4	0.284	6.42	10.7	288
	6/15/2016	0.058	14.2	60.4	0.306 J	6.61	11.8	269
	8/24/2016	0.0877	13.1	63	0.262 J	6.75	11.8	287
	10/4/2016	0.059	15.4	57.9	0.477	6.87	10.9	253
	12/22/2016	0.0759	61.4	264	0.446	6.63	55.6	778
	10/2/2017	0.0665	17.5	58.6	0.295 J	6.89	10.4	246
	6/5/2018	0.0739	16.8	60	0.391 J	6.43	12.1	253
	9/7/2018	0.077	15.8	63.3	0.392 J	6.11	10.6	249
	5/17/2019	0.0686	13.5	66.4	0.462	6.57	11.2	257
	8/20/2019	0.079	16	66.7	0.514	6.78	10.8	263
	5/7/2020	0.0985	18	71.8	0.344 J	6.68	10.6	264
	9/9/2020	0.201	20.5	79.8	0.372 J	6.81	66.5	407
	6/16/2021	0.0753	17.7	77.7	0.415	6.69	10	255
	10/12/2021	0.0615	20.9	83.6	0.433	6.52	11.7	282
	5/12/2022	0.0773	20	80.9	0.438	6.74	11.5	285
	9/26/2022	0.0768	19.8	87.8	0.383 J	6.73	12	290
	11/3/2015	0.0483	8.57	20.2	0.289 J	6.42	11.5	276
	12/17/2015	0.0539	8.75	17.7	0.319 J	6.86	14.7	243

Notes:
-- Not analyzed.
1. All concentrations in mg/L. pH in standard units.

Table C-1. CCR Groundwater Detection Monitoring
Data Summary - Ash Landfill

Sample Location	Date Sampled	B	Ca	Cl	Fl	field pH	SO_4	TDS
MW-07	2/9/2016	0.0547	13.3	28.9	0.276 J	7.18	25.3	283
	4/15/2016	0.0567	10	20.9	0.187	6.71	16	341
	6/15/2016	0.0639	10.5	22.9	0.226 J	6.75	23.2	294
	8/24/2016	0.0691	9.58	20.4	0.159 J	6.89	21.8	290
	10/4/2016	0.0549	10.3	15.6	0.277 J	6.82	17.1	256
	12/22/2016	0.054	12.5	22.9	0.229 J	6.29	34.7	262
	10/2/2017	0.0733	13.9	15.8	0.178 J	6.59	38.4	298
	6/5/2018	0.105	17.5	15.7	0.169 J	5.98	61.1	316
	9/7/2018	0.151	19.7	21.5	0.250 J	6.18	80.3	357
	11/6/2018	0.154	--	--	--	--	--	--
	5/17/2019	0.132	17.1	20.2	0.244 J	6.83	84.1	355
	8/19/2019	0.215	22.8	19.7	0.367 J	6.77	100	385
	5/7/2020	0.302	29.7	22.4	0.234 J	6.84	123	432
	9/9/2020	0.297	26.9	24.7	0.302 J	6.58	121	413
	6/16/2021	0.186	25.8	26.2	0.378 J	6.84	108	404
	10/13/2021	0.181	31.6	29.6	<0.353	6.85	130	422
	5/12/2022	0.297	34.6	31.4	0.208 J	6.75	144	484
	9/26/2022	0.282	35.8	33.9	0.143	6.41	150	499
MW-08/ MW-08R	11/4/2015	0.0631	120	599	0.17 J	6.81	138	2,070
	12/18/2015	0.0604	70.4	488	0.158 J	6.78	49.8	1,140
	2/9/2016	0.0695	140	612	0.175 J	6.42	170	1,530
	4/15/2016	0.0726	133	566	<0.1	6.61	139	1,680
	6/16/2016	0.0677	76.6	520	<0.1	6.76	83.6	1,090
	12/22/2016	0.0702	32.4	166	0.355 J	6.93	39.7	617
	3/21/2017	0.0662	117	563	0.2 J	5.83	98.3	1,220
	4/20/2017	0.0696	115	560	0.149 J	5.91	94.9	1,190
	10/2/2017	0.061	13.1	14.4	<0.100	6.63	28.7	243
	6/5/2018	0.082	18.9	53.9	0.138 J	6.37	9.66	302
	9/7/2018	0.0921	106	504	0.242 J	5.84	96.9	1,550
	11/6/2018	--	15.7	19	--	--	--	268
	5/17/2019	0.102	16.7	69.8	0.269 J	6.54	12.4	326
	8/20/2019	0.096	24.9	48	0.501	6.84	30.7	255
	5/7/2020	0.122	19	51.8	0.117 J	6.83	11.1	320
	9/9/2020	0.0977	15.8	55.5	0.344 J	6.68	19.0	256
	6/16/2021	0.116	15.3	43.5	0.263 J	6.76	9.26	266
	10/12/2021	0.107	32.8	268	<0.1	6.76	136	874
	5/11/2022	0.0648	43.8	111	0.979	6.89	27.3	563
	9/26/2022	0.104	10.6	30.1	0.154	6.52	7.24	193
MW-09	11/3/2015	0.0722	36.4	155	0.149 J	6.45	74.9	583
	12/18/2015	0.077	40.3	157	0.266 J	6.48	83.1	528
	2/9/2016	0.072	38.4	158	0.152 J	6.16	80	445
	4/15/2016	0.0734	42.2	151	<0.1	6.41	80.9	568
	6/15/2016	0.0778	43.1	174	<0.1	6.52	98.7	574
	8/25/2016	0.0829	45.6	195	<0.1	6.76	116	715
	10/4/2016	0.0803	47.8	179	0.256 J	6.64	108	648
	12/22/2016	0.0776	42.6	290	0.159 J	6.87	116	791
	10/2/2017	0.106	58.2	140	<0.100	6.76	95.3	433
	6/4/2018	0.091	21.7	6.48	0.162 J	6.28	6.08	135
	9/6/2018	0.0999	49.8	186	0.134 J	5.61	104	704
	11/6/2018	--	--	--	--	--	58.6	--
	5/17/2019	0.12	17.2	366	0.541	6.72	53.2	935
	8/20/2019	0.117	26	61.2	0.359 J	6.96	22.3	331
	5/7/2020	0.0988	20.2	45.1	0.234 J	6.68	17.3	212
	9/9/2020	0.123	48.5	156	0.152 J	6.72	99.6	468
	6/16/2021	0.0682	16.3	4.18	<0.100	6.84	8.19	127
	10/12/2021	0.0821	20.7	29.9	<0.100	6.84	31.2	223
	5/12/2022	0.111	67.9	195	0.124 J	6.57	119	582
	9/26/2022	0.132	63.9	155	<0.100	6.79	108	482

Notes:
-- Not analyzed.
1. All concentrations in mg/L. pH in standard units.

Table C-2. CCR Groundwater Baseline Assessment Monitoring
Data Summary - Ash Landfill

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	Fl	Pb	Li	Hg	Mo	Se	Th	Ra 226/228
Upgradient Wells																
AL-10	11/4/2015	<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	2.66
	12/18/2015	<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	3.70
	2/10/2016	<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	2.17
	4/15/2016	<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	3.35
	6/16/2016	<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	1.29
	8/25/2016	<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	3.45
	10/4/2016	<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	1.18
	12/22/2016	<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	2.06
MW-02	11/4/2015	<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	4.56
	12/18/2015	<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	2.14
	2/10/2016	<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	2.06
	4/15/2016	<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	<2.391
	6/16/2016	<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	4.39
	8/25/2016	<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	1.10
	10/4/2016	<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	2.22
	12/21/2016	<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	2.20
Downgradient Wells																
MW-05	11/4/2015	<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	1.99
	12/18/2015	<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	<1.871
	2/10/2016	<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	2.45
	4/15/2016	<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	3.83
	6/15/2016	<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	1.76
	8/24/2016	<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	3.36
	10/4/2016	<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	1.33
	12/22/2016	<0.0008	<0.002	0.0415	<0.0003	<0.0003	0.0197	<0.003	0.446	0.00057 J	0.114	<0.00008	<0.002	0.00371 J	<0.0005	0.94
MW-07	11/3/2015	<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	2.68
	12/17/2015	<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	2.65
	2/9/2016	<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	2.80
	4/15/2016	<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	<1.774
	6/15/2016	<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	0.97
	8/24/2016	<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	1.82
	10/4/2016	<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	1.34
	12/22/2016	<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	<0.734
MW-08/ MW-08R	11/4/2015	<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	2.41
	12/18/2015	<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	3.35
	2/9/2016	<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	3.29
	4/15/2016	<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	3.57
	6/16/2016	<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	2.88
	12/22/2016	<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	2.21
MW-09	11/3/2015	<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	2.90
	12/18/2015	<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	5.09
	2/9/2016	<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	2.28
	4/15/2016	<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	3.56
	6/15/2016	<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	3.17
	8/25/2016	<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	3.40
	10/4/2016	<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	2.37
	12/22/2016	<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	2.62

Notes:
1. All concentrations in mg/L. Ra combined in pCi/L.

Table C-3. Evaluation for Appendix III Background Data
Comparing Upgradient Wells AL-10 vs. MW-02 and
Baseline (2015-2016) vs. Newer (2017-2022) Data
Oak Grove - Ash Landfill

Constituent List	Constituent	# Detects/ # Samples at AL-10		# Detects/ # Samples at MW-02		Defined Distribution for Residuals[1]	Levene's or Fligner's Test[2]		ANOVA or Kruskal-Wallis[3] Statistically Significant between..			Decision
		Baseline Data	Newer Data	Baseline Data	Newer Data		p-value	Hetero-scedasticity present?	Wells: AL-10 vs MW-02 (p-value)?[4]	Events: Baseline vs Newer Data (p-value)?[4]	Interaction between Wells and Events (p-value)?[4]	
Appendix III	Boron	8/8	11/11	8/8	11/11	Normal	0.80	No	No (0.73)	Yes (0.00054)	No (0.79)	use AL-10 and MW-20, 2017-2022 data
	Calcium	8/8	11/11	8/8	11/11	Normal	0.16	No	No (0.077)	No (0.11)	Yes (0.00404)	use MW-02, 2015-2022 data
	Chloride	8/8	11/11	8/8	11/11	Nonparametric	0.58	No	No (0.038)	No (0.046)	No (0.049)	use AL-10 and MW-20, 2015-2022
	Fluoride	7/8	9/11	8/8	9/11	Lognormal	0.041	No	No (0.43)	No (0.12)	No (0.54)	use AL-10 and MW-20, 2015-2022
	field pH	8/8	11/11	8/8	11/11	Normal	0.56	No	No (0.088)	No (0.38)	No (0.017)	use AL-10 and MW-20, 2015-2022
	Sulfate	8/8	11/11	8/8	11/11	Normal	0.35	No	Yes (0.0056)	No (0.46)	No (0.069)	use MW-02, 2015-2022 data
	Total Dissolved Solids	8/8	11/11	8/8	11/11	Normal	0.73	No	No (0.66)	No (0.091)	Yes (0.0091)	use MW-02, 2015-2022 data

1-a=0.01, Distribution Test
2-Heteroscedasticity based on Levene when data Normal or Lognormal, otherwise Fligner Test; a=0.01
3-ANOVA used when residuals are Normal or Lognormal, otherwise Kruskal-Wallis Test
4-α=0.017

Table C-4. Single-Test Error Rates to Achieve Type 1 Experimentwise Error Rate of α=0.05
Ash Landfill - Upgradient Wells (AL-10 and MW-02)

Constituent List		Single-Test Error Rate (# of Detected Constituents) for Spatial and Temporal Tests	
		AL-10	MW-02
Appendix III	Constituents Detected	0.013 (4)	0.0073 (7)
	Constituents Detected≥50%	0.013 (4)	0.0073 (7)
Appendix IV	Constituents Detected	0.0057 (9)	0.0073 (7)
	Constituents Detected≥50%	0.013 (4)	0.013 (4)

Table C-5. Summary of Spatial Analysis - Results from ANOVA or Kruskal-Wallis Test
Ash Landfill - Upgradient Wells (AL-10 and MW-02)

Constituent List	Constituent	# Detects/ # Samples Upgradient Wells	# Detects/ # Samples at AL-10	# Detects/ # Samples at MW-02	Defined Distribution for Residuals[1]	Levene's or Fligner's Test[2]		ANOVA or Kruskal-Wallis[3]	
						p-value	Heteroscedasticity present?	p-value	Statistically Significant[4]?
Appendix III	Boron	22/22	11/11	11/11	Normal	0.028	No	0.93	No
	Calcium	19/19	--	19/19	--	--	--	--	--
	Chloride	38/38	19/19	19/19	Not Normal or Lognormal	0.0074	Yes		--
	Fluoride	33/38	16/19	17/19	Lognormal	0.45	No	0.45	No
	field pH	38/38	19/19	19/19	Normal	0.82	No	0.11	No
	Sulfate	19/19	--	19/19	--	--	--	--	--
	Total Dissolved Solids	19/19	--	19/19	--	--	--	--	--
Appendix IV	Antimony	0/16	0/8	0/8	--	--	--		--
	Arsenic	2/16	2/8	0/8	Not Normal or Lognormal	0.15	No	0.14	No
	Barium	16/16	8/8	8/8	Normal	0.084	No	0.24	No
	Beryllium	1/16	1/8	0/8	Not Normal or Lognormal	0.32	No	0.32	No
	Cadmium	0/16	0/8	0/8	--	--	--		--
	Chromium	2/16	1/8	1/8	Not Normal or Lognormal	0.84	No	0.93	No
	Cobalt	1/16	1/8	0/8	Not Normal or Lognormal	0.32	No	0.32	No
	Fluoride	15/16	7/8	8/8	Normal	0.93	No	0.76	No
	Lead	5/16	2/8	3/8	Not Normal or Lognormal	0.87	No	0.90	No
	Lithium	16/16	8/8	8/8	Normal	0.014	No	0.034	No
	Mercury	0/16	0/8	0/8	--	--	--		--
	Molybdenum	0/16	0/8	0/8	--	--	--		--
	Selenium	1/16	0/8	1/8	Not Normal or Lognormal	0.32	No	0.32	No
	Thallium	0/16	0/8	0/8	--	--	--		--
	Radium-226 + Radium 228	15/16	8/8	7/8	Normal	0.55	No	1.0	No

1-a=0.01, Distribution Test

2-Heteroscedasticity based on Levene when data Normal or Lognormal, otherwise Fligner Test; a=0.01

3-ANOVA used when residuals are Normal or Lognormal, otherwise Kruskal-Wallis Test

4-a=0.013 Appendix III, 0.0057 Appendix IV

Table C-6. Summary of Mann-Kendall Trend Test and rank von Neumann Autocorrelation Test
Ash Landfill - Upgradient Wells (AL-10 and MW-02)

Upgradient Well	Constituent List	Analyte	# Detects/ # Samples	Mann-Kendall Trend Test		rank von Neumann Autocorrelation Test	
				p-value	Statistically Significant?	p-value	Statistically Significant?
AL-10	Appendix III	Boron	11/11	0.81	No	0.043	Yes
		Calcium	--	--	--	--	--
		Chloride	19/19	3.7E-05	Yes (decreasing)	0.00012	Yes
		Fluoride	16/19	0.34	No	0.38	No
		field pH	19/19	0.42	No	0.56	No
		Sulfate	--	--	--	--	--
		Total Dissolved Solids	--	--	--	--	--
	Appendix IV	Antimony	0/8	--	--	--	--
		Arsenic	2/8	1	No	--	--
		Barium	8/8	0.54	No	0.90	No
		Beryllium	1/8	0.66	No	--	--
		Cadmium	0/8	--	--	--	--
		Chromium	1/8	0.66	No	--	--
		Cobalt	1/8	0.66	No	--	--
		Fluoride	7/8	0.54	No	0.34	No
		Lead	2/8	0.74	No	--	--
		Lithium	8/8	0.17	No	0.98	No
		Mercury	0/8	--	--	--	--
		Molybdenum	0/8	--	--	--	--
		Selenium	0/8	--	--	--	--
		Thallium	0/8	--	--	--	--
		Radium-226 + Radium 228	8/8	0.27	No	0.42	No
MW-02	Appendix III	Boron	11/11	0.76	No	0.99	No
		Calcium	19/19	0.73	No	0.74	No
		Chloride	19/19	0.53	No	0.97	No
		Fluoride	17/19	0.12	No	0.64	No
		field pH	19/19	0.085	No	0.51	No
		Sulfate	19/19	0.36	No	0.99	No
		Total Dissolved Solids	19/19	0.67	No	0.79	No
	Appendix IV	Antimony	0/8	--	--	--	--
		Arsenic	0/8	--	--	--	--
		Barium	8/8	0.90	No	0.16	No
		Beryllium	0/8	--	--	--	--
		Cadmium	0/8	--	--	--	--
		Chromium	1/8	0.38	No	--	--
		Cobalt	0/8	--	--	--	--
		Fluoride	8/8	0.11	No	0.76	No
		Lead	3/8	0.11	No	--	--
		Lithium	8/8	0.17	No	0.96	No
		Mercury	0/8	--	--	--	--
		Molybdenum	0/8	--	--	--	--
		Selenium	1/8	0.19	No	--	--
		Thallium	0/8	--	--	--	--
		Radium-226 + Radium 228	7/8	0.71	No	0.54	No

NOTES:
No trend tests or autocorrelation tests performed for AL-10 Calcium, Sulfate, and Total Dissolved Solids since not included in background data sets.
Statistical Significance when p-value less than single test error rates (see Table C-3).

Table C-7. Summary of Observed Suspect Outliers, Dixon's Test and Rosner's Test
Oak Grove - Ash Landfill

Constituent List	Constituent	Suspect Outlier for Low or High Concentration?	Suspect Outlier Concentration (Date Sampled)	p-values for Distributional Tests without Outlier, Detect Data - Normality			Is Distribution without Outlier(s) Normal?	p-values for Distributional Tests without Outlier, Detect Data - Lognormality			Is Distribution without Outlier(s) Lognormal?	Conclusion of Dixon or Rosner's Test[1]
				Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation		Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation		
Appendix III	Chloride	High	298 mg/L (MW-02, 2022-09-26) 444 mg/L (AL-10, 2016-08-25)	1.4E-06	2.8E-05	8.7E-05	No	0.023	0.00012	0.00014	No	Not performed, data Not Normal or Lognormal
	Fluoride	High	0.558 mg/L (MW-02, 2019-08-20) 0.977 mg/L (MW-02, 2021-06-16)	0.32	0.10	0.12	Yes	0.83	0.55	0.46	Yes	Two Statistical high outliers (p-value<0.05) Based on Normality
	field pH	Low	6.02 s.u. (MW-02, 2018-09-06) 6.28 s.u. (MW-02, 2018-06-04)	0.55	0.20	0.20	Yes	0.58	0.17	0.16	Yes	One Statistical low outlier (p-value <0.05) Based on Normality
Appendix IV	Arsenic	High	0.00218 J mg/L (AL-10, 2016-02-10) 0.00364 J mg/L (AL-10, 2016-08-25)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects
	Barium	High	0.306 mg/L (AL-10, 2016-08-25)	0.091	0.063	0.071	Yes	0.49	0.26	0.35	Yes	Statistical high outlier (p-value=0.019) Based on Normality
	Beryllium	High	0.000436 J mg/L (AL-10, (2016-08-25)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects
	Chromium	High	0.0022 J mg/L (MW-02, 2016-10-04) 0.00842 mg/L (AL-10, 2016-08-25)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects
	Cobalt	High	0.00314 J mg/L (AL-10, 2016-08-25)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects
	Fluoride	High	0.293 mg/L (MW-02, 2016-12-21)	0.28	0.40	0.26	Yes	0.76	1.0	0.95	Yes	Not a statistical high outlier (p-value=0.24) Based on Normality
	Lead	High	0.00285 mg/L (AL-10, 2016-08-25) 0.00339 mg/L (AL-10, 2015-12-18)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects
	Selenium	High	0.00232 J mg/L (MW-02, 2016-12-21)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects

NOTE:
[1]Dixon's Test used for cases when n<=25 and can only test one outlier. Rosner's Test used for cases when n>25 and can test mutliple outliers.
Statistical Significance for Distributional tests and for Dixon's or Rosner's tests based on a=0.05.

Table C-8. Summary of Distributional Tests
Oak Grove - Ash Landfill

Constituent List	Constituent	# Detects/ # Samples	% Detects	Defined Distribution	Tests for Normality			Can the Data be defined as Normal?
					Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation	
Appendix III	Boron	22/22	100	Normal	0.50	0.85	0.69	Yes
	Calcium	19/19	100	Normal	0.22	0.21	0.28	Yes
	Chloride	38/38	100	Nonparametric	2.4E-07	3.9E-06	1.2E-05	No
	Fluoride	33/38	87	Lognormal	4.0E-04	1.1E-07	5.0E-07	No
	field pH	38/38	100	Normal	0.074	0.0028	0.0027	Yes
	Sulfate	19/19	100	Gamma	0.0031	0.018	0.036	No
	Total Dissolved Solids	19/19	100	Normal	0.13	0.53	0.63	Yes
Appendix IV	Antimony	0/16	0	All NDs	--	--	--	--
	Arsenic	2/16	13	Nonparametric, <50% Detects	--	--	--	--
	Barium	16/16	100	Normal	0.066	0.056	0.037	Yes
	Beryllium	1/16	6	Nonparametric, <50% Detects	--	--	--	--
	Cadmium	0/16	0	All NDs	--	--	--	--
	Chromium	2/16	13	Nonparametric, <50% Detects	--	--	--	--
	Cobalt	1/16	6	Nonparametric, <50% Detects	--	--	--	--
	Fluoride	15/16	94	Normal	0.16	0.14	0.14	Yes
	Lead	5/16	31	Nonparametric, <50% Detects	--	--	--	--
	Lithium	16/16	100	Nonparametric	2.4E-04	0.0022	0.0048	No
	Mercury	0/16	0	All NDs	--	--	--	--
	Molybdenum	0/16	0	All NDs	--	--	--	--
	Selenium	1/16	6	Nonparametric, <50% Detects	--	--	--	--
	Thallium	0/16	0	All NDs	--	--	--	--
	Radium-226 + Radium 228	15/16	94	Normal	0.040	0.18	0.24	Yes

Note:
Statistical Significance for Distributional tests are based on 95% level of confidence, or α=0.05.
'-- No Distributional Test performed since <50% Detects

Table C-8. Summary of Distributional Tests
Oak Grove - Ash Landfill

Constituent List	Constituent	# Detects/ # Samples	% Detects	Defined Distribution	Tests for Gamma		Can the Data be defined as Gamma?
					Shapiro-Wilks Test	Probability Plot Correlation	
Appendix III	Boron	22/22	100	Normal	0.95	0.78	Yes
	Calcium	19/19	100	Normal	0.66	0.81	Yes
	Chloride	38/38	100	Nonparametric	0.017	0.010	No
	Fluoride	33/38	87	Lognormal	2.6E-04	3.2E-04	No
	field pH	38/38	100	Normal	0.0016	0.0016	No
	Sulfate	19/19	100	Gamma	0.26	0.39	Yes
	Total Dissolved Solids	19/19	100	Normal	0.59	0.60	Yes
Appendix IV	Antimony	0/16	0	All NDs	--	--	--
	Arsenic	2/16	13	Nonparametric, <50% Detects	--	--	--
	Barium	16/16	100	Normal	0.71	0.44	Yes
	Beryllium	1/16	6	Nonparametric, <50% Detects	--	--	--
	Cadmium	0/16	0	All NDs	--	--	--
	Chromium	2/16	13	Nonparametric, <50% Detects	--	--	--
	Cobalt	1/16	6	Nonparametric, <50% Detects	--	--	--
	Fluoride	15/16	94	Normal	0.60	0.57	Yes
	Lead	5/16	31	Nonparametric, <50% Detects	--	--	--
	Lithium	16/16	100	Nonparametric	0.0084	0.020	No
	Mercury	0/16	0	All NDs	--	--	--
	Molybdenum	0/16	0	All NDs	--	--	--
	Selenium	1/16	6	Nonparametric, <50% Detects	--	--	--
	Thallium	0/16	0	All NDs	--	--	--
	Radium-226 + Radium 228	15/16	94	Normal	0.33	0.43	Yes

Note:
Statistical Significance for Distributional tests are based on 95% level of confidence, or α=0.05.
'-- No Distributional Test performed since <50% Detects

Table C-8. Summary of Distributional Tests
Oak Grove - Ash Landfill

Constituent List	Constituent	# Detects/ # Samples	% Detects	Defined Distribution	Tests for Lognormality			Can the Data be defined as Lognormal?
					Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation	
Appendix III	Boron	22/22	100	Normal	0.83	0.84	0.60	Yes
	Calcium	19/19	100	Normal	0.36	0.59	0.72	Yes
	Chloride	38/38	100	Nonparametric	0.045	0.0013	9.2E-04	No
	Fluoride	33/38	87	Lognormal	0.59	0.022	0.016	Yes
	field pH	38/38	100	Normal	0.049	0.0013	0.0013	No
	Sulfate	19/19	100	Gamma	0.64	0.29	0.40	Yes
	Total Dissolved Solids	19/19	100	Normal	0.54	0.25	0.23	Yes
Appendix IV	Antimony	0/16	0	All NDs	--	--	--	--
	Arsenic	2/16	13	Nonparametric, <50% Detects	--	--	--	--
	Barium	16/16	100	Normal	0.44	0.84	0.54	Yes
	Beryllium	1/16	6	Nonparametric, <50% Detects	--	--	--	--
	Cadmium	0/16	0	All NDs	--	--	--	--
	Chromium	2/16	13	Nonparametric, <50% Detects	--	--	--	--
	Cobalt	1/16	6	Nonparametric, <50% Detects	--	--	--	--
	Fluoride	15/16	94	Normal	0.59	0.84	0.82	Yes
	Lead	5/16	31	Nonparametric, <50% Detects	--	--	--	--
	Lithium	16/16	100	Nonparametric	0.0054	0.011	0.028	No
	Mercury	0/16	0	All NDs	--	--	--	--
	Molybdenum	0/16	0	All NDs	--	--	--	--
	Selenium	1/16	6	Nonparametric, <50% Detects	--	--	--	--
	Thallium	0/16	0	All NDs	--	--	--	--
	Radium-226 + Radium 228	15/16	94	Normal	0.19	0.28	0.37	Yes

Note:
Statistical Significance for Distributional tests are based on 95% level of confidence, or α=0.05.
'-- No Distributional Test performed since <50% Detects

Table C-9. Summary Statistics with Baseline Values[1] (UPLs and GWPS)
Oak Grove - Ash Landfill

Constituent List	Constituent	# Detects/ # Samples	% Detects	Minimum Detected Result	Maximum Detected Result	Baseline Value (UPL/ GWPS)	MCL or RSL[2]	Reporting Limit	UPL 1-of-2	Defined Distribution	single test error rate for annual SWFPR of 10%	Power Rate for UPL 1-of-2
Appendix III	Boron	22/22	100	0.0567	0.166	0.16	--	0.03	0.16	Normal	0.0038	GOOD
	Calcium	19/19	100	11.5	82.4	81	--	0.3	81	Normal	0.0038	GOOD
	Chloride	38/38	100	2.87	444	440	--	1	440	Nonparametric	0.015	GOOD
	Fluoride	33/38	87	0.102	0.977	0.59	4	0.4	0.59	Lognormal	0.0038	GOOD
	field pH	38/38	100	6.02	6.92	6.3 - 7.0	--		6.3 - 7.0	Normal	0.0019	LOW, GOOD
	Sulfate	19/19	100	6.14	131	190	--	1	190	Gamma	0.0038	GOOD
	Total Dissolved Solids	19/19	100	106	872	900	--	10	900	Normal	0.0038	GOOD
Appendix IV	Antimony	0/16	0	ND	ND	0.006	0.006	0.0025	0.0025	All NDs	--	--
	Arsenic	2/16	13	0.00218	0.00364	0.01	0.01	0.005	0.0036	Nonparametric, <50% Detects	0.0081	GOOD
	Barium	16/16	100	0.0415	0.306	2	2	0.01	0.29	Normal	0.0020	GOOD
	Beryllium	1/16	6	0.000436	0.000436	0.004	0.004	0.001	0.00044	Nonparametric, <50% Detects	0.0081	GOOD
	Cadmium	0/16	0	ND	ND	0.005	0.005	0.001	0.001	All NDs	--	--
	Chromium	2/16	13	0.0022	0.00842	0.1	0.1	0.005	0.0084	Nonparametric, <50% Detects	0.0081	GOOD
	Cobalt	1/16	6	0.00314	0.00314	0.006	0.006	0.005	0.0031	Nonparametric, <50% Detects	0.0081	GOOD
	Fluoride	15/16	94	0.102	0.293	4	4	0.4	0.31	Normal	0.0020	GOOD
	Lead	5/16	31	0.000403	0.00339	0.015	0.015	0.001	0.0034	Nonparametric, <50% Detects	0.0081	GOOD
	Lithium	16/16	100	0.00591	0.1	0.10	0.04	0.01	0.10	Nonparametric	0.0081	GOOD
	Mercury	0/16	0	ND	ND	0.002	0.002	0.0002	0.0002	All NDs	--	--
	Molybdenum	0/16	0	ND	ND	0.1	0.1	0.005	0.005	All NDs	--	--
	Selenium	1/16	6	0.00232	0.00232	0.05	0.05	0.005	0.0023	Nonparametric, <50% Detects	0.0081	GOOD
	Thallium	0/16	0	ND	ND	0.002	0.002	0.0015	0.0015	All NDs	--	--
	Radium-226 + Radium 228	15/16	94	1.1	4.56	5.1	5	0	5.1	Normal	0.0020	GOOD

Notes:
1. All concentrations in mg/L. pH in standard units.
2. RSL provided for Cobalt, Lithium, Lead, and Molybdenum

Figures

Figure C−1. Appendix III − Boron

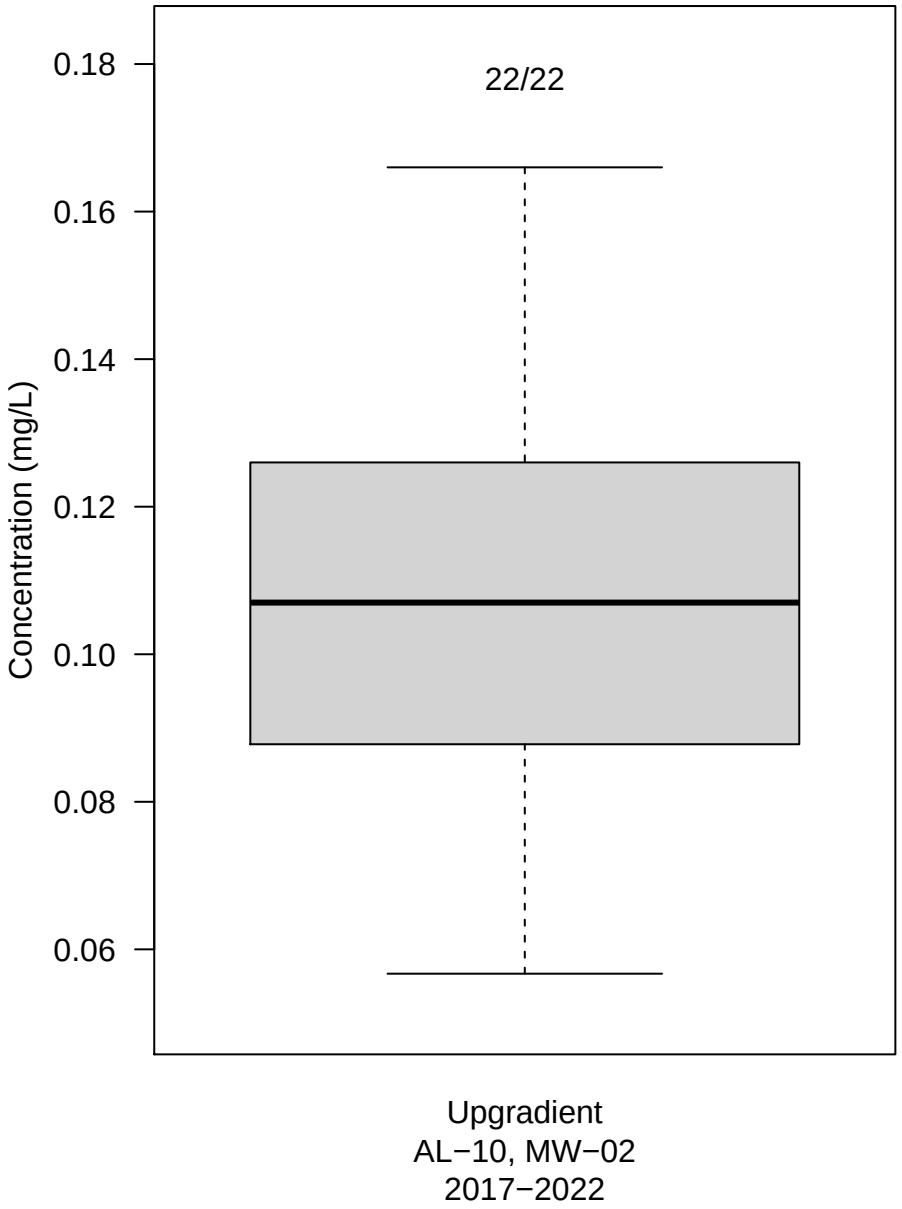


Figure C−2. Appendix III − Calcium

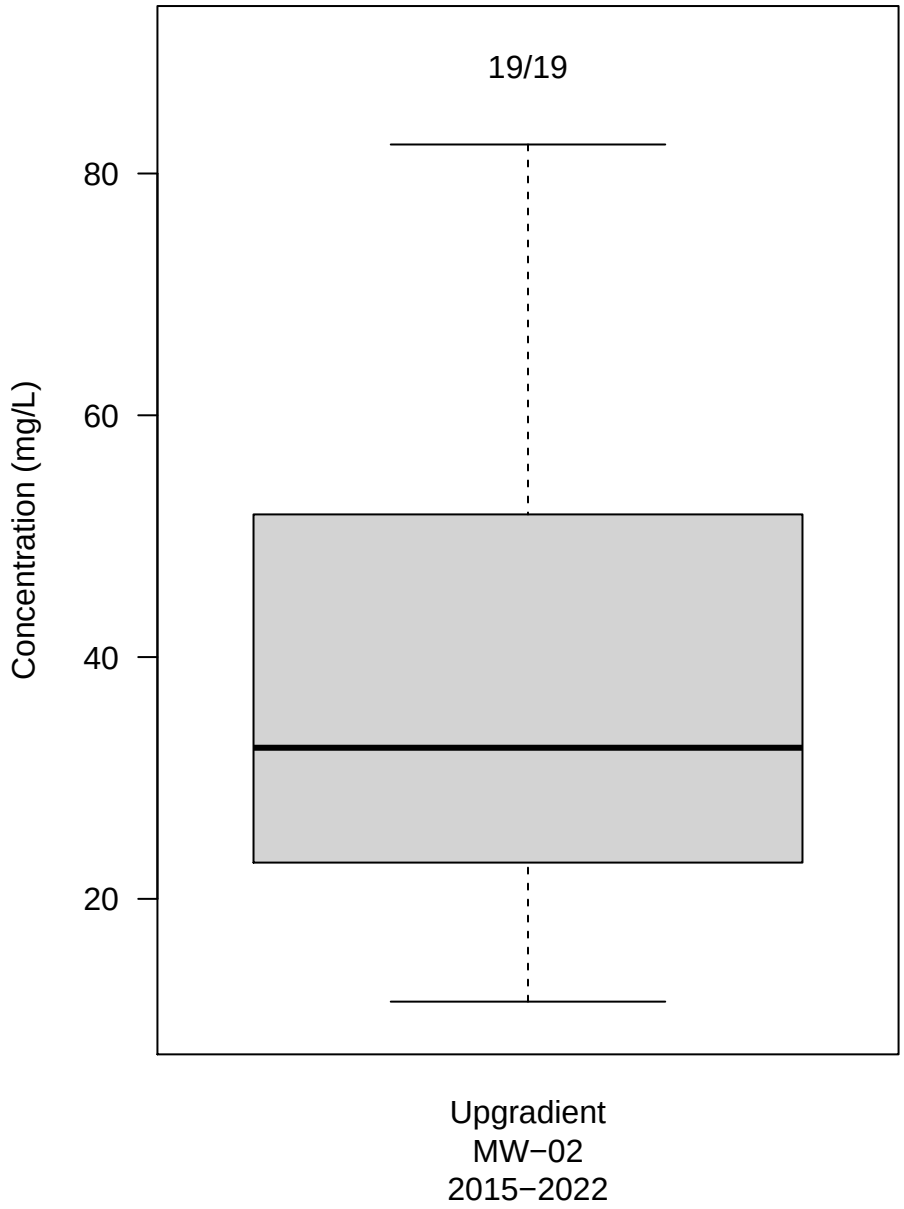


Figure C−3. Appendix III − Chloride

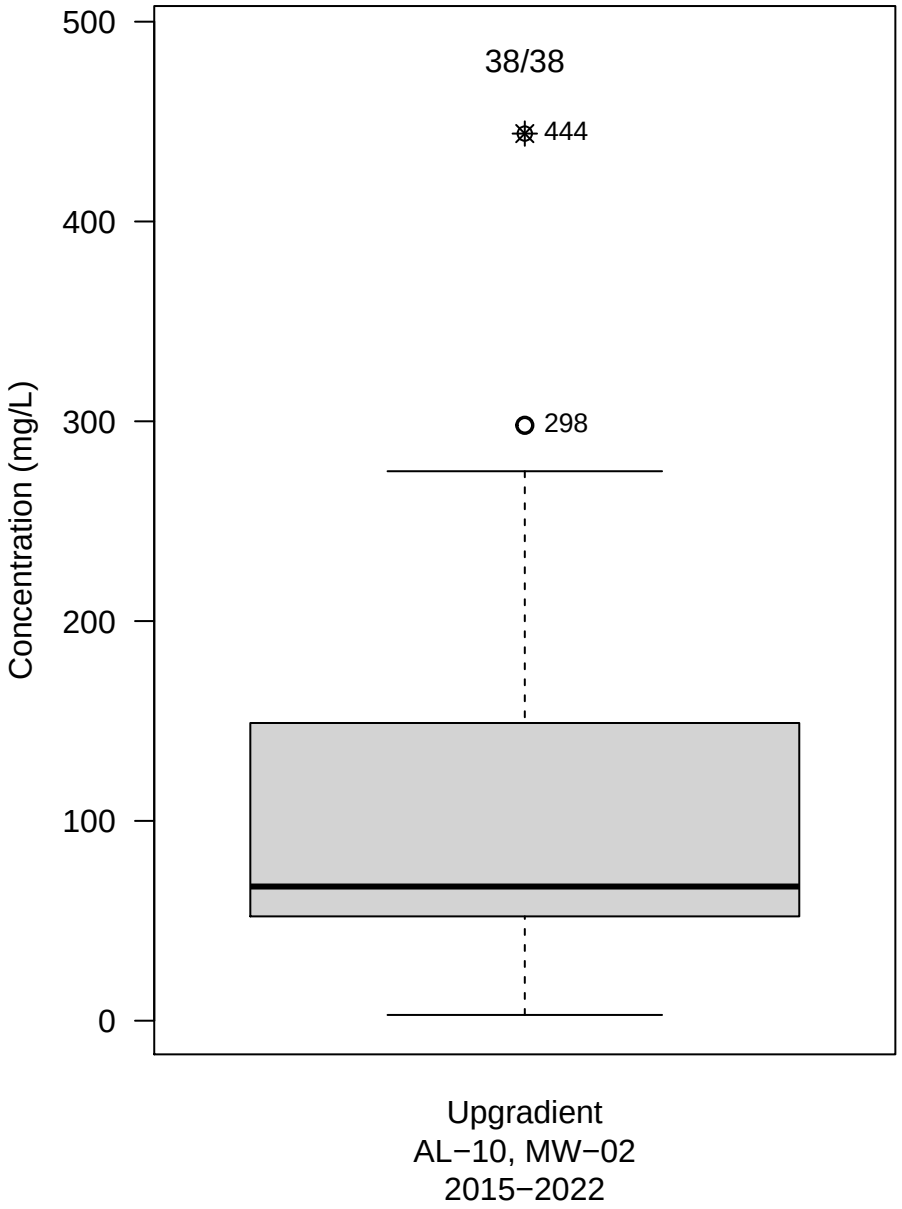


Figure C−4. Appendix III − Fluoride

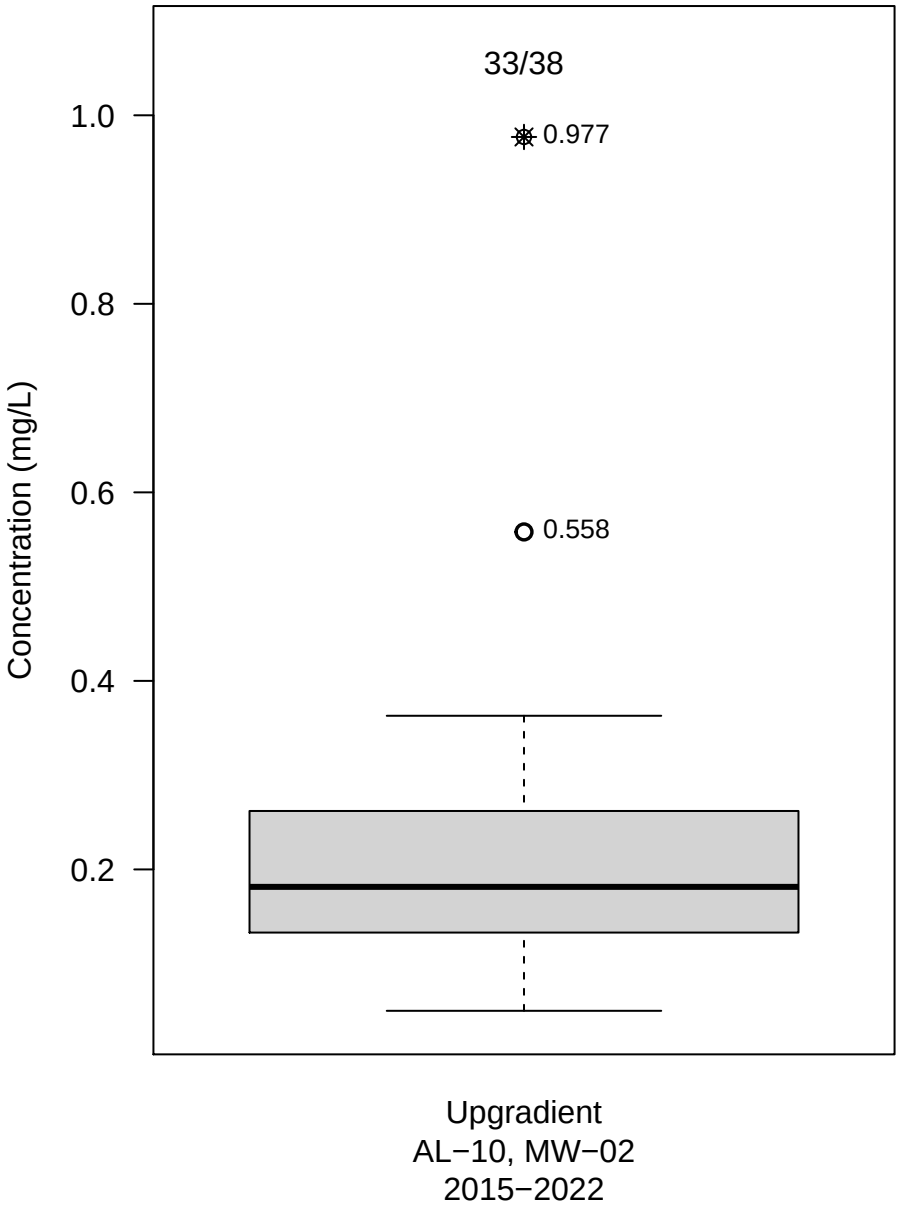


Figure C−5. Appendix III − field pH

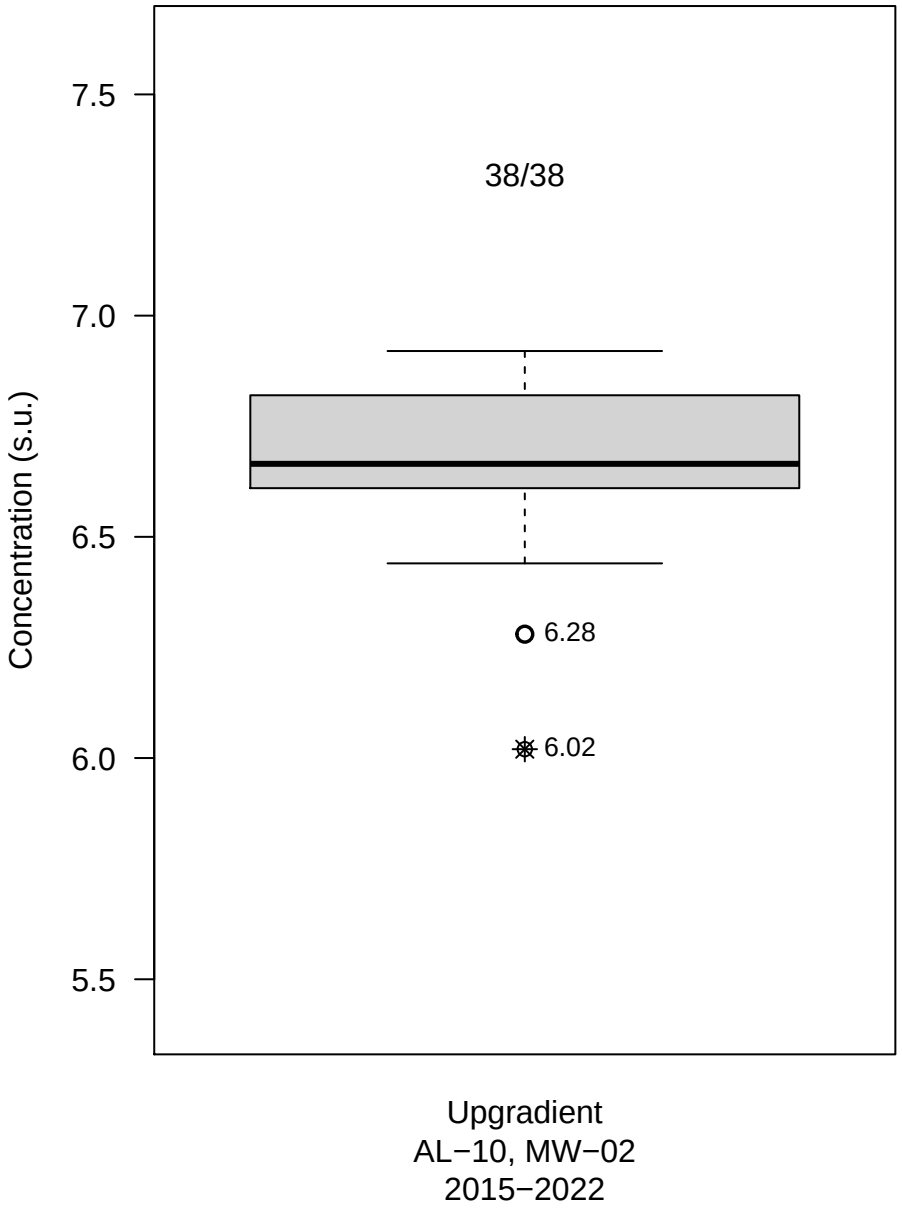


Figure C−6. Appendix III − Sulfate

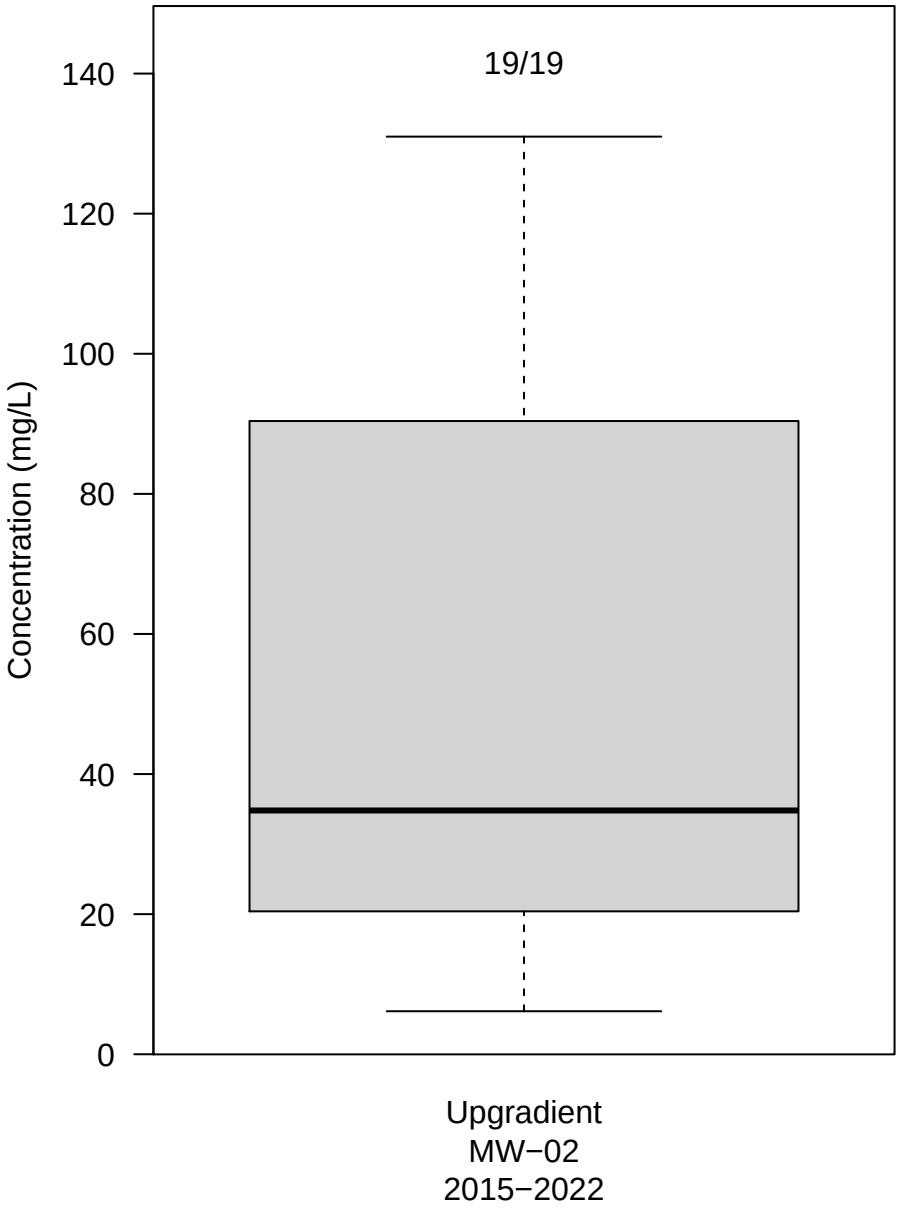


Figure C−7. Appendix III − Total Dissolved Solids

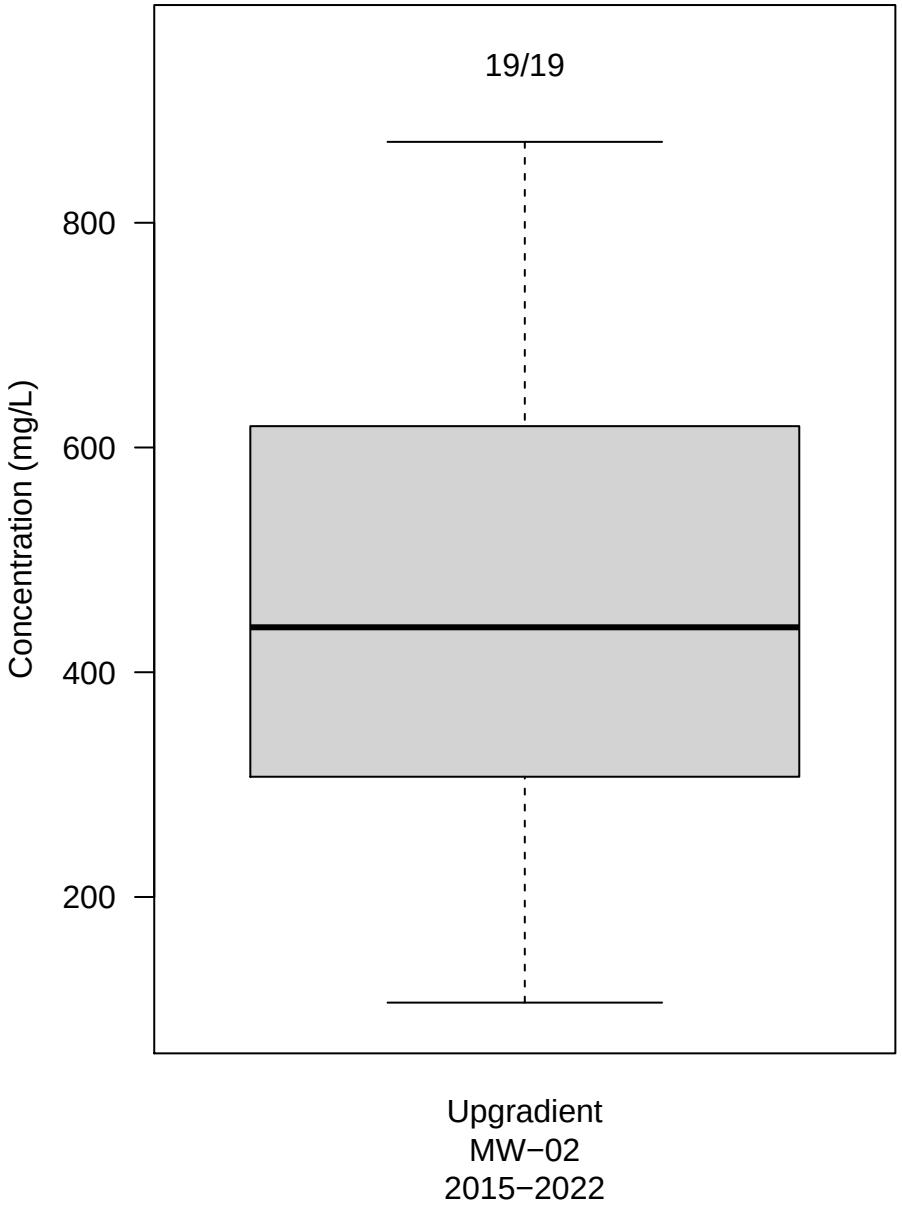


Figure C−8. Appendix IV − Arsenic

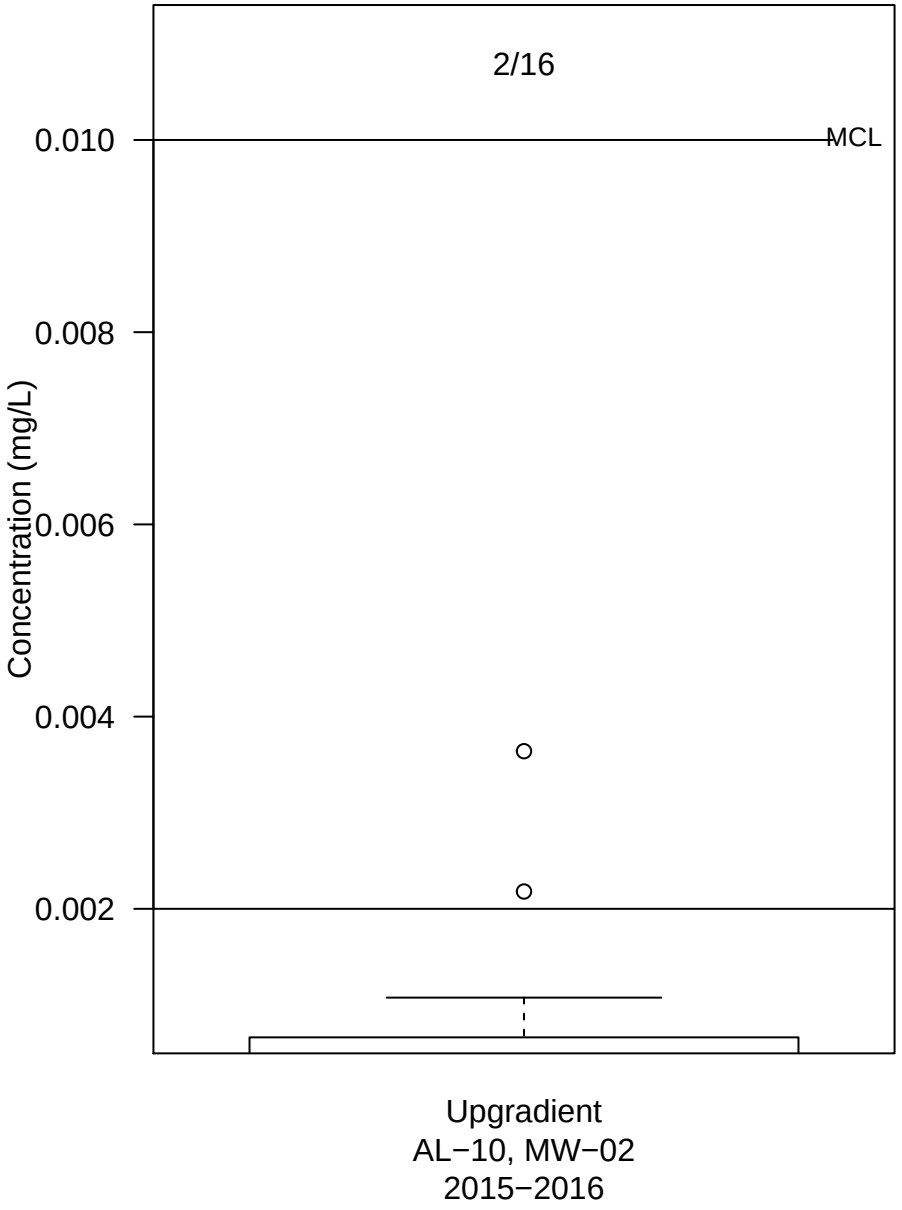


Figure C−9. Appendix IV − Barium

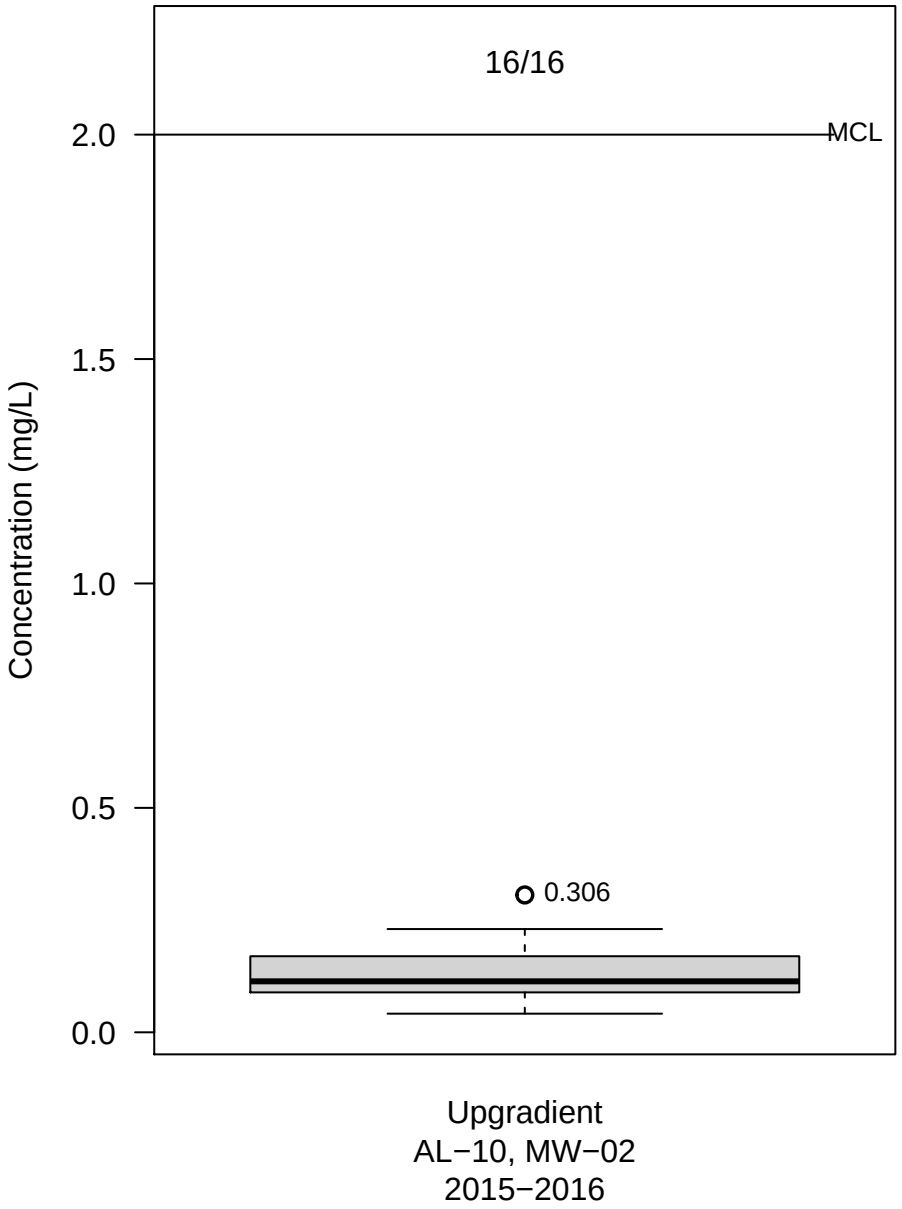


Figure C−10. Appendix IV − Beryllium

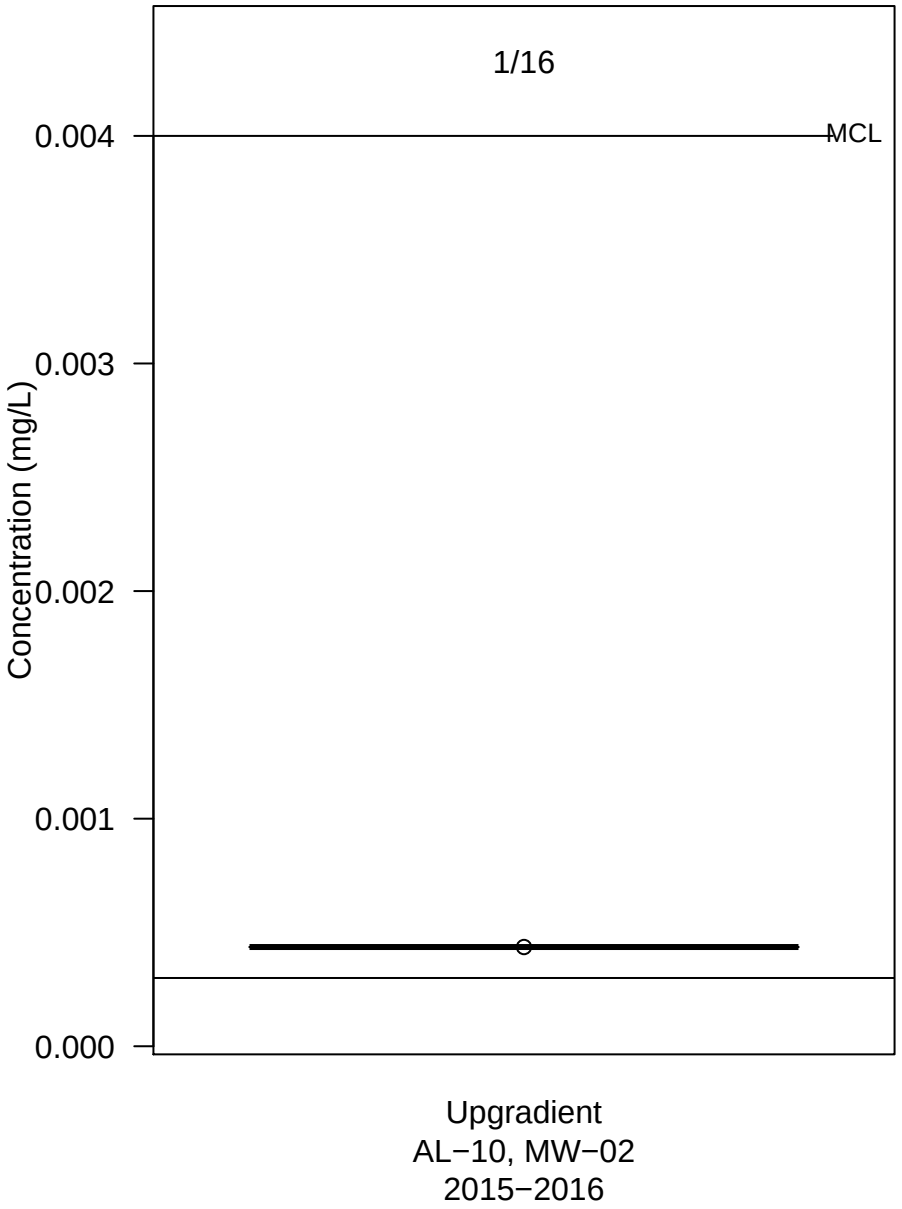


Figure C−11. Appendix IV − Chromium

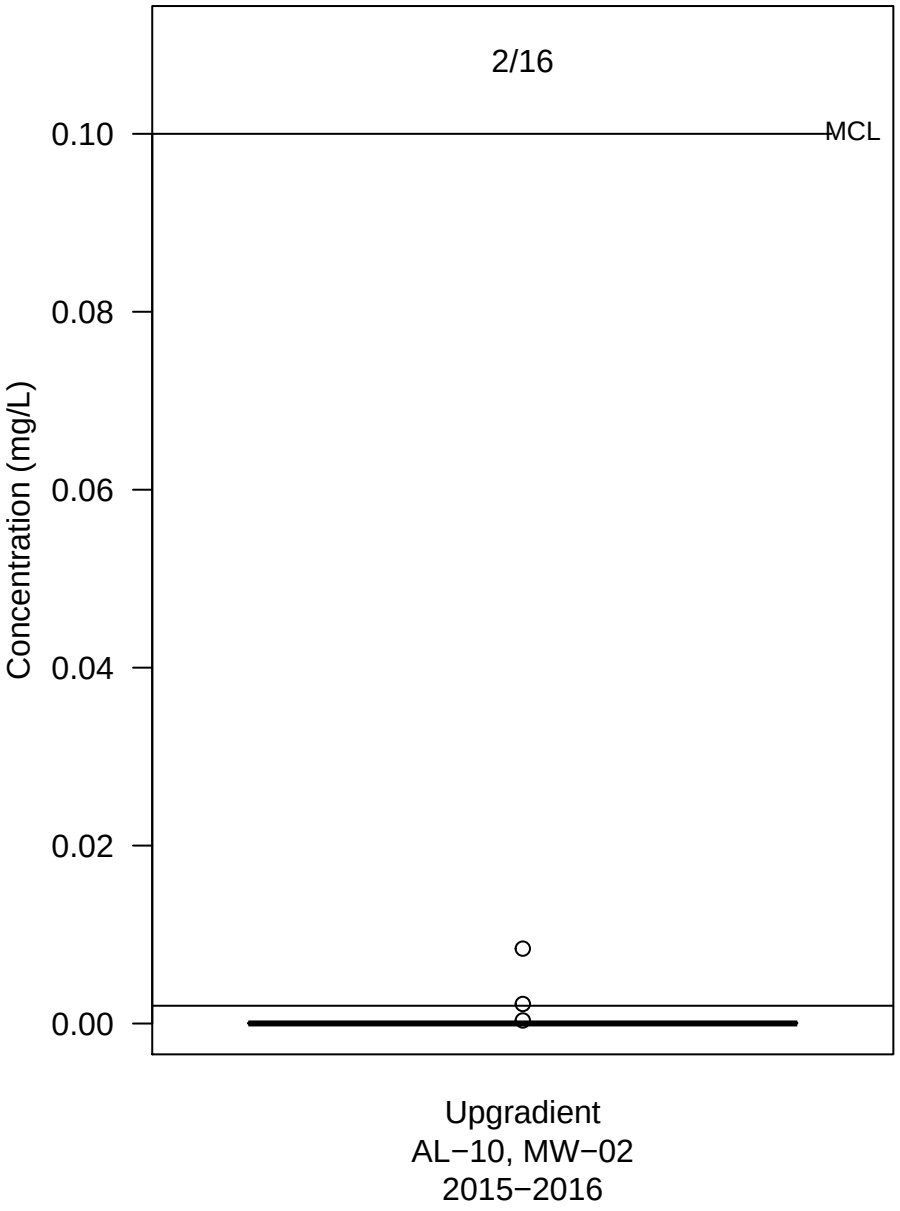


Figure C−12. Appendix IV − Cobalt

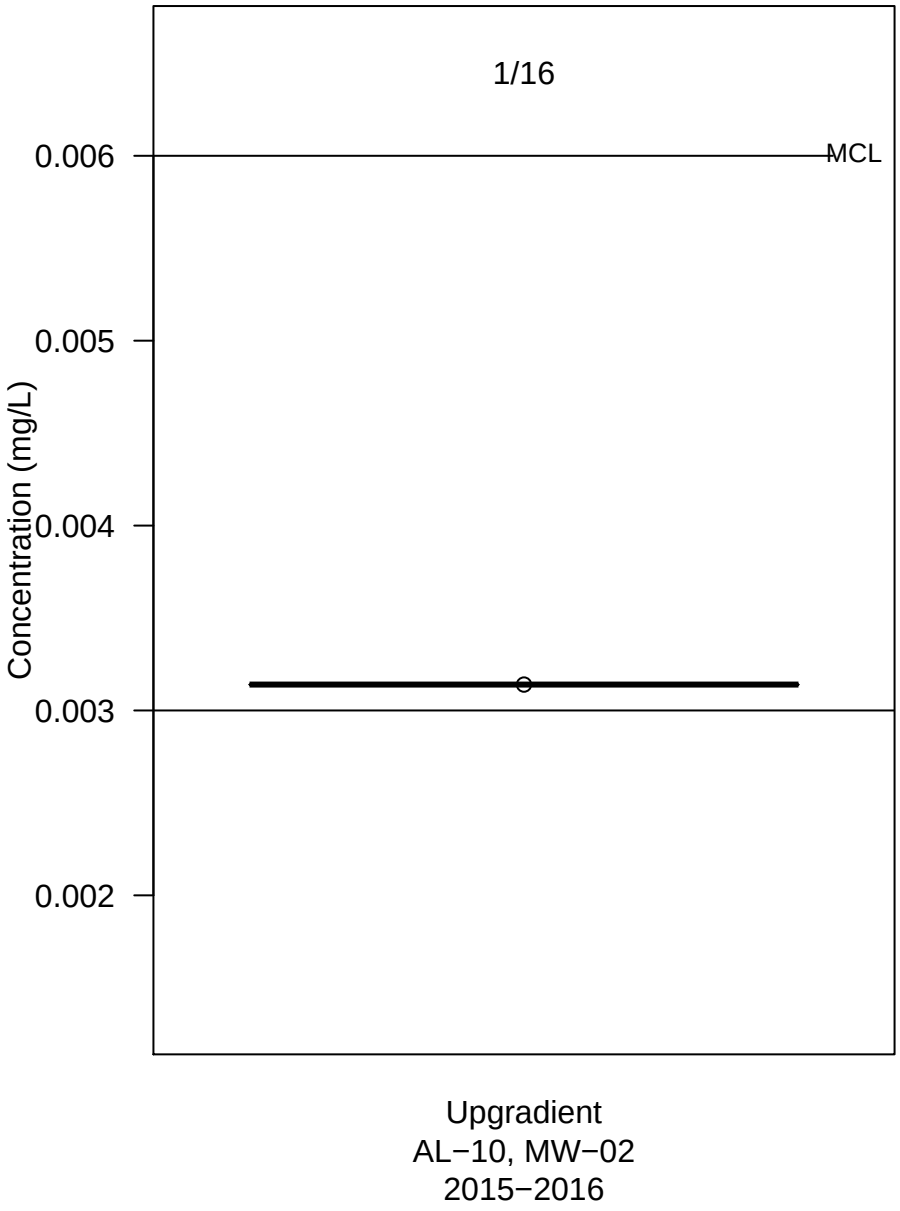


Figure C−13. Appendix IV − Fluoride

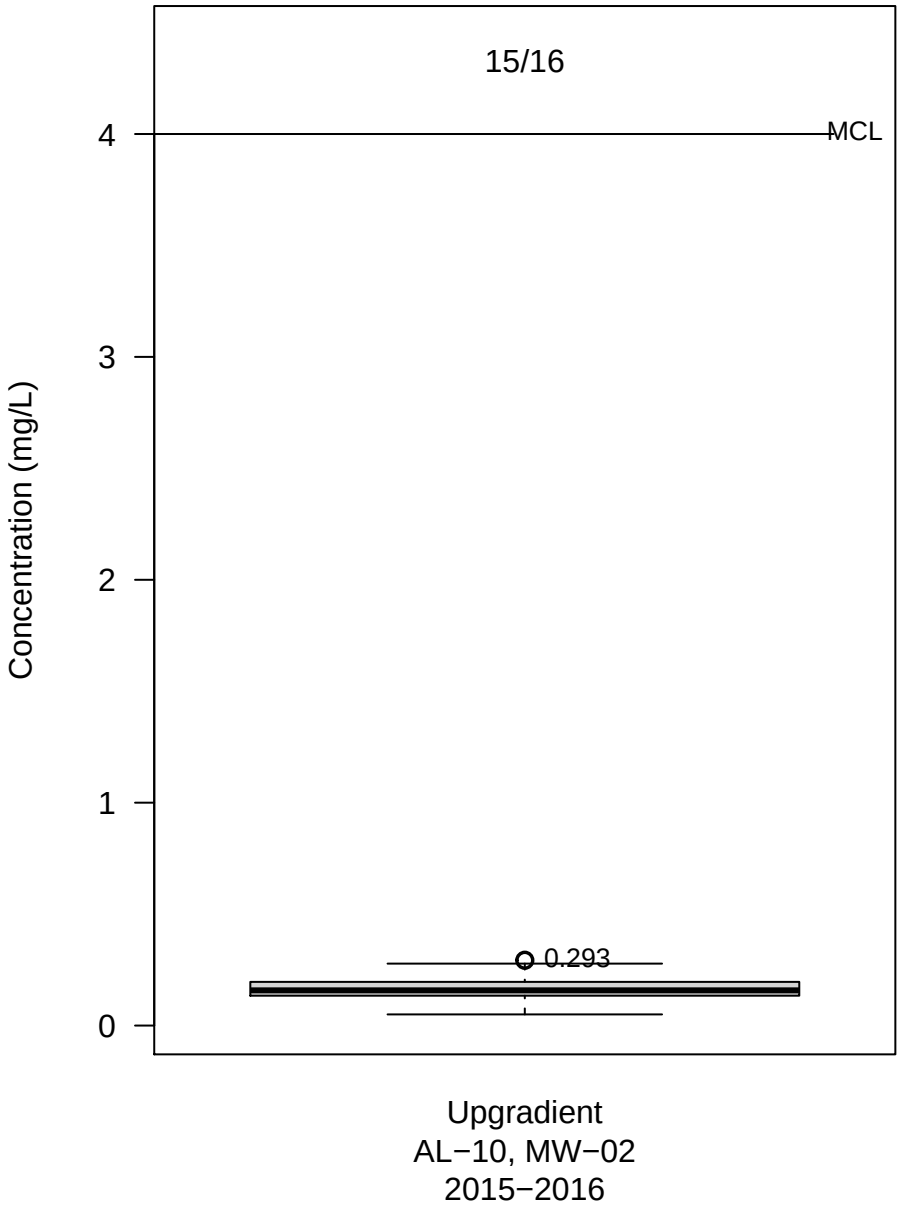


Figure C−14. Appendix IV − Lead

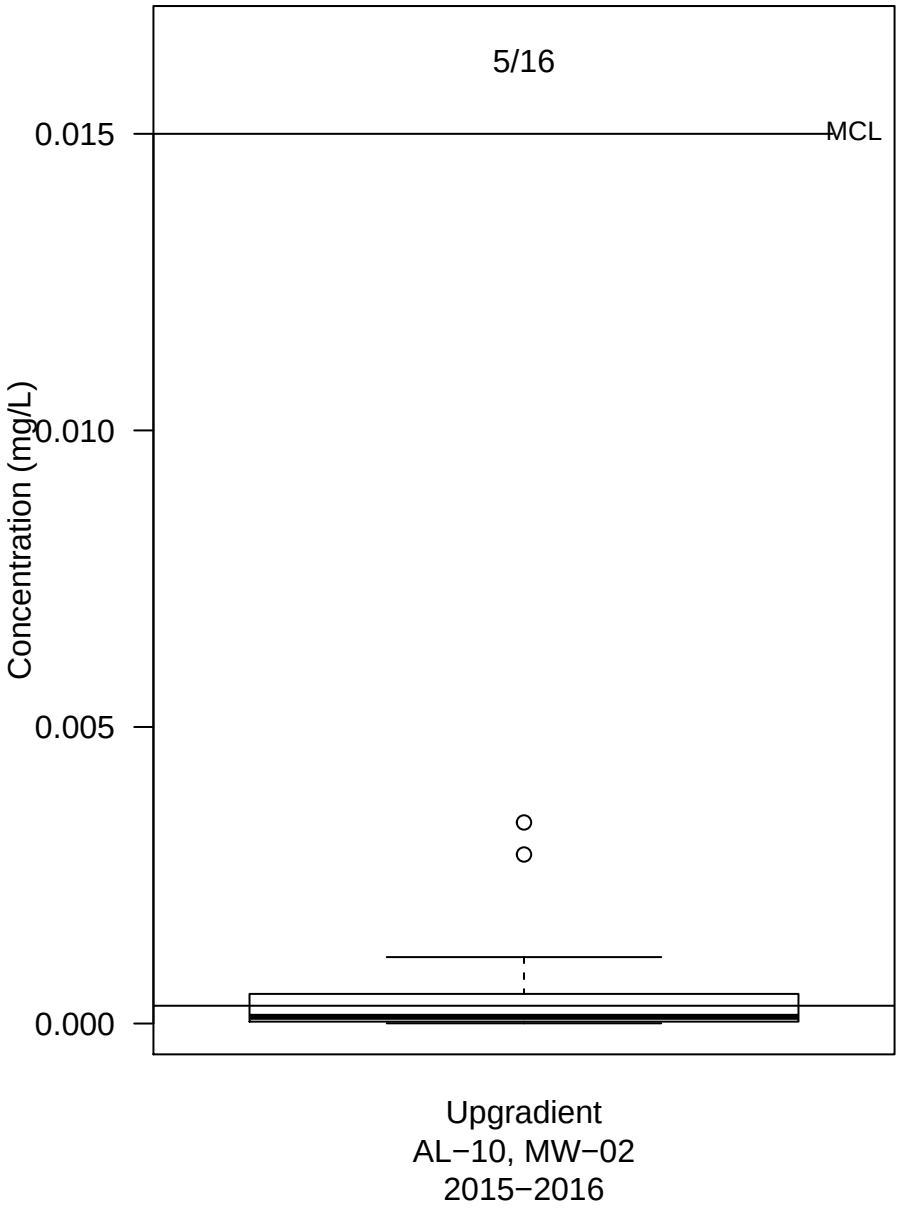


Figure C−15. Appendix IV − Lithium

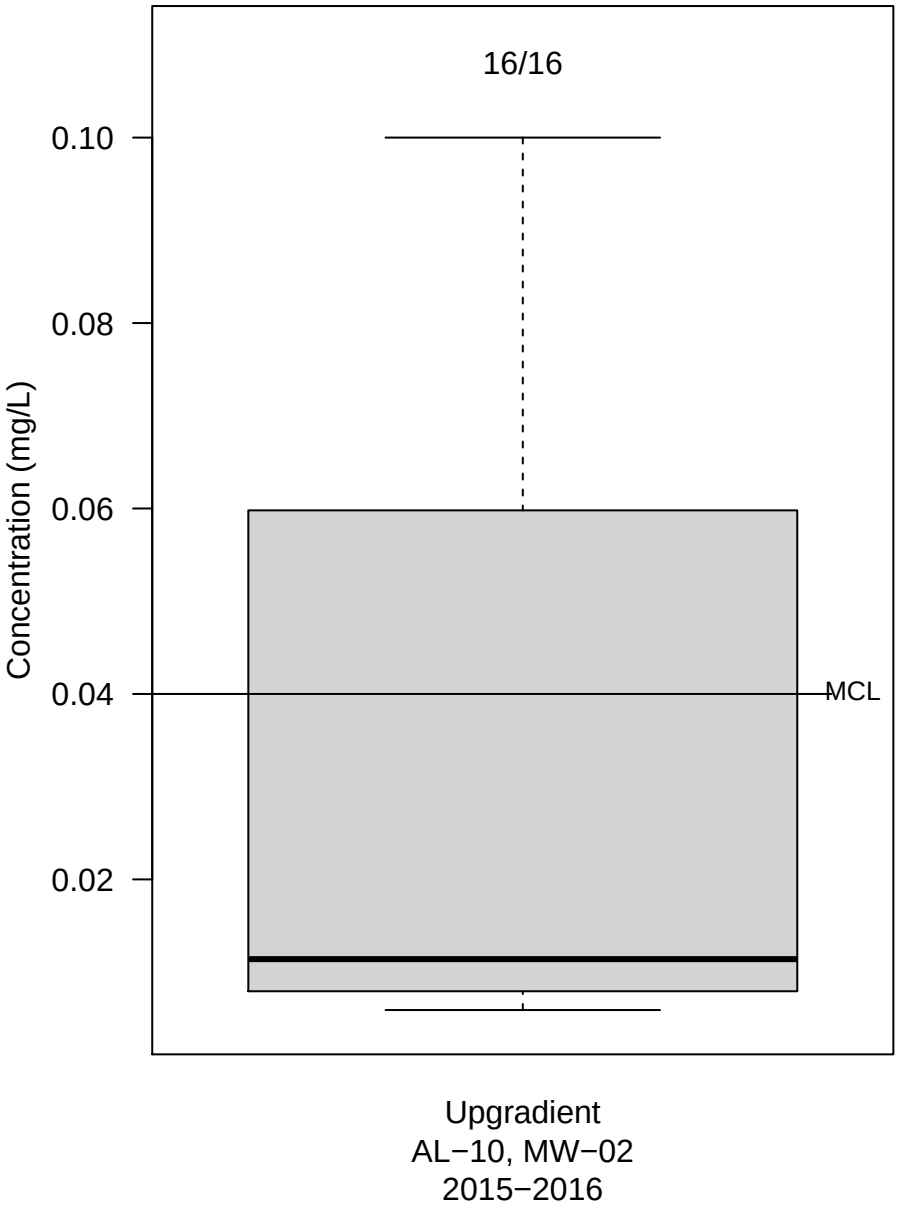


Figure C−16. Appendix IV − Selenium

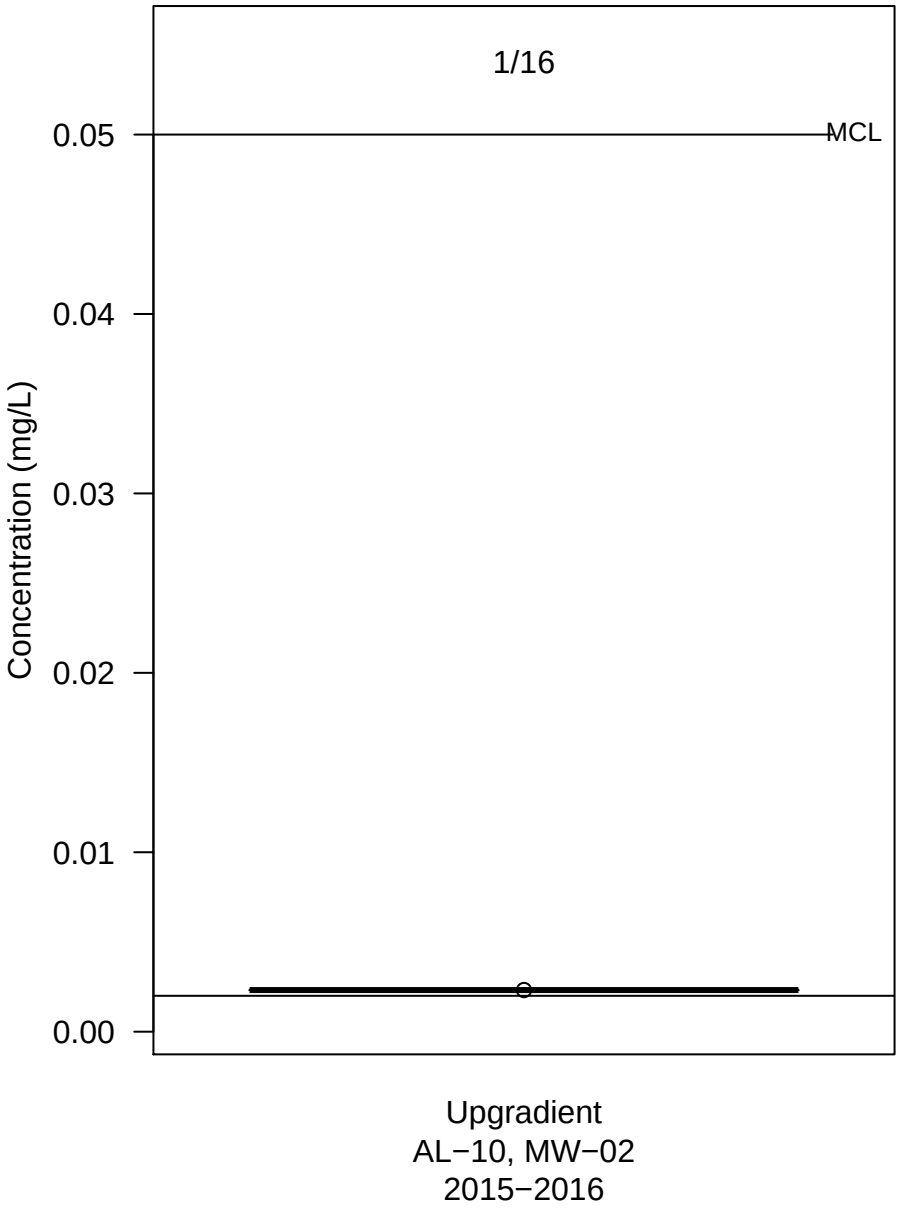
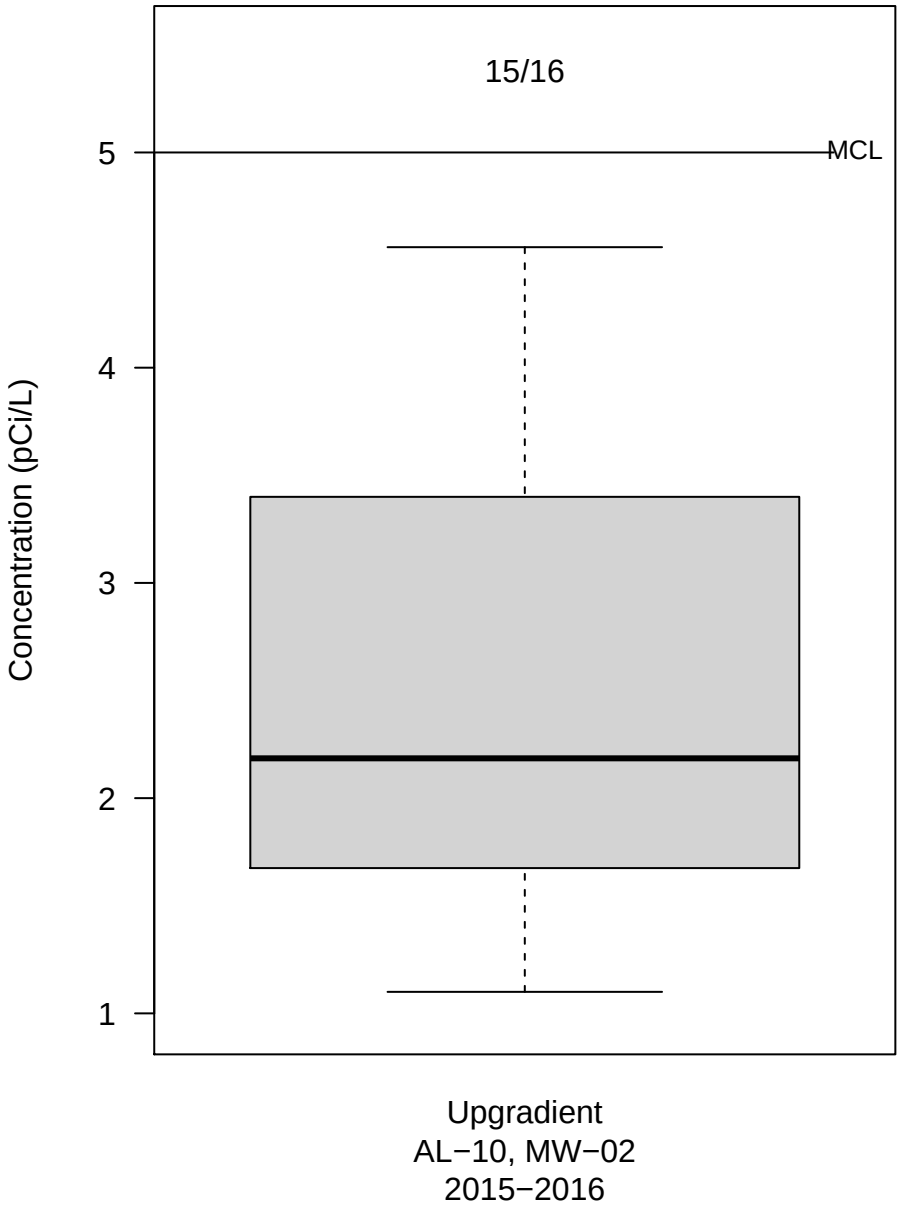
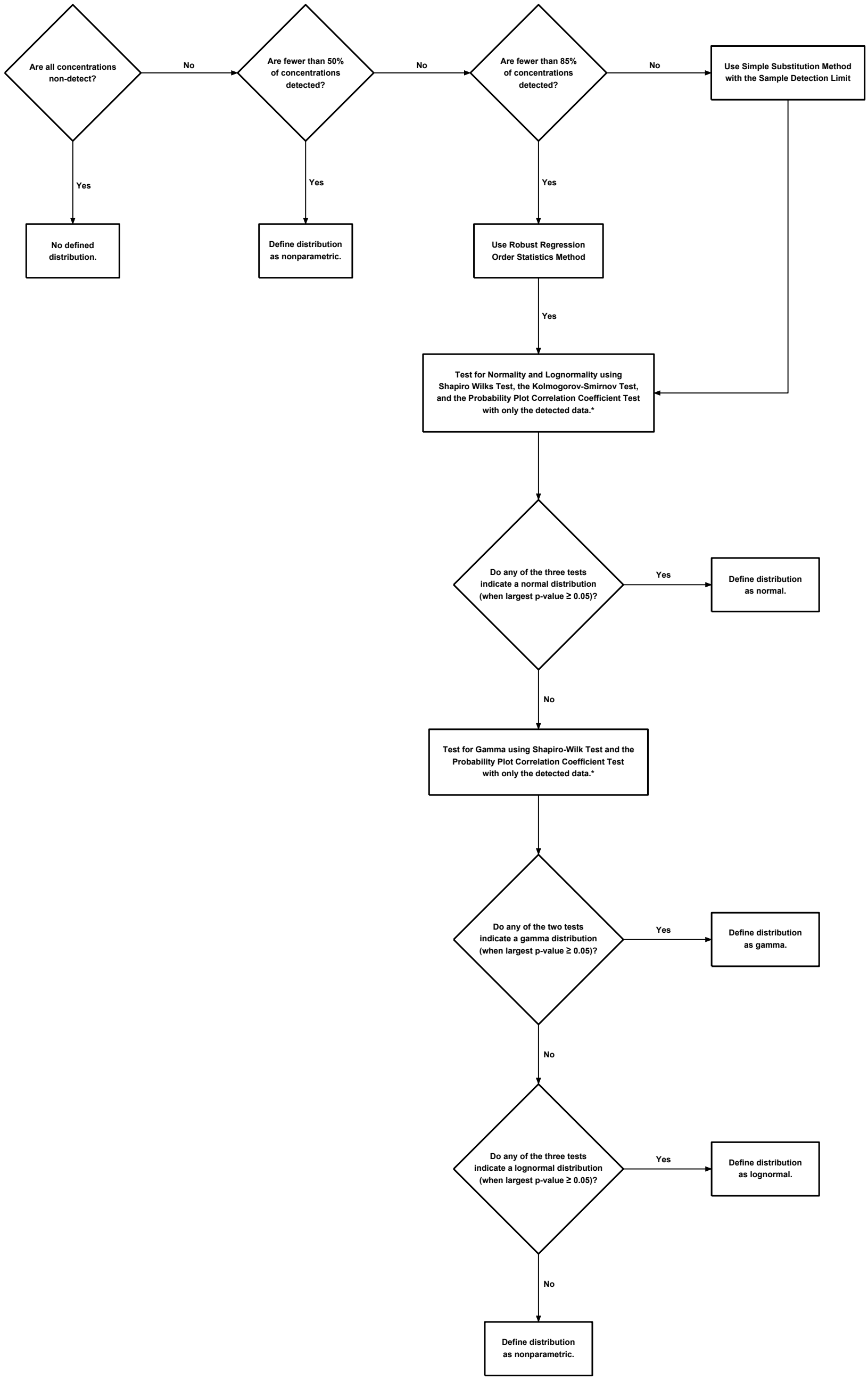


Figure C−17. Appendix IV − Radium−226 + Radium−228





Note:

* - Distributional tests can not be performed for the following cases:

1. For a data group with fewer than five detected samples, the Kolmogorov-Smirnov Test and the Probability Plot Correlation Coefficient Test can not be performed using only the detected concentrations.
2. For a data group with fewer than four detected samples, the Shapiro-Wilks Test can not be performed using only the detected concentrations.

Figure C-18

PROCESS FOR DEFINING A DISTRIBUTION FOR A DATA SET

PROJECT: 5164E	BY: AJD	REVISIONS
DATE: jAN. 2019	CHECKED: PJB	

Attachment 4.2

FGD Ponds
Background Groundwater Monitoring and Statistical Analysis Summary Report

Bullock, Bennett & Associates, LLC

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165 N. Lampasas St. • Bertram, Texas 78605 • (512) 355-9198

COAL COMBUSTION RESIDUAL RULE BACKGROUND GROUNDWATER MONITORING AND STATISTICAL ANALYSIS SUMMARY REPORT

FGD PONDS
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

September 15, 2023

Prepared For:

Oak Grove Management Company LLC

Prepared By:

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Texas Engineering Firm Registration No. F-8542
Texas Geoscience Firm Registration No. 50127

TABLE OF CONTENTS

LIST OF TABLES iii
LIST OF FIGURES iii
LIST OF APPENDICES iii
1.0 INTRODUCTION 1
1.1 Description of FGD Ponds 2
1.2 FGD Pond Area Groundwater Monitoring System 2
2.0 BACKGROUND GROUNDWATER MONITORING PROGRAM 4
2.1 Groundwater Sampling Procedures 4
2.2 Analytes and Analytical Procedures 4
2.3 Background Groundwater Monitoring Sampling Results 5
2.4 Establishing Background Assessment Levels 5
3.0 DETECTION AND ASSESSMENT MONITORING DATA EVALUATION PROCEDURES 6
3.1 Detection Monitoring Data Evaluation 7
3.2 Assessment Monitoring Data Evaluation 8
4.0 REFERENCES 11
SIGNATURE PAGE 12

LIST OF TABLES

Table No.	Title
1	Appendix III Groundwater Background Upper Prediction Limits
2	Appendix IV Groundwater Protection Standards

LIST OF FIGURES

Figure No.	Title
1	Site Location Map
2	Ash Landfill 1 Site Plan
3	FGD Ponds Site Plan

LIST OF APPENDICES

Appendix	Title
A	Groundwater Potentiometric Surface Maps
B	Laboratory Analytical Reports
C	Statistical Approach to Establishing Baseline Concentrations

1.0 INTRODUCTION

Oak Grove Management Company LLC 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 lignite-fired units with a combined operating capacity of 1,796 megawatts. Coal Combustion Residuals (CCR) including fly ash, bottom ash, and gypsum are generated as part of OGSES unit operations. CCRs generated at the OGSES are managed in the FGD Pond Area (FGD-A, FGD-B and FGD-C) and Ash Landfill 1. This report discusses the Ash Landfill 1 (the Site).

The federal CCR Rule (Title 40 Code of Federal Regulations (C.F.R.) Section 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) has been promulgated by the United States Environmental Protection Agency (USEPA) to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. The final CCR Rule was published in the Federal Register on April 17, 2015. The effective date of the CCR Rule is October 19, 2015. TCEQ adopted portions of the Federal CCR Rule at Title 30 Texas Administrative Code (T.A.C.) Chapter 352 (Texas CCR Rule). The USEPA published its final approval of the Texas CCR Rule on June 28, 2021 and the Texas CCR Rule became effective on July 28, 2021. It adopts and incorporates by reference the Federal CCR Program requirements for groundwater monitoring at 30 T.A.C. Sections 352.901 through 352.951.

The CCR Rule establishes minimum criteria for existing and new CCR landfills, existing and new CCR surface impoundments, and lateral expansions to landfills/impoundments. 40 C.F.R. § 257.93(d) of the CCR Rule requires that the owner or operator of the CCR unit must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the constituents required in the particular groundwater monitoring program that applies to the CCR unit as determined under 40 C.F.R. §257.94(a) (*Detection Monitoring Program)* and 40 C.F.R. § 257.95(a) (*Assessment Monitoring Program)*. 40 C.F.R. § 257.94(b) of the CCR Rule requires that a minimum of eight independent groundwater samples from each background and downgradient well associated with a CCR unit be collected and analyzed for the constituents listed in Appendix III and IV to Part 257 no later than October 17, 2017. This report presents a summary of the sampling and analytical activities performed to establish background groundwater quality at the Site.

1.1 Description of FGD Ponds

The FGD Ponds (FGD-A, FGD-B, and FGD-C) are located approximately 2,500 feet northwest of the OGSES power generation units (Figure 1). FGD-A construction began in the mid-1980s, but pond construction stopped when construction of the OGSES was suspended (Golder 2016). FGD-A construction resumed in 2007 and was completed in 2008. FGD-A covers an area of approximately 9.4 acres and stores CCR and other wastes generated from the OGSES prior to recycling or disposal in the OGSES Ash Landfill 1. FGD-A was formerly considered a lined CCR surface impoundment in accordance with 40 C.F.R. § 257.71(a)(1)(i) of the CCR Rule; however, the pond was reclassified as an unlined impoundment based on the August 2018 DC Circuit Court Ruling. FGD-A was retrofitted in accordance with 40 C.F.R. § 257.102(k) in 2022 to meet the requirements of the CCR Rule.

Construction began on FGD-B in the mid-1980s during the initial OGSES construction phase for use as a storm water retention pond. Pond construction was halted in the 1980s when construction of the OGSES was suspended. The former retention pond was reconstructed in 2012 as FGD-B for use in management of CCR and other wastes (Golder 2016). FGD-B covers an area of approximately 11.3 acres in size and receives CCR and other wastes generated from the OGSES similar to FGD-A. The composite liner system in FGD-B complies with the requirements of 40 C.F.R. § 257.71(a)(1)(ii) of the CCR Rule and the pond is considered a lined surface impoundment under the CCR Rule.

FGD-C Pond construction commenced in July 2015 and was completed in June 2016 (Golder 2016). FGD-C Pond is approximately 17 acres in size and receives CCR and other wastes generated from the OGSES, similar to FGD-A and FGD-B. The composite liner system in FGD-C complies with the requirements of 40 C.F.R. §257.71(a)(1)(ii) of the CCR Rule and the pond is considered a lined surface impoundment under the CCR Rule.

1.2 FGD Pond Area Groundwater Monitoring System

The CCR groundwater monitoring system at the FGD Pond Area consists of the following nine monitoring wells:

Background Wells	Downgradient Wells
FGD-8 FGD-11	FGD-1 FGD-2 FGD-3 FGD-4 FGD-5 FGD-6 FGD-12

A detailed Site Plan of the FGD Pond Area showing the location of the CCR monitoring wells is provided as Figure 1. The FGD Pond Area CCR groundwater monitoring system was certified by a professional engineer in accordance with 40 C.F.R. § 257.91 of the CCR Rule (PBW, 2017).

2.0 BACKGROUND GROUNDWATER MONITORING PROGRAM

This section describes groundwater sampling and analysis procedures used for the background monitoring events.

2.1 Groundwater Sampling Procedures

Groundwater sampling during the background period was performed in accordance with the Site Groundwater Monitoring Plan (WSP Golder, 2022a). Water levels were measured in each well to the nearest 0.01-foot prior to purging or sampling the wells. The wells were purged using low-flow methods until field water quality parameters stabilized, after which a groundwater sample was collected in a laboratory-supplied container. After the samples were collected, the sample containers were placed in a cooler or similar container, preserved with ice, and delivered to the laboratory for analysis.

2.2 Analytes and Analytical Procedures

Groundwater samples collected during the background period were analyzed for the constituents listed in Appendix III and IV to Part 257, including:

Appendix III Constituents	Appendix IV Constituents
Boron	Arsenic
Calcium	Barium
Chloride	Beryllium
Fluoride	Cadmium
pH	Chromium
Sulfate	Cobalt
Total Dissolved Solids (TDS)	Fluoride
	Lead
	Lithium
	Mercury
	Molybdenum
	Selenium
	Thallium
	Radium 226 and 228 (combined)

The laboratory methods used to analyze the background samples were as follows:

Appendix III Constituents

- Boron and calcium by USEPA Method SW6020;
- Chloride, fluoride, and sulfate by USEPA Method E300;
- pH by Standard Method M4500-H + B (field measurement); and

- TDS by Standard Method M2540.

Appendix IV Constituents

- Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, lithium, molybdenum, selenium, and thallium by USEPA Method SW6020;
- Fluoride USEPA Method E300;
- Mercury by USEPA Method SW7470; and
- Radium 226 and 228 by USEPA Methods 904.0/SW9320 Modified and 903.1 Modified.

All metals analyses were reported as "total recoverable metals" in accordance with 40 C.F.R. § 257.93(1) of the CCR Rule. Samples were not filtered prior to analysis.

2.3 Background Groundwater Monitoring Sampling Results

Eight background groundwater monitoring events were performed using the monitoring well system from November 2015 through December 2016. The laboratory analytical reports for the background samples are presented in Appendix B and the background sample data are summarized in Appendix C, Table C-1 (Appendix III) and Table C-2 (Appendix IV).

2.4 Establishing Background Assessment Levels

The following statistical evaluation approach was selected to develop background groundwater quality assessment levels for the Site:

- Use of interwell data evaluations, which compare new sample data to data from upgradient or background monitoring wells.

- Use of upper prediction limits (UPLs) to develop site-specific background concentrations for all Appendix III and Appendix IV constituents. 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 evaluations under the CCR Rule.

Documentation on the statistical procedures used to establish background UPLs is presented in Appendix C.

3.0 DETECTION AND ASSESSMENT MONITORING DATA EVALUATION PROCEDURES

Statistical analysis of groundwater monitoring data is required as part of detection monitoring and assessment monitoring under 40 C.F.R. § 257.93 of the CCR Rule. 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 40 C.F.R. § 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 under the CCR Rule:

- Use of interwell data evaluations, which compare new sample data to data from upgradient or background monitoring wells.
- Use of UPLs to develop site-specific background concentrations for all Appendix III and Appendix IV constituents. 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 evaluations under the CCR Rule.
- After every detection monitoring event, Appendix III constituent concentrations from each well are compared to background UPLs to ascertain if a statistically significant

increase above background exists. Background UPLs are based on a 1-of-2 resampling approach, meaning that if one or more constituent concentrations in a compliance well are above their respective background concentration, a resample can be collected to validate or invalidate the background concentration exceedance.

- If in assessment monitoring, the 95% lower confidence limit of the mean (LCL) is calculated after each assessment monitoring event for each Appendix IV constituent. The data set used to calculate LCLs is based on current and historical constituent concentrations. A statistically significant increase over the Groundwater Protection Standard (GWPS) has occurred at a CCR unit when the LCL for at least one assessment monitoring constituent at a well is greater than the appropriate GWPS. Development of the GWPSs is discussed in Section 3.2 and statistical methods used to develop LCLs are discussed in Appendix C.

The proposed statistical evaluation procedures conform with the CCR Rule requirements, as well as the Statistical Analysis Plan for the Site (WSP Golder, 2022b), USEPA's *Unified Guidance: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (USEPA, 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).

3.1 Detection Monitoring Data Evaluation

After every detection monitoring event, the constituent concentrations from each downgradient well are compared to the background UPLs to ascertain if a statistically significant increase above background exists. The Appendix III detection monitoring prediction limits are summarized in Table 1. Documentation on the statistical procedures used to establish background groundwater quality prediction limits is presented in Appendix C. Background UPLs are based on a 1-of-2 resampling approach, meaning that if zero or one concentration measurements from a series of two independent samples collected from a well do not exceed the appropriate UPL, then a statistically significant increase over background has not occurred at the CCR unit. This conclusion will be reached if the data indicate either of the following:

- All detection monitoring constituent concentrations in a compliance well are less than or equal to their respective background UPL; or

- At least one detection monitoring constituent concentration in a well is above the respective background UPL. If this occurs, the well or wells with constituent concentration(s) above the background UPL(s) may be resampled and analyzed for the detection monitoring constituent(s) with exceedances. If the resample indicates that the target detection monitoring constituent concentration(s) in the well or wells is less than or equal to their respective background UPL(s), then it can be concluded that a statistically

significant increase over background for all detection monitoring constituents has not occurred since concentrations in one sample of the two independent samples do not exceed the appropriate background UPL(s).

If the groundwater monitoring data indicate that a statistically significant increase over background has not occurred at the CCR wells, then detection monitoring at all CCR wells will continue on a semi-annual basis.

If one or more detection monitoring constituent concentration in any well is above the respective background UPL in both the original detection monitoring sample and the resample, then a statistically significant increase over background for the target detection monitoring constituents can be concluded. In accordance with 40 C.F.R. § 257.94(e), if a statistically significant increase is indicated, within 90 days the owner/operator shall:

- Establish an assessment monitoring program, or
- Demonstrate that a source other than the CCR unit caused the statistically significant increase over the background UPL for a constituent, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Per 30 TAC § 352.941, in making an alternative source demonstration, the owner or operator must:
    - Notify the TCEQ executive director, and any local pollution agency with jurisdiction that has requested to be notified, in writing within 14 days that the owner or operator intends to make an alternative source demonstration; and
    - Within 90 days of making a determination of a statistically significant increase over the background value for any Appendix III constituent, submit a report prepared and certified in accordance with 30 TAC § 352.4 (relating to Engineering and Geoscientific Information) to the TCEQ executive director and any local pollution agency with jurisdiction that has requested to be notified, demonstrating that a source other than a CCR unit caused the statistically significant increase or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

3.2 Assessment Monitoring Data Evaluation

Assessment monitoring will be performed at a CCR unit's groundwater monitoring system after a statistically significant increase over background has been confirmed for one or more of the detection monitoring constituents and the statistically significant increase cannot be attributed to a source other than the CCR unit. Within 90 days of obtaining the results from the initial assessment monitoring sampling event, GWPSs will be established for all Appendix IV

assessment monitoring constituents as follows:

- For constituents for which an MCL has been established, the GWPS is the highest of the MCL, UPL, or reporting limit for each constituent; or
- For constituents for which an MCL has not been established, the GWPS is the higher of the UPL, reporting limit, or the EPA regional screening level (RSL) for each constituent.

The GWPS for each Appendix IV constituent is presented in Table 2.

The 95% LCL for each Appendix IV constituent concentration at each is compared to the GWPS established for each constituent to ascertain if a statistically significant increase above the GWPS does or does not exist. A statistically significant increase is indicated if the LCL exceeds the GWPS. Additional information on the development of Appendix IV constituent LCLs is provided in Appendix C.

In accordance with 40 C.F.R. § 257.95(g)(3), if a statistically significant increase over GWPSs for any Appendix IV assessment monitoring constituent is confirmed, within 90 days of the initial assessment monitoring event, the owner/operator will either:

- Initiate an assessment of corrective measures for the CCR unit in accordance with 40 C.F.R. § 257.96; or
- Demonstrate that a source other than the CCR unit caused the statistically significant level over the background UPL for a constituent, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Per 30 TAC § 352.951, in making an alternative source demonstration, the owner or operator must:
    - Notify the TCEQ executive director, and any local pollution agency with jurisdiction that has requested to be notified, in writing within 14 days that the owner or operator intends to make an alternative source demonstration; and
    - Within 90 days of making a determination of a statistically significant increase over the GWPS of any Appendix IV constituent, submit a report prepared and certified in accordance with 30 TAC § 352.4 (relating to Engineering and Geoscientific Information) to the TCEQ executive director, and any local pollution agency with jurisdiction that has requested to be notified, demonstrating that a source other than a CCR unit caused the exceedance or that the exceedance resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

If one or more Appendix IV assessment monitoring constituents are detected at statistically significant levels above their respective GWPS in any sampling event, and if a source other than the CCR unit cannot be demonstrated to have caused the exceedance, the nature and extent of the release should be further characterized as follows in accordance with 40 C.F.R § 257.95(g)(1):

- Install additional monitoring wells necessary to define the contaminant plume(s);
- Collect data on the nature and estimated quantity of material released including specific information on the Appendix IV assessment monitoring constituents and the levels at which they are present in the material released;
- Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well for all Appendix III detection monitoring parameters and for those Appendix IV assessment monitoring constituents that have been detected as part of assessment monitoring. This monitoring must be performed on at least a semi-annual basis thereafter; and
- Sample all wells in accordance with 40 C.F.R § 257.95(d)(1) to characterize the nature and extent of the release.

4.0 REFERENCES

ASTM, 2017. Standard Guide for Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs at Waste Disposal Facilities - D6312-17.

Golder, 2016. History of Construction – CCR Surface Impoundments, Oak Grove Steam Electric Station. October.

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

WSP Golder, 2022a. Groundwater Monitoring Plan – Revision 2, Oak Grove Steam Electric Station – FGD Ponds, Robertson, County.

WSP Golder, 2022b. Statistical Analysis Plan – Revision 1, Oak Grove Steam Electric Station – FGD Ponds, Robertson, County.

SIGNATURE PAGE

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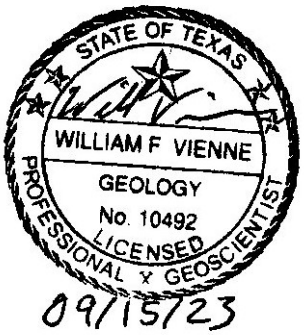
Senior Hydrogeologist



Tables

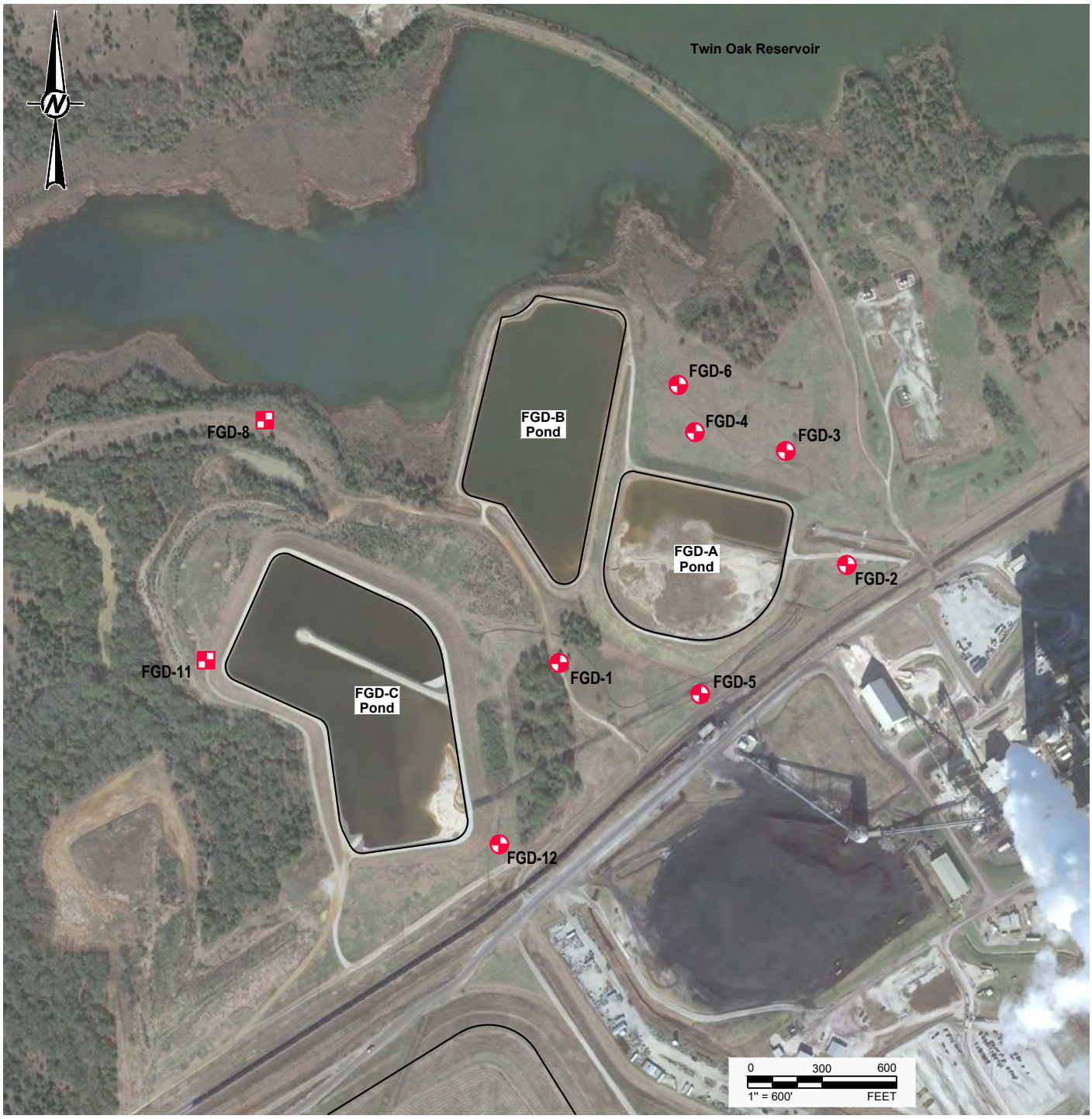
Table 1
Appendix III Groundwater Background Upper Prediction Limits
OGSES FGD Ponds

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

Table 2
Appendix IV Groundwater Protection Standards
OGSES FGD Ponds

Parameter	Groundwater Protection Standard
Antimony (mg/L)	0.0060
Arsenic (mg/L)	0.015
Barium (mg/L)	2.0
Beryllium (mg/L)	0.0040
Cadmium (mg/L)	0.0050
Chromium (mg/L)	0.10
Cobalt (mg/L)	0.016
Fluoride (mg/L)	4.0
Lead (mg/L)	0.015
Lithium (mg/L)	0.15
Mercury (mg/L)	0.0020
Molybdenum (mg/L)	0.10
Selenium (mg/L)	0.050
Thallium (mg/L)	0.0020
Radium 226+228 (pCi/L)	11

Figures



LEGEND

- DOWNGRADIENT CCR MONITORING WELL
- BACKGROUND CCR MONITORING WELL

FGD PONDS
OAK GROVE STEAM ELECTRIC STATION
ROBERTSON COUNTY, TEXAS

FIGURE 1

SITE PLAN

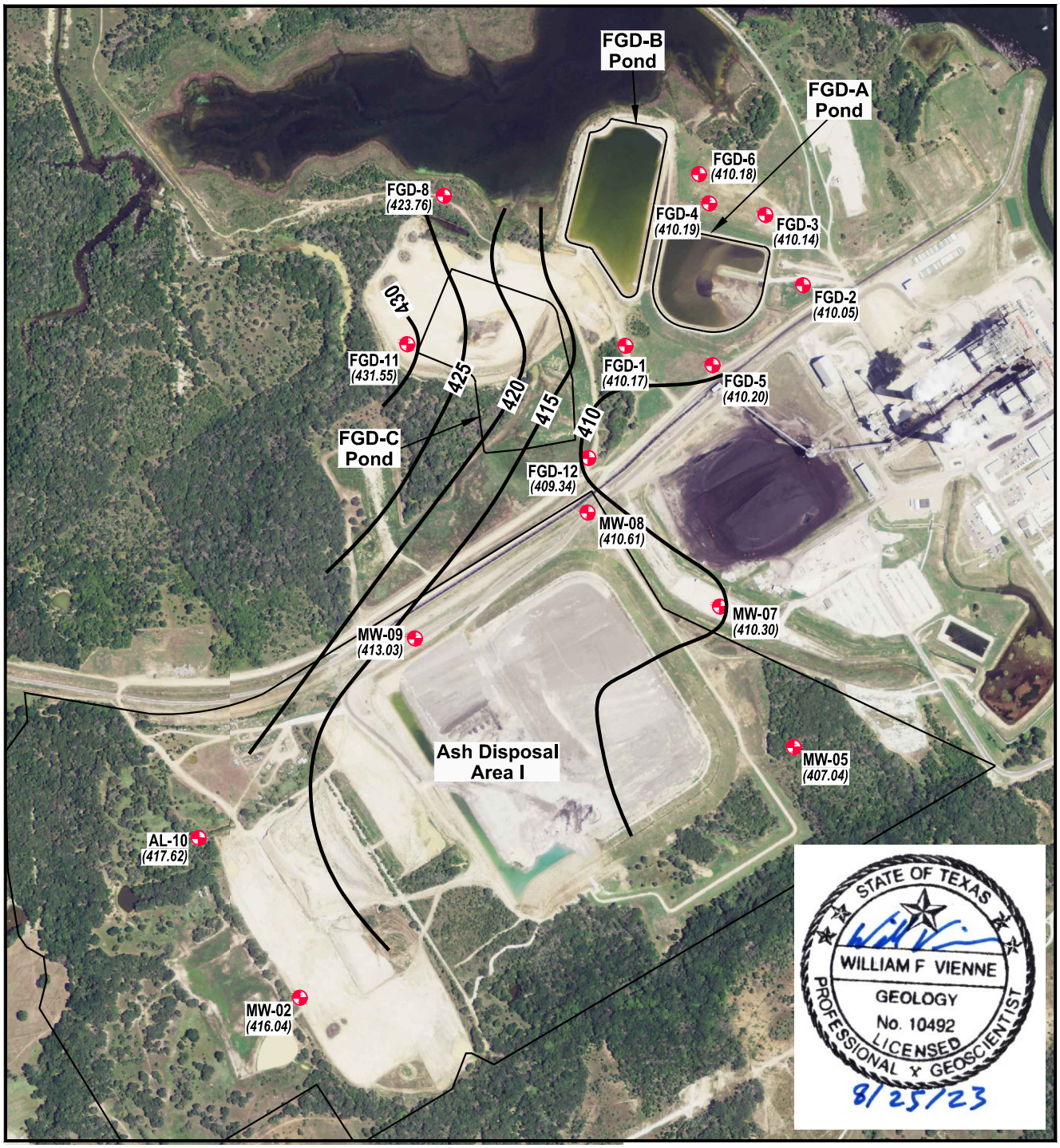
PROJECT: 23643.01	BY: SLB	DATE: 8/16/2023	CHECKED: WV

REFERENCE(S)
BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 12/9/18.

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

Appendix A

Groundwater Potentiometric Surface Maps



EXPLANATION

- CCR Monitoring Well Location
- (410.06) Groundwater Potentiometric Surface (ft. MSL)
- 400 Groundwater Potentiometric Surface Contour (C.I. = 5 ft.)

N

Scale in Feet

0 500 1000

SOURCE:
Imagery from www.tnris.gov, Robertson Co., aerial photographs, 2012.

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 1

GROUNDWATER POTENTIOMETRIC SURFACE MAP NOVEMBER 3, 2015

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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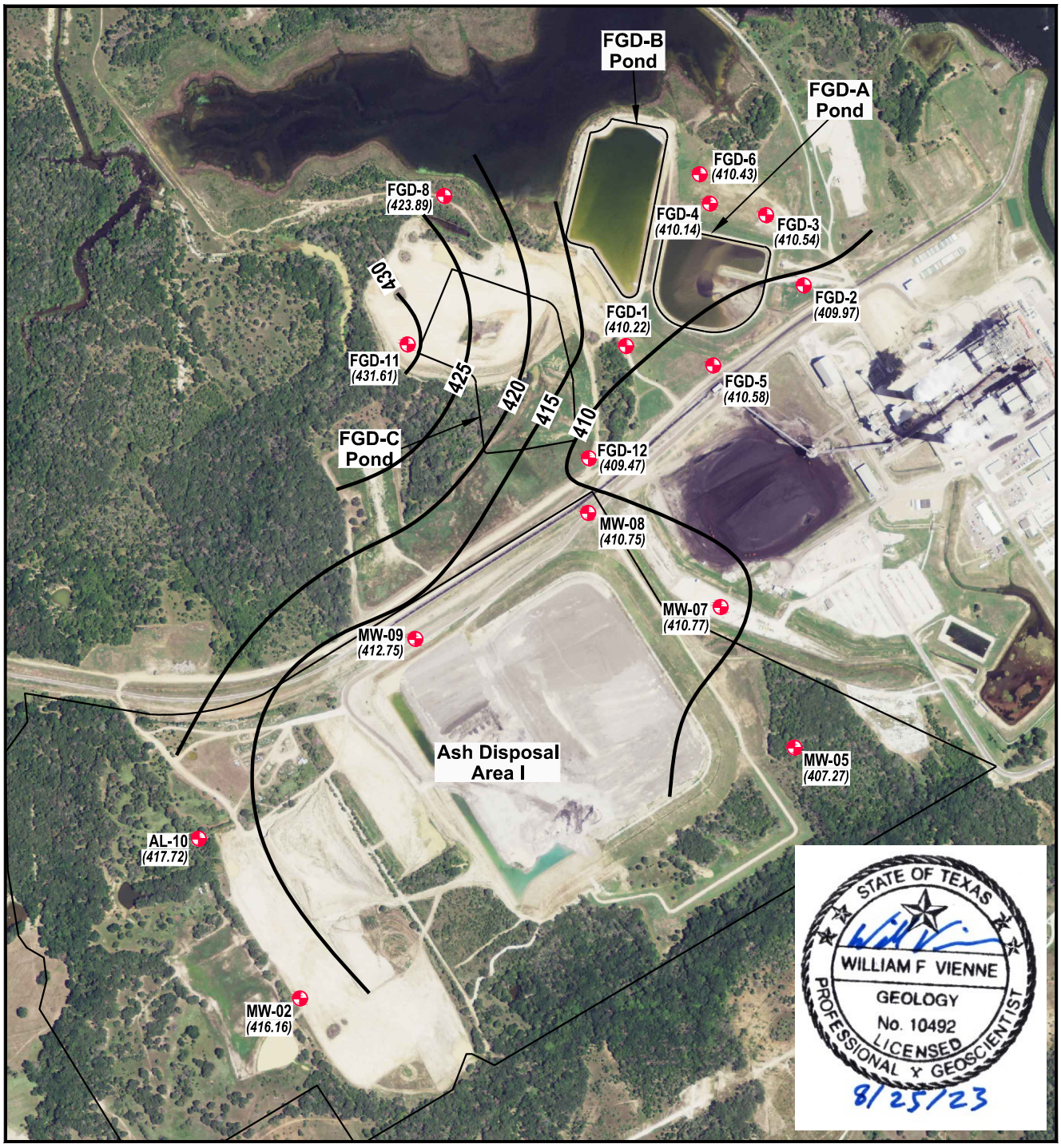
CONSULTING ENGINEERS AND SCIENTISTS



STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
8/25/23

EXPLANATION

- CCR Monitoring Well Location
- (410.06) Groundwater Potentiometric Surface (ft. MSL)
- 400 Groundwater Potentiometric Surface Contour (C.I. = 5 ft.)

N

Scale in Feet

0 500 1000

SOURCE:
Imagery from www.tnris.gov, Robertson Co., aerial photographs, 2012.

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 2

GROUNDWATER POTENTIOMETRIC SURFACE MAP DECEMBER 12, 2015

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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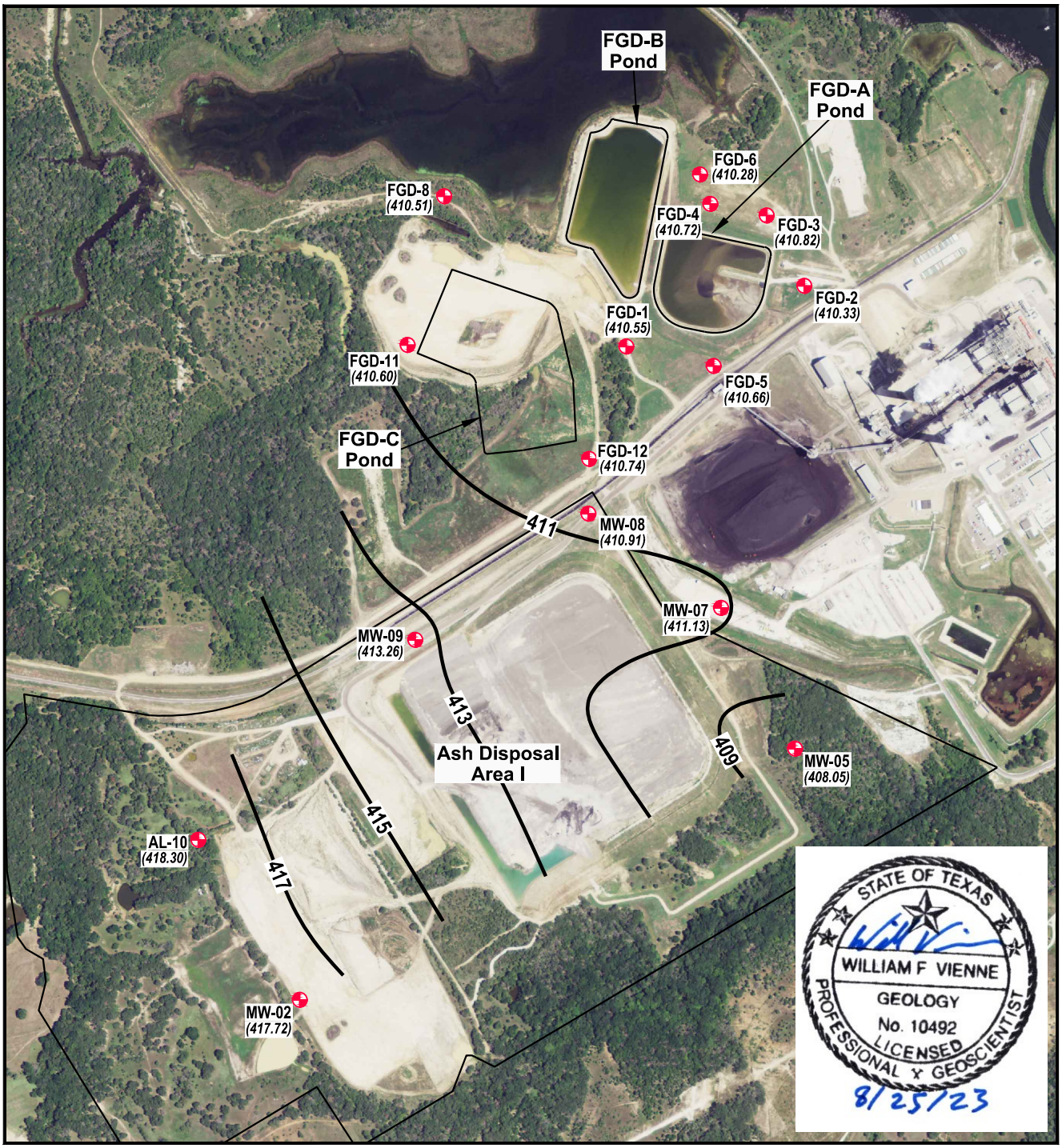

STATE OF TEXAS
WILLIAM F VIENNE
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8/25/23

EXPLANATION

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

N

Scale in Feet

0 500 1000

SOURCE:
Imagery from www.tnris.gov, Robertson Co., aerial photographs, 2012.

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 3

GROUNDWATER POTENTIOMETRIC SURFACE MAP FEBRUARY 9-10, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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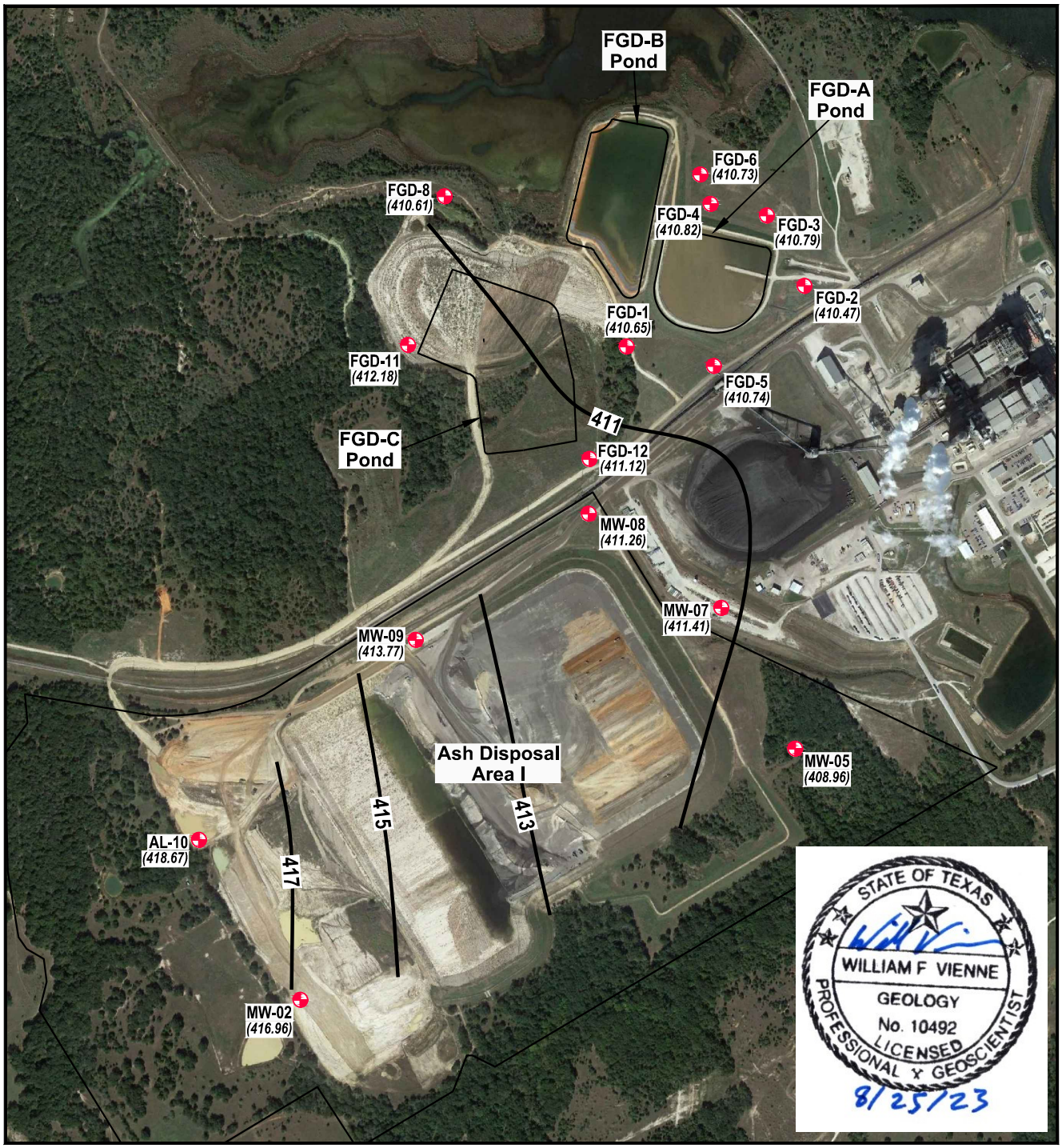

STATE OF TEXAS
WILLIAM F VIENNE
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No. 10492
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PROFESSIONAL GEOSCIENTIST
8/25/23

EXPLANATION

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

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 4

GROUNDWATER POTENTIOMETRIC SURFACE MAP APRIL 14-15, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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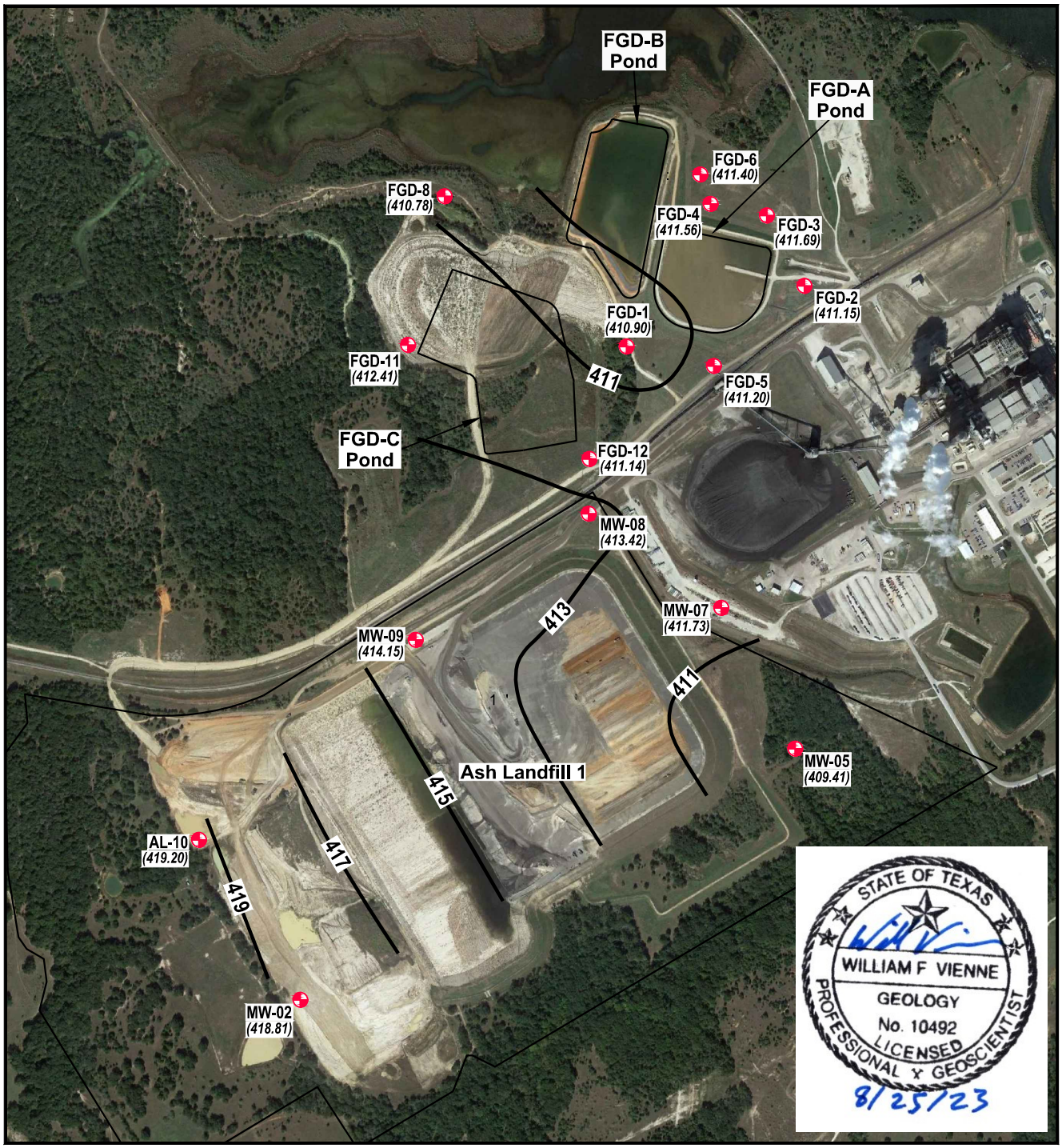
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

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

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 5

GROUNDWATER POTENTIOMETRIC SURFACE MAP JUNE 16, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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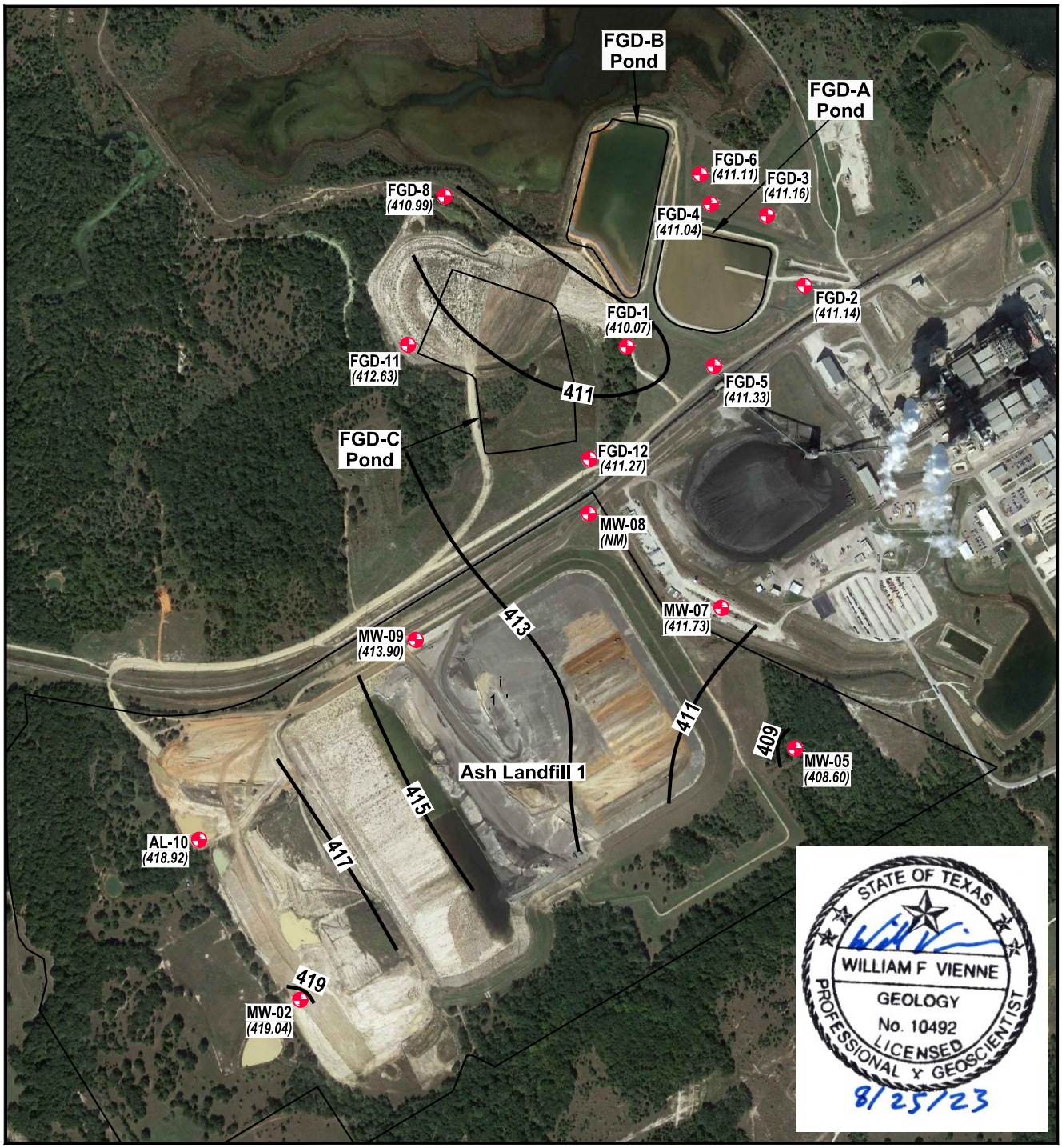

EXPLANATION

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

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 6

GROUNDWATER POTENTIOMETRIC SURFACE MAP AUGUST 24, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

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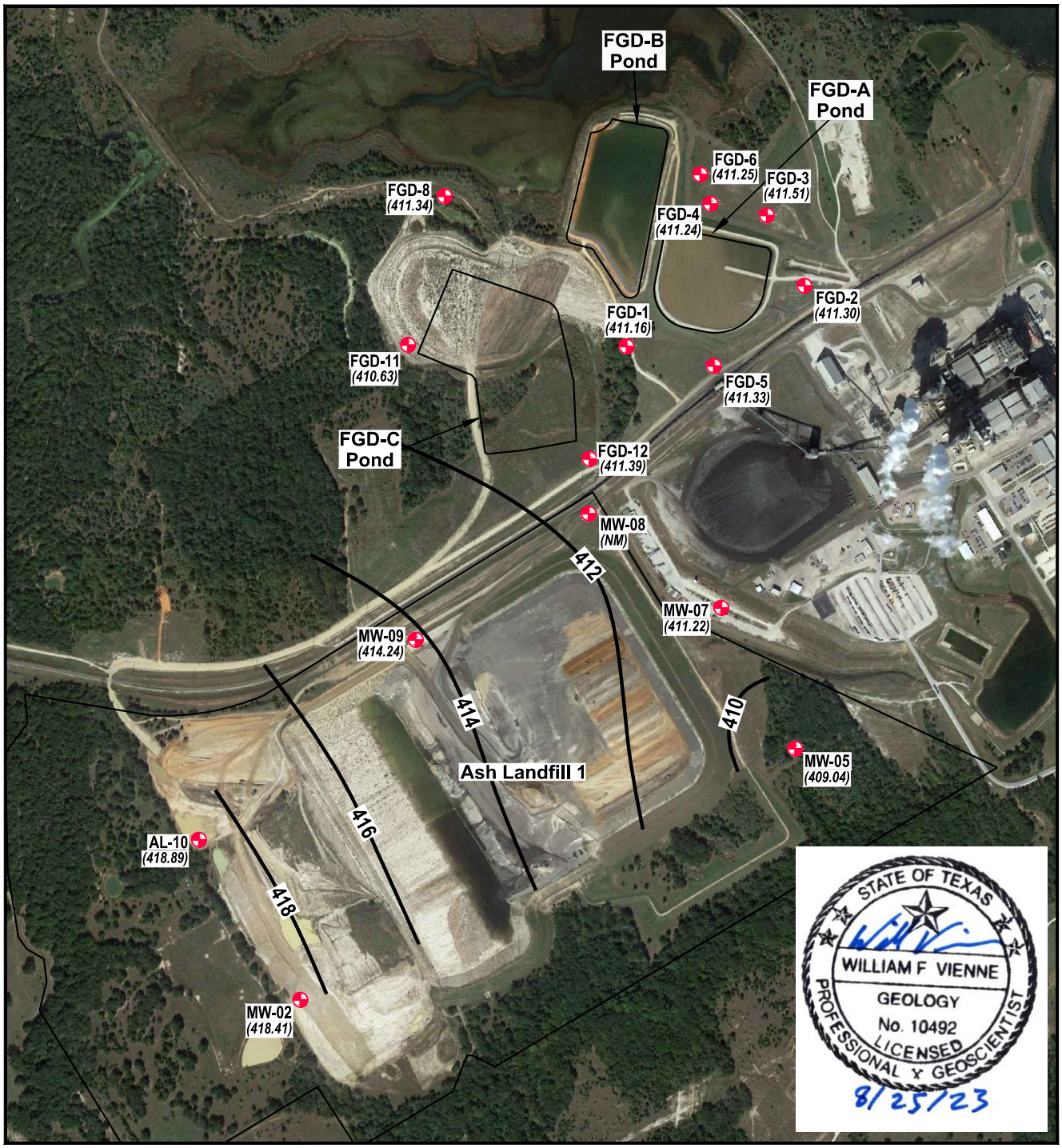
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

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

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

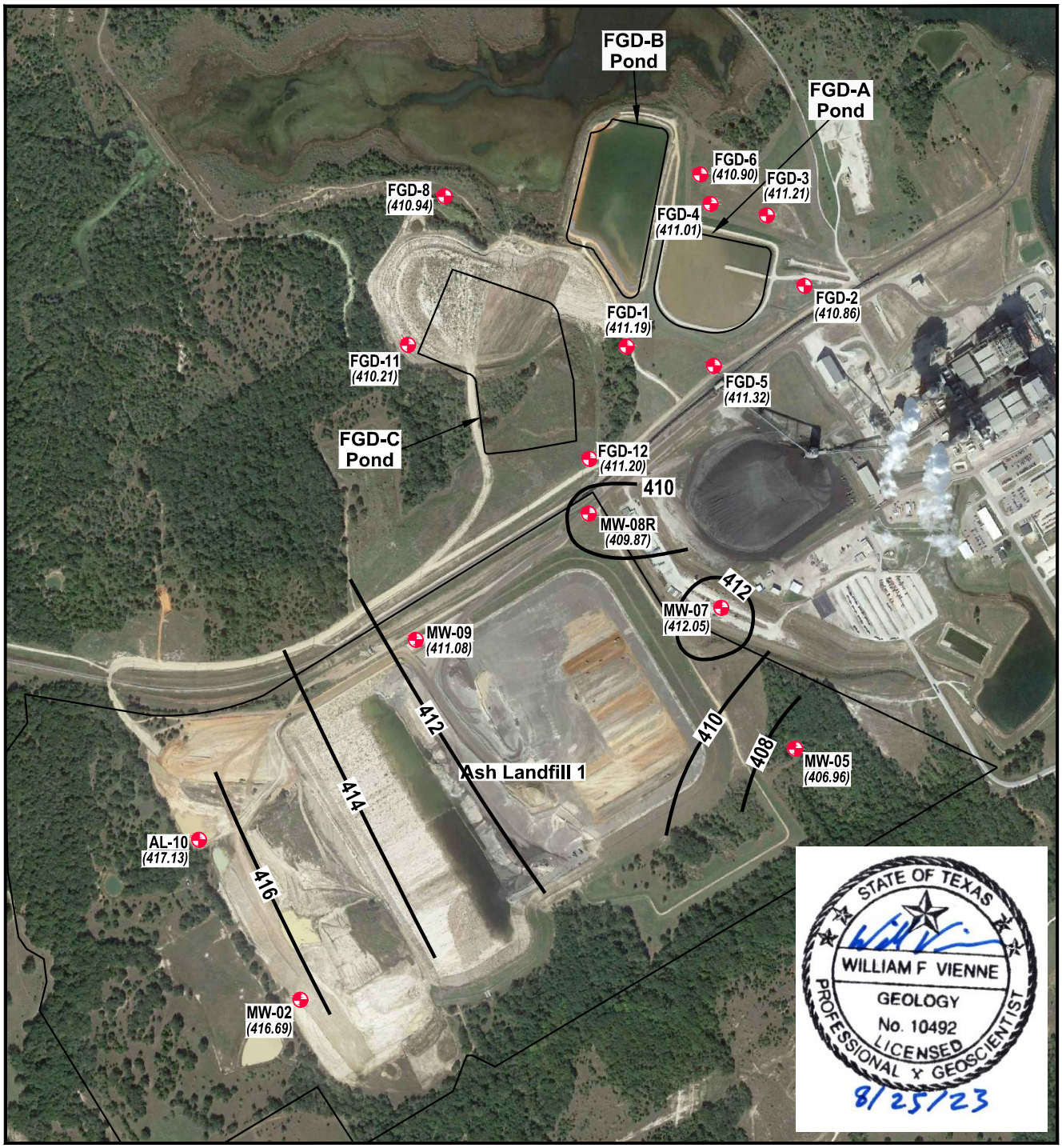
Figure 7

GROUNDWATER POTENTIOMETRIC SURFACE MAP OCTOBER 4, 2016

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. = 5 ft.)

N

Scale in Feet

0 500 1000

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

OAK GROVE STEAM ELECTRIC STATION

ROBERTSON COUNTY, TEXAS

Figure 8

GROUNDWATER POTENTIOMETRIC SURFACE MAP DECEMBER 19, 2016

PROJECT: 5164D	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: PJB	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS

Appendix B

Laboratory Analytical Reports

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

Order No.: 1511075

RE: Luminant - Oak Grove

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,

John DuPont
General Manager

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

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1511075 ..... **7**

WorkOrderSampleSummary 1511075 ..... **8**

PrepDatesReport 1511075 ..... **9**

AnalyticalDatesReport 1511075 ..... **13**

Analytical Report 1511075 ..... **18**

AnalyticalQCSummaryReport 1511075 ..... **33**

Subcontract Report 1511075 ..... **53**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 68804

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: 11-4-15 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1511075
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BRAUTON

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

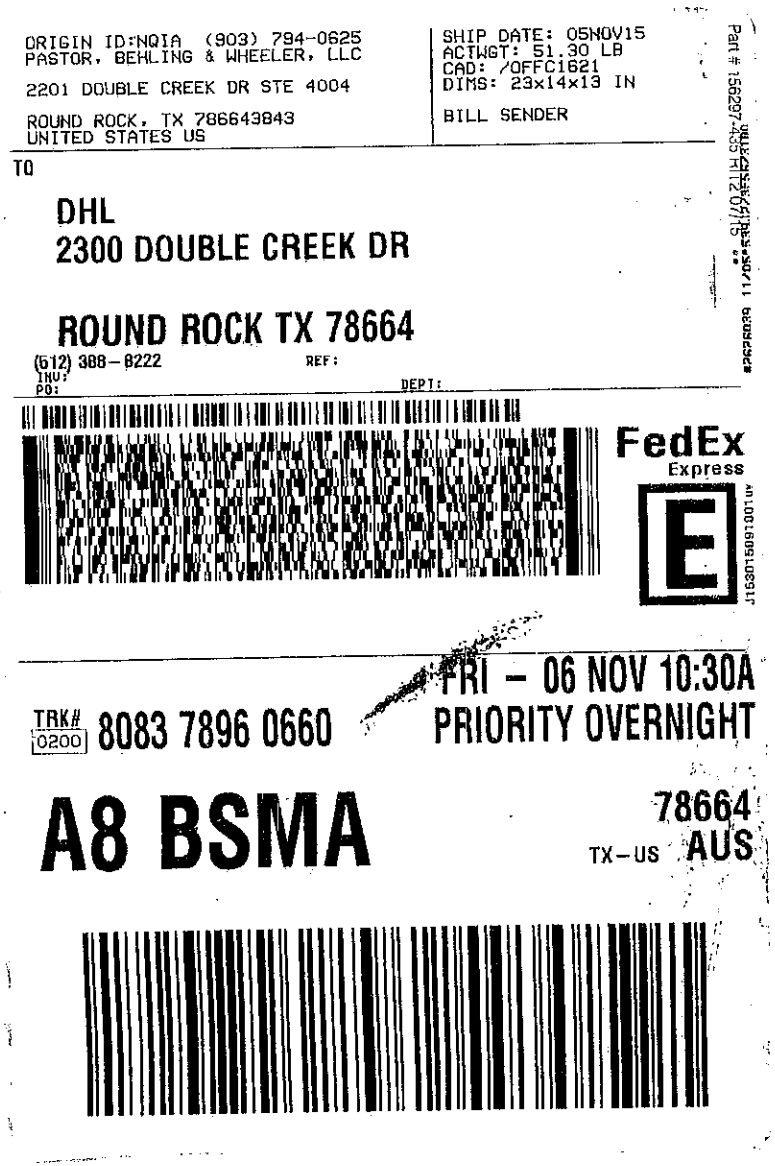
Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐	VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐	8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐	8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐	8321 HERB ☐ T PHOS, AMMONIA ☐	METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐	RCRA ☐ TX11 ☐	PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	CHLORIDE ☐ ANIONS ☐	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ FLASHPOINT ☐ DGAS ☐ CYANIDE ☐	TDS ☐ TSS ☐ % MOISTURE ☐ SEE ATTACHED	FIELD NOTES
FGD-1	01	11-3-15	1050	W	P	4																					X	
MW-09	02		1150	W	P	4																					X	
MW-07	03		1240	W	P	4																					X	
FGD-2	04		1415	W	P	4																					X	
FGD-3	05		1505	W	P	4																					X	
FGD-4	06		1600	W	P	4																					X	
FGD-5	07		1650	W	P	4																					X	
AL-10	08	11-4-15	0815	W	P	4																					X	
MW-02	09		0905	W	P	4																					X	
MW-08	10		1010	W	P	4																					X	
MW-05	11		1105	W	P	4																					X	
FGD-12	12		1155	W	P	4																					X	
FGD-11	13		1300	W	P	4																					X	
FGD-6	14		1355	W	P	4																					X	
FGD-8	15		1450	W	P	4																					X	

RELINQUISHED BY: (Signature) DATE/TIME 11-5-15 1815 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) DATE/TIME 11/6/15 915 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP 2.1, 2.8 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED


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

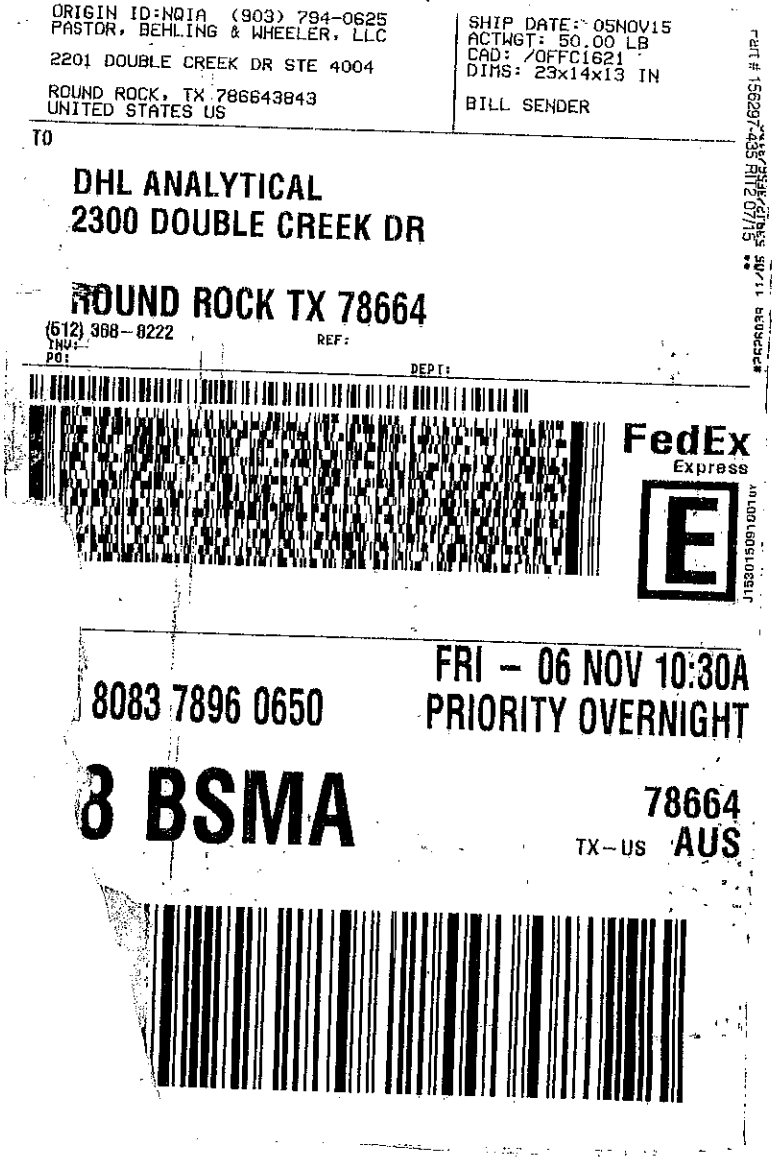
SHIP DATE: 05NOV15
ACTWGT: 51.30 LB
CAD: /OFFC1621
DIMS: 23x14x13 IN
BILL SENDER

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

FedEx Express

TRK# 0200 8083 7896 0660
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

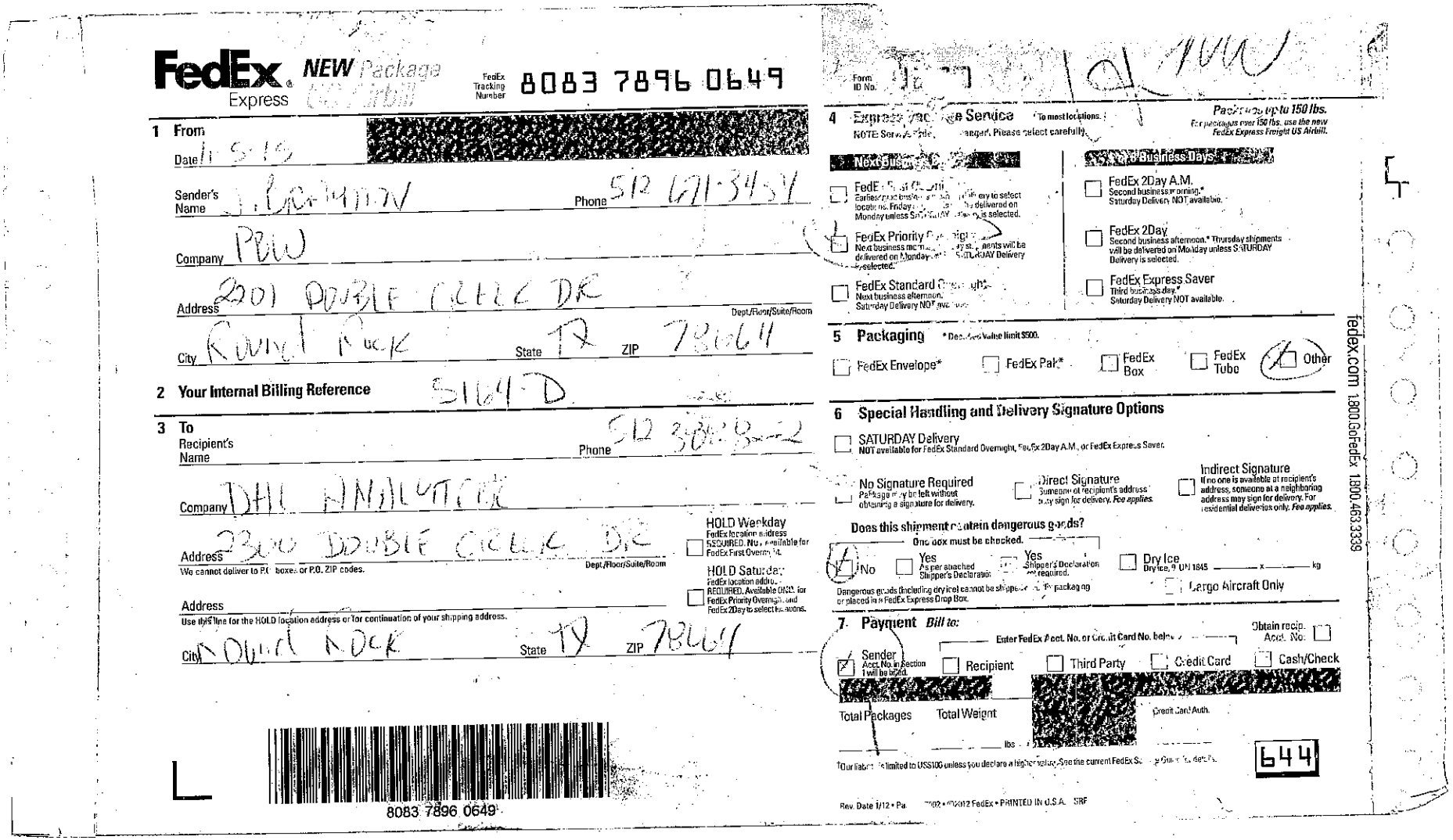
SHIP DATE: 05NOV15
ACTWGT: 50.00 LB
CAD: /OFFC1621
DIMS: 23x14x13 IN
BILL SENDER

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

FedEx Express

8083 7896 0650
FRI - 06 NOV 10:30A
PRIORITY OVERNIGHT

8 BSMA
78664
TX-US AUS



FedEx Express NEW Package

FedEx Tracking Number 8083 7896 0649

Form ID No.

1 From

Date 11-5-19

Sender's Name J. [redacted] Phone 512 671-3457

Company PBW

Address 201 DOUBLE CREEK DR

City ROUND ROCK State TX ZIP 78664

Dept/Floor/Suite/Room

2 Your Internal Billing Reference 5164-D

3 To

Recipient's Name Phone 512 380-8[redacted]2

Company DHL ANALYTICS

Address 2300 DOUBLE CREEK DR

We cannot deliver to P.O. 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

HOLD Weekday
FedEx location address REQUIRED. Not available for FedEx First Overnight.

HOLD Saturday
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4 Express Package Service * To most locations.

NOTE Service Guide. Please select carefully.

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

Next Business Day

- FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- FedEx Standard Overnight — Next business afternoon. Saturday Delivery NOT available.

2nd 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 — Someone at recipient's address may 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?
One box must be checked.

No | Yes As per attached Shipper's Declaration | Yes Shipper's Declaration not required | Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

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

Cargo 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 ____ lbs. | Credit Card Auth.

644

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8083 7896 0649

DHL Analytical, Inc.

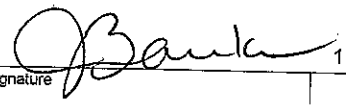
Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 11/6/2015

Work Order Number 1511075

Received by JB

Checklist completed by:  11/6/2015
Signature Date

Reviewed by 11/6/2015
Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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? No		Checked by
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *14-Dec-15*

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.

DHL Analytical, Inc.

Date: *14-Dec-15*

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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C
	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_151113C

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_151113C
	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-01
Project No:	5164-D	**Collection Date:**	11/03/15 10:50 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-02
Project No:	5164-D	**Collection Date:**	11/03/15 11:50 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-03
Project No:	5164-D	**Collection Date:**	11/03/15 12:40 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-04
Project No:	5164-D	**Collection Date:**	11/03/15 02:15 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-05
Project No:	5164-D	**Collection Date:**	11/03/15 03:05 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-06
Project No:	5164-D	**Collection Date:**	11/03/15 04:00 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-07
Project No:	5164-D	**Collection Date:**	11/03/15 04:50 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-08
Project No:	5164-D	**Collection Date:**	11/04/15 08:15 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-09
Project No:	5164-D	**Collection Date:**	11/04/15 09:05 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-08
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-10
Project No:	5164-D	**Collection Date:**	11/04/15 10:10 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-11
Project No:	5164-D	**Collection Date:**	11/04/15 11:05 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-12
Project No:	5164-D	**Collection Date:**	11/04/15 11:55 AM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-13
Project No:	5164-D	**Collection Date:**	11/04/15 01:00 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-14
Project No:	5164-D	**Collection Date:**	11/04/15 01:55 PM
Lab Order:	1511075	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1511075-15
Project No:	5164-D	**Collection Date:**	11/04/15 02:50 PM
Lab Order:	1511075	**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℃	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	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	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: 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	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-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	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-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	

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-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	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-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			

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

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	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 **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	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 **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	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 **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	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 **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	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: 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	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: 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			

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: 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	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: 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	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

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℃**
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℃**
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	

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℃**
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℃**
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℃**
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	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: 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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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 C Day

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

385405

Work Order: 1511075

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

		Date/Time			Date/Time
Relinquished by:	[signature]	11/9/15 1730	**Received by:**	Fedex	11/9/15 1730
Relinquished by:			**Received by:**	B. Luthman	11/12/15 0840

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1511075

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:		11/9/15	**Received by:**	11/9/15 1733
Relinquished by:			**Received by:**	B. Luthman 11/12/15 0840

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DHLA	**SDG/AR/COC/Work Order:** 365404
Received By: Brielle Luthman	**Date Received:** 11/12/15 0840

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): Ø
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 20°
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): 150340071
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 7749 3118 2946

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AMD 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).

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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).

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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).

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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).

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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).

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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).

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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).

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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
Sample ID: 385405008
Matrix: Water
Collect Date: 04-NOV-15 08:15
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		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).

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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).

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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).

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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).

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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).

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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).

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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).

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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
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QC Summary

Report Date: December 9, 2015

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.

QC Summary

Workorder: **385405**

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

Order No.: 1512286

RE: Luminant - Oak Grove

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

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1512286 ..... **9**

WorkOrderSampleSummary 1512286 ..... **10**

PrepDatesReport 1512286 ..... **11**

AnalyticalDatesReport 1512286 ..... **15**

Analytical Report 1512286 ..... **20**

AnalyticalQCSummaryReport 1512286 ..... **35**

Subcontract Report 1512286 ..... **56**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 69463

CHAIN-OF-CUSTODY

CLIENT: PBW
ADDRESS: 2201 DOUBLE CREEK DR ROUND ROCK, TX
PHONE: 512-671-3434 FAX/E-MAIL: 512-671-3446
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

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

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

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ | METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ | RCRA ☐ TX11 ☐ _____ ☐ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS _____ ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	SEE ATTACHED	FIELD NOTES
FGD-3	01	12-17-15	0935	W	P	4						X	
FGD-4	02		1025	W	P	4						X	
FGD-5	03		1115	W	P	4						X	
FGD-2	04		1200	W	P	4						X	
FGD-1	05		1250	W	P	4						X	
FGD-6	06		1345	W	P	4						X	
FGD-8	07		1450	W	P	4						X	
FGD-12	08		1540	W	P	4						X	
FGD-11	09		1630	W	P	4						X	
MW07	10		1815	W	P	4						X	
MW05	11	12-18-15	0740	W	P	4						X	
MW02	12		0825	W	P	4						X	
AL-10	13		0920	W	P	4						X	
MW09	14		1020	W	P	4						X	
MW08	15		1115	W	P	4						X	

RELINQUISHED BY: (Signature) DATE/TIME 12-18-15 RECEIVED BY: (Signature) 1745
RELINQUISHED BY: (Signature) DATE/TIME 12/19/15 RECEIVED BY: (Signature) 1020
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 3.6, 4.6, 4.1 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

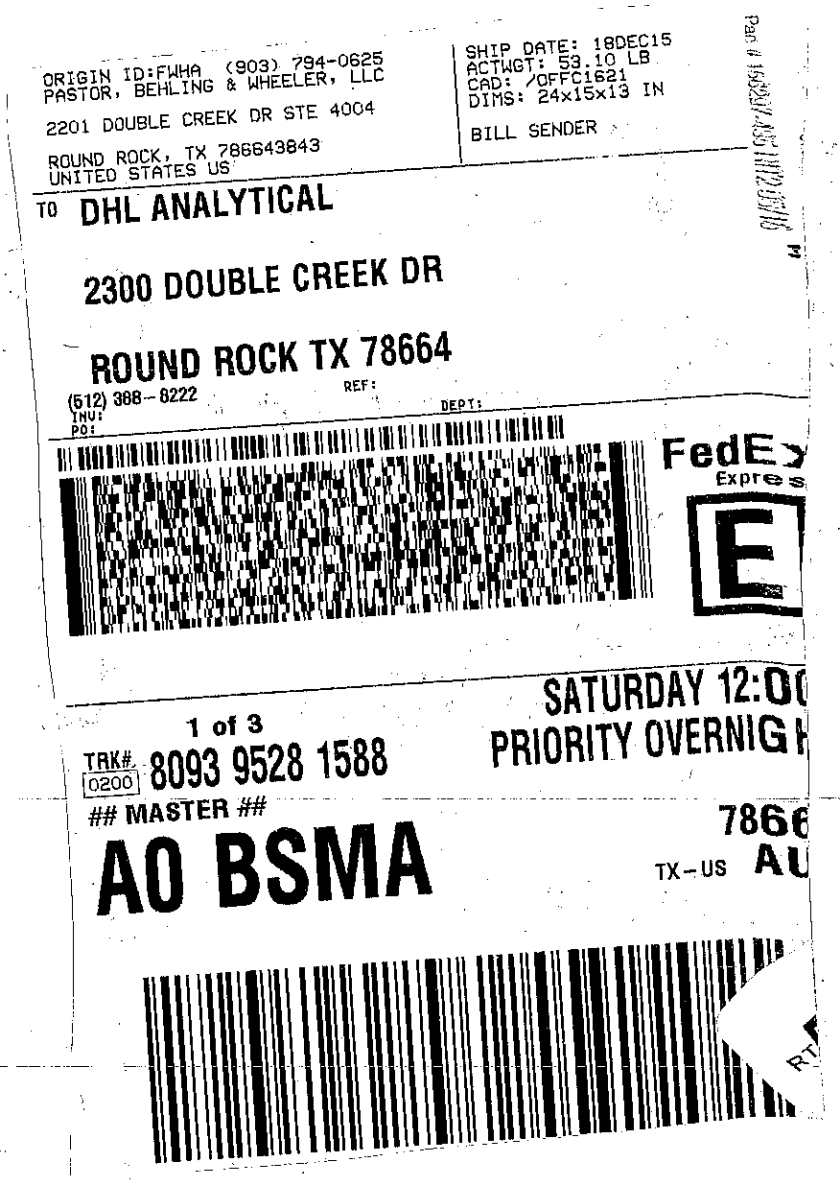
Appendix IV
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

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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ROUND ROCK, TX 786643843
UNITED STATES US
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ACTWGT: 53.10 LB
CAD: /OFFC1621
DIMS: 24x15x13 IN
BILL SENDER
TO DHL ANALYTICAL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 388-8222
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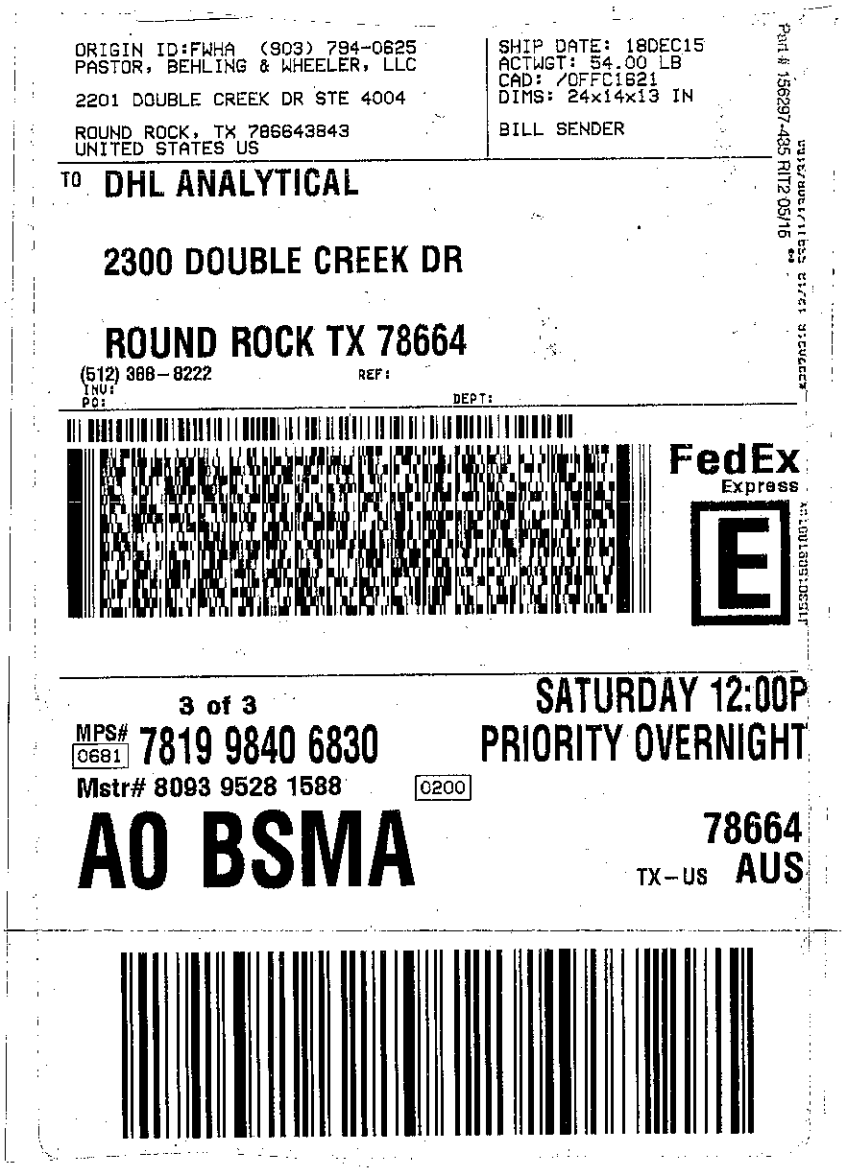

ORIGIN ID:FWHA (903) 794-0625
PASTOR, BEHLING & WHEELER, LLC
2201 DOUBLE CREEK DR STE 4004
ROUND ROCK, TX 786643843
UNITED STATES US

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

Part # 156297-435 RIT2 05/16

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

FedEx Express

3 of 3
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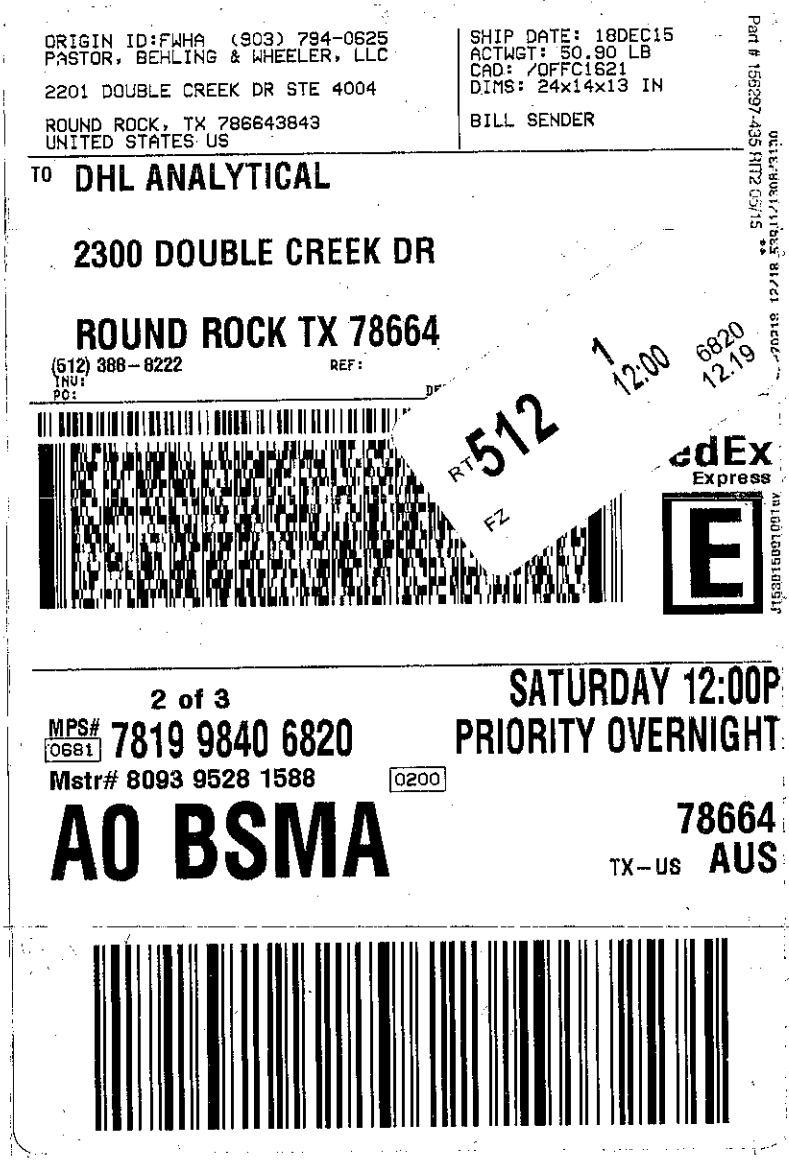
Mstr# 8093 9528 1588 0200

SATURDAY 12:00P
PRIORITY OVERNIGHT

AO BSMA

78664
TX-US AUS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ROUND ROCK, TX 786643843
UNITED STATES US
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CAD: /OFFC1621
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BILL SENDER
TO DHL ANALYTICAL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 388-8222
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MPS# 0681 7819 9840 6820
Mstr# 8093 9528 1588
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SATURDAY 12:00P
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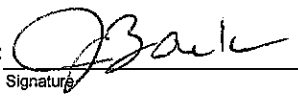
78664
TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Pastor, Behling & Wheeler** Date Received: **12/19/2015**

Work Order Number **1512286** Received by **JB**

Checklist completed by:  12/21/2015 Reviewed by 12/21/2015

Signature Date Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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? NO		Checked by
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 _____

DHL Analytical, Inc. **Date:** *25-Jan-16*

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.

DHL Analytical, Inc.

Date: *25-Jan-16*

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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-01
Project No:	5164-D	**Collection Date:**	12/17/15 09:35 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-02
Project No:	5164-D	**Collection Date:**	12/17/15 10:25 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-03
Project No:	5164-D	**Collection Date:**	12/17/15 11:15 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-04
Project No:	5164-D	**Collection Date:**	12/17/15 12:00 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-05
Project No:	5164-D	**Collection Date:**	12/17/15 12:50 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-06
Project No:	5164-D	**Collection Date:**	12/17/15 01:45 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-07
Project No:	5164-D	**Collection Date:**	12/17/15 02:50 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-08
Project No:	5164-D	**Collection Date:**	12/17/15 03:40 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-09
Project No:	5164-D	**Collection Date:**	12/17/15 04:30 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-10
Project No:	5164-D	**Collection Date:**	12/17/15 06:15 PM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-11
Project No:	5164-D	**Collection Date:**	12/18/15 07:40 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-12
Project No:	5164-D	**Collection Date:**	12/18/15 08:25 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-13
Project No:	5164-D	**Collection Date:**	12/18/15 09:20 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-14
Project No:	5164-D	**Collection Date:**	12/18/15 10:20 AM
Lab Order:	1512286	**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℃	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	**Client Sample ID:**	MW-08
Project:	Luminant - Oak Grove	**Lab ID:**	1512286-15
Project No:	5164-D	**Collection Date:**	12/18/15 11:15 AM
Lab Order:	1512286	**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℃	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	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	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: 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	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

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	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 **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	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 **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	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 **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			

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 **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	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 **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			

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_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	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

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	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_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			

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: 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	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: 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	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

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	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

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℃**
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℃**
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	

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℃**
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℃**
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	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_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	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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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 C Day

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).

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-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).

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-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).

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-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).

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-6
Sample ID: 388114006
Matrix: Water
Collect Date: 17-DEC-15 13:45
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		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).

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-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).

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-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).

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-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).

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: 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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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: 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
Sample ID: 388114015
Matrix: Water
Collect Date: 18-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		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).

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

QC Summary

Report Date: January 15, 2016

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.

QC Summary

Workorder: **388114**

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

388114

CHAIN-OF-CUSTODY RECORD

Work Order: 1512286

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

		Date/Time		Date/Time
Relinquished by:		12/21/15 1730	**Received by:**	12/21/15 1730
Relinquished by:			**Received by:**	12-24-15 0920

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1512286

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

		Date/Time			Date/Time
Relinquished by:		12/21/15 1733	**Received by:**		12/21/15 1233
Relinquished by:	FDX		**Received by:**		12-24-15 0920

GEL Laboratories LLC

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**	*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): Cpm0
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 20 C
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: 130X62962 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: 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: 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 (FedEx Ground) UPS Field Services Courier Other 7752 6232 9395

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials J.R. Date 12-24-15 Page 1 of 1 GL-CHL-SR-001 Rev 2

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

Order No.: 1602130

RE: Oak Grove CCR

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,

John DuPont
General Manager

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

Table of Contents

Miscellaneous Documents 3

CaseNarrative 1602130 6

WorkOrderSampleSummary 1602130 7

PrepDatesReport 1602130 8

AnalyticalDatesReport 1602130 13

Analytical Report 1602130 18

AnalyticalQCSummaryReport 1602130 33

Subcontract Report 1602130 65

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 70282

CHAIN-OF-CUSTODY

CLIENT: Pastor, Behling & Wheeler
ADDRESS: 2201 Double Creek Dr Ste 4004
PHONE: 512-671-3434 FAX/E-MAIL: will.vienne@pbwllc.com
DATA REPORTED TO: Will Vienne
ADDITIONAL REPORT COPIES TO: Karla Henson

DATE: 2/10/16 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 1602130
PROJECT LOCATION OR NAME: Oak Grove CCR
CLENT PROJECT #: 5164D COLLECTOR: MH/ST

Authorize 5% surcharge for TRRP Report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐	VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐	8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐	8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐	8321 HERB ☐ T PHOS, AMMONIA ☐	METALS 6020 ☐ METALS 2008 ☐ DISS. METALS ☐	RCRA ☐ TX11 ☐	PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	CHLORIDE ☐ ANIONS ☐	TCLP SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ FLASHPOINT ☐ DGAS ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	See attached (CCR)	FIELD NOTES
FGD-11	1	2/10/16	9:25	W		4		X		X																		X	
FGD-12	2	2/10/16	10:00	W		4		X		X																		X	
FGD-08	3	2/10/16	11:25	W		4		X		X																		X	
FGD-1	4	2/10/16	12:00	W		4		X		X																		X	
FGD-5	5	2/10/16	13:05	W		4		X		X																		X	
FGD-2	6	2/10/16	13:50	W		4		X		X																		X	
FGD-3	7	2/10/16	14:50	W		4		X		X																		X	
FGD-6	8	2/10/16	16:15	W		4		X		X																		X	
FGD-4	9	2/10/16	16:50	W		4		X		X																		X	
MW-08	10	2/10/16	17:55	W		4		X		X																		X	
MW-07	11	2/11/16	7:45	W		4		X		X																		X	
MW-09	12	2/11/16	8:30	W		4		X		X																		X	
AL-10	13	2/11/16	9:05	W		4		X		X																		X	
MW-02	14	2/11/16	9:35	W		4		X		X																		X	
MW-05	15	2/11/16	10:45	W		4		X		X																		X	

RELINQUISHED BY: (Signature) DATE/TIME 2/11/16 13:30 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

3

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 33.0+0.2 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

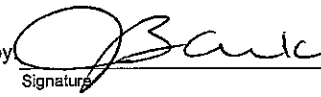
10/26/2015

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Pastor, Behling & Wheeler** Date Received: **2/11/2016**

Work Order Number **1602130** Received by **JB**

Checklist completed by  2/11/2016 (Signature / Date) Reviewed by 2/11/2016 (Initials / Date)

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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? WO		Checked by JB
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *15-Mar-16*

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.

DHL Analytical, Inc.

Date: *15-Mar-16*

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

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	**Client Sample ID:**	FGD-11
Project:	Oak Grove CCR	**Lab ID:**	1602130-01
Project No:	5164D	**Collection Date:**	02/10/16 09:25 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Oak Grove CCR	**Lab ID:**	1602130-02
Project No:	5164D	**Collection Date:**	02/10/16 10:00 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Oak Grove CCR	**Lab ID:**	1602130-03
Project No:	5164D	**Collection Date:**	02/10/16 11:25 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Oak Grove CCR	**Lab ID:**	1602130-04
Project No:	5164D	**Collection Date:**	02/10/16 12:00 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Oak Grove CCR	**Lab ID:**	1602130-05
Project No:	5164D	**Collection Date:**	02/10/16 01:05 PM
Lab Order:	1602130	**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	J	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℃	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	**Client Sample ID:**	FGD-2
Project:	Oak Grove CCR	**Lab ID:**	1602130-06
Project No:	5164D	**Collection Date:**	02/10/16 01:50 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Oak Grove CCR	**Lab ID:**	1602130-07
Project No:	5164D	**Collection Date:**	02/10/16 02:50 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Oak Grove CCR	**Lab ID:**	1602130-08
Project No:	5164D	**Collection Date:**	02/10/16 04:15 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Oak Grove CCR	**Lab ID:**	1602130-09
Project No:	5164D	**Collection Date:**	02/10/16 04:50 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-08
Project:	Oak Grove CCR	**Lab ID:**	1602130-10
Project No:	5164D	**Collection Date:**	02/10/16 05:55 PM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-07
Project:	Oak Grove CCR	**Lab ID:**	1602130-11
Project No:	5164D	**Collection Date:**	02/11/16 07:45 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-09
Project:	Oak Grove CCR	**Lab ID:**	1602130-12
Project No:	5164D	**Collection Date:**	02/11/16 08:30 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	AL-10
Project:	Oak Grove CCR	**Lab ID:**	1602130-13
Project No:	5164D	**Collection Date:**	02/11/16 09:05 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-02
Project:	Oak Grove CCR	**Lab ID:**	1602130-14
Project No:	5164D	**Collection Date:**	02/11/16 09:35 AM
Lab Order:	1602130	**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℃	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	**Client Sample ID:**	MW-05
Project:	Oak Grove CCR	**Lab ID:**	1602130-15
Project No:	5164D	**Collection Date:**	02/11/16 10:45 AM
Lab Order:	1602130	**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℃	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	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	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: 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	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: 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	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	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: 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	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

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	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 **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	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 **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	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 **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	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 **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	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_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	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 **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	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 **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	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 **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
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 **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	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 **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	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 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	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

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			

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

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	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

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			

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: 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	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: 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			

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: 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	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: 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	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: 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℃**
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℃**
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	

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: TITRATOR_160212A

Sample ID **ICV-160212**	Batch ID: **R84145**	TestNo: **M4500-H+ B**	Units: **pH Units@22.4℃**
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℃**
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℃**
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	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_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	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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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 C Day

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 Anna C Day

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
Sample ID: 391437001
Matrix: Water
Collect Date: 10-FEB-16 09:25
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		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
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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-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).

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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-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).

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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-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).

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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).

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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).

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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
Sample ID: 391437010
Matrix: Water
Collect Date: 10-FEB-16 17:55
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	0.450	+/-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	Project:	DHLA00112
Sample ID:	391437011	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	11-FEB-16 07:45		
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	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
Sample ID: 391437013
Matrix: Water
Collect Date: 11-FEB-16 09:05
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		1.19	+/-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
Sample ID: 391437014
Matrix: Water
Collect Date: 11-FEB-16 09:35
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		1.61	+/-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	Project:	DHLA00112
Sample ID:	391437015	Client ID:	DHLA002
Matrix:	Water		
Collect Date:	11-FEB-16 10:45		
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	0.397	+/-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).

QC Summary

Report Date: March 15, 2016

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.

QC Summary

Workorder: **391437**

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.

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

391437

CHAIN-OF-CUSTODY RECORD

Work Order: 1602130

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

		Date/Time			Date/Time
Relinquished by:	[signature]	2/11/16 1730	**Received by:**	Fed ex	2/11/16 1730
Relinquished by:			**Received by:**	[signature]	2/16/16 8:40

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1602130

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:	[signature]	2/11/16 1730	**Received by:**	Fed ex	2/11/16 1730
Relinquished by:			**Received by:**	[signature] mark	2/16/16 8:40

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DHLA		**SDG/AR/COC/Work Order:** 391437	
Received By: Shanta mack		**Date Received:** 2/16/16 8:40	
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): Background
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 14 C
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): ES03207585
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 7756 3067 8989

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials ADV Date 2/16/16 Page 1 of 1 GL-CHL-SR-001 Rev 2

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

Order No.: 1604175

RE: Luminant - Oak Grove

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1604175 ..... **8**

WorkOrderSampleSummary 1604175 ..... **9**

PrepDatesReport 1604175 ..... **10**

AnalyticalDatesReport 1604175 ..... **15**

Analytical Report 1604175 ..... **20**

AnalyticalQCSummaryReport 1604175 ..... **37**

Subcontract Report 1604175 ..... **66**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 70848

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: 4-15-16 PAGE 1 OF 2
PO #: 5164-D DHL WORK ORDER #: 1604175
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT 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: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO [METHOD 8015] ❑ DRO [METHOD 8105] ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8082 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | RCRA ❑ TX11 ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ❑ ANIONS ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
FGD-2	01	4-14-16	0815	W	P	4						X	
FGD-3	02	"	0905	W	P	4						X	
FGD-6	03	"	1000	W	P	4						X	
FGD-4	04	"	1050	W	P	4						X	
FGD-5	05	"	1140	W	P	4						X	
FGD-1	06	"	1235	W	P	4						X	
FGD-8	07	"	1450	W	P	4						X	
FGD-12	08	"	1540	W	P	4						X	
FGD-11	09	"	1630	W	P	4						X	
MW07	10	4-15-16	0750	W	P	4						X	
AL-10	11	"	0915	W	P	4						X	
MW02	12	"	1020	W	P	4						X	
MW09	13	"	1120	W	P	4						X	
MWD8	14	"	1225	W	P	4						X	
DUP-1	10	"	1225	W	P	4						X	

RELINQUISHED BY: (Signature) DATE/TIME 4/18/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☒
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 0.4 THERM #: 78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☒ NOT USED
CARRIER: ❑ LONE STAR ❑ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
☒ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

№ 70849

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 #: 1604175
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

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

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ T PHOS, AMMONIA ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ DISS. METALS ☐ | METALS 6020 ☐ METALS 200.8 ☐ _____ ☐ | RCRA ☐ TX11 ☐ _____ ☐ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS _____ ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	SEE ATTACHED	FIELD NOTES
EB-1	16	4-15-16	0825	W	P	4						X	
MW05	17	4-15-16	1340	W	P	4						X	

RELINQUISHED BY: (Signature) DATE/TIME 4/18/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 0.9 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

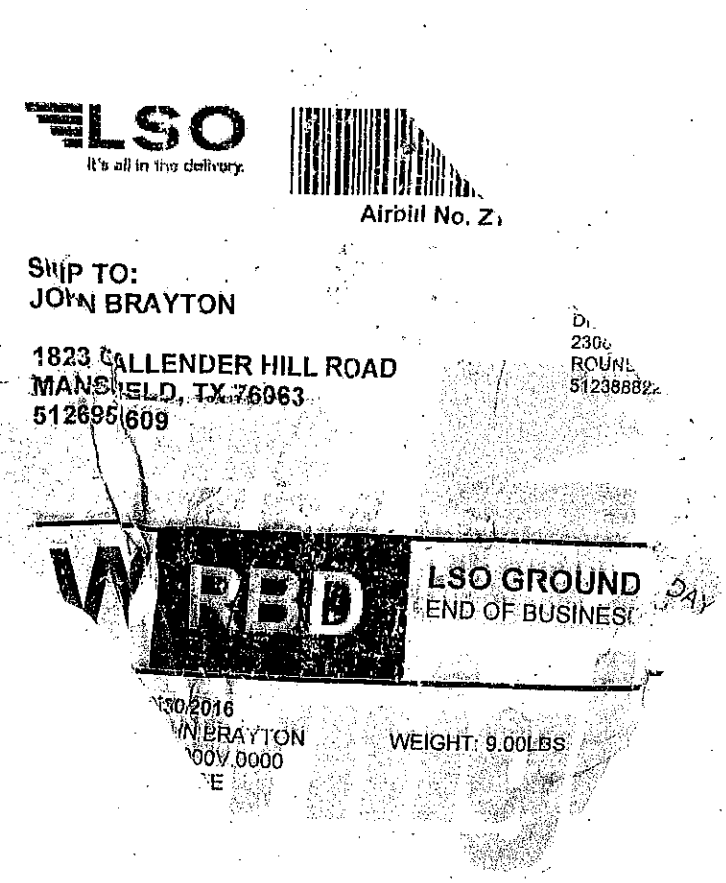
Appendix IV
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

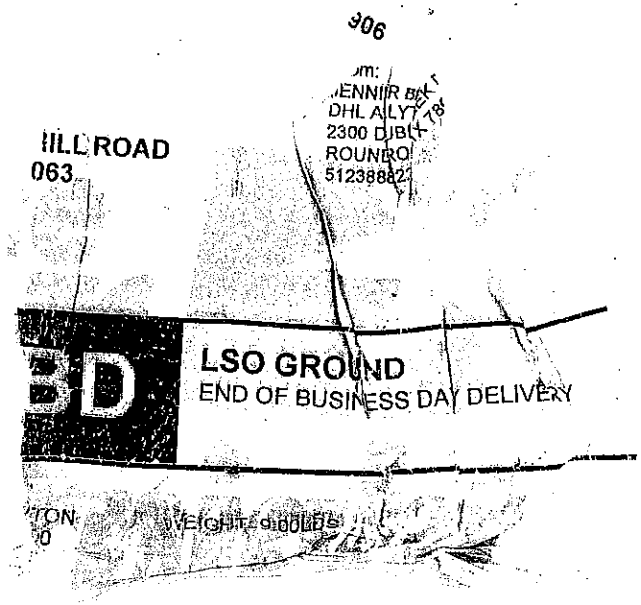
We are looking to have approximately 74 wells sampled 8 times over the course of the next two years. Please let me know if there is any more information you might need.

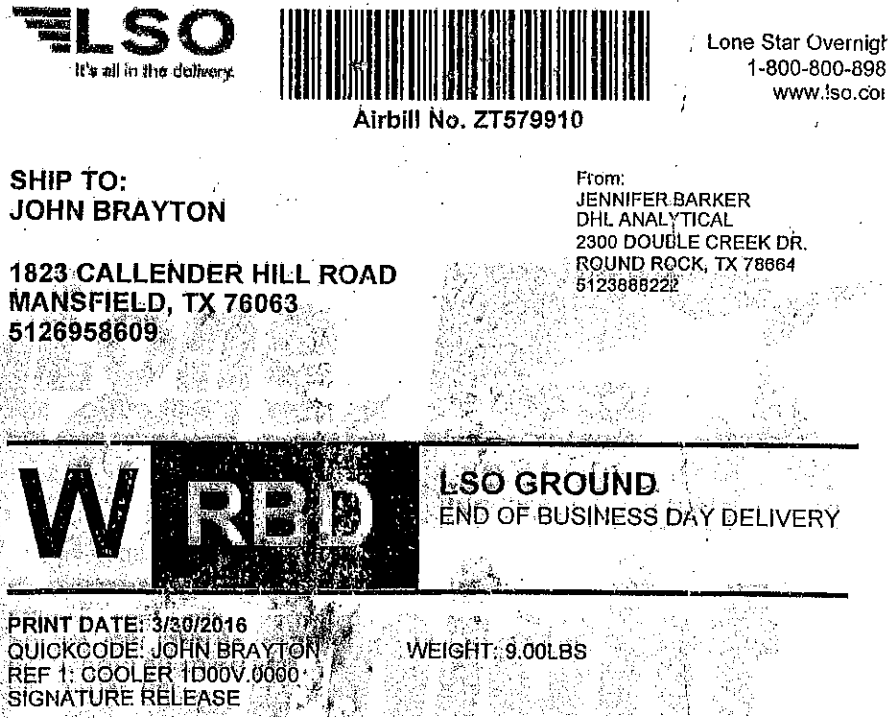
Cheers,

Sara

10/26/2015


LSO
It's all in the delivery.
Airbill No. Z
SHIP TO:
JOHN BRAYTON
1823 CALLENDER HILL ROAD
MANSFIELD, TX 76063
5126958609
WRBD
LSO GROUND
END OF BUSINES
WEIGHT: 9.00LBS


LSO GROUND
END OF BUSINESS DAY DELIVERY


LSO
It's all in the delivery.
Airbill No. ZT579910
Lone Star Overnigt
1-800-800-898
www.lso.co
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
5123868222
WRBD
LSO GROUND
END OF BUSINESS DAY DELIVERY
PRINT DATE: 3/30/2016
QUICKCODE: JOHN BRAYTON
REF 1: COOLER 1D00V.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: _____ 4/18/2016 Reviewed by _____ 4/18/2016
Signature Date Initials Date

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 10.6°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? NO		Checked by
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 _____

DHL Analytical, Inc. **Date:** *26-May-16*

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.

DHL Analytical, Inc.

Date: *26-May-16*

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
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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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-01
Project No:	5164-D	**Collection Date:**	04/14/16 08:15 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-02
Project No:	5164-D	**Collection Date:**	04/14/16 09:05 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-03
Project No:	5164-D	**Collection Date:**	04/14/16 10:00 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-04
Project No:	5164-D	**Collection Date:**	04/14/16 10:50 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-05
Project No:	5164-D	**Collection Date:**	04/14/16 11:40 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-06
Project No:	5164-D	**Collection Date:**	04/14/16 12:35 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-07
Project No:	5164-D	**Collection Date:**	04/14/16 02:50 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-08
Project No:	5164-D	**Collection Date:**	04/14/16 03:40 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-09
Project No:	5164-D	**Collection Date:**	04/14/16 04:30 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-10
Project No:	5164-D	**Collection Date:**	04/15/16 07:50 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-11
Project No:	5164-D	**Collection Date:**	04/15/16 09:15 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-12
Project No:	5164-D	**Collection Date:**	04/15/16 10:20 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-13
Project No:	5164-D	**Collection Date:**	04/15/16 11:20 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-08
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-14
Project No:	5164-D	**Collection Date:**	04/15/16 12:25 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	DUP-1
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-15
Project No:	5164-D	**Collection Date:**	04/15/16 12:25 PM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	EB-1
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-16
Project No:	5164-D	**Collection Date:**	04/15/16 08:25 AM
Lab Order:	1604175	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1604175-17
Project No:	5164-D	**Collection Date:**	04/15/16 01:40 PM
Lab Order:	1604175	**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℃	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	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: 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	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

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	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 **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	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 **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	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**

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	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 **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	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 **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	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 **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	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

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	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 **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			

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_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	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_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	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_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	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_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			

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_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	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_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	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_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	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: 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	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: 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	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: 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	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: 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	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: 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℃**

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℃**

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	

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: TITRATOR_160420A

Sample ID	**ICV-160420**	Batch ID:	**R85330**	TestNo:	**M4500-H+ B**	Units:	**pH Units@21.8℃**
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℃**
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℃**
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	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: 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	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

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:

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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.

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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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

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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

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

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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	LCSD RPD	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:

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
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DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

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				
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

		Date/Time			Date/Time
Relinquished by:	Jorge	4/18/16 17:30	**Received by:**	LoneStar	4/18/16 17:30
Relinquished by:			**Received by:**		4/20/16 10:38

2016037 4

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

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

L830741

		Date/Time			Date/Time
Relinquished by:	Jtower	4/18/16 17:30	**Received by:**	LoneStar	4/18/16 17:30
Relinquished by:			**Received by:**		4/20/16 1038

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** ND **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 04/20/16 pm labd with sample date "04/14/16" and a printed label (which matches coc) with "04/15/16" pm

Inspected By: _____ **DATE** 4/20/16

QA or Designee Review: Raymond Vaughn **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

Order No.: 1606193

RE: Oak Grove

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16

Table of Contents

Miscellaneous Documents 3

CaseNarrative 1606193 9

WorkOrderSampleSummary 1606193 10

PrepDatesReport 1606193 11

AnalyticalDatesReport 1606193 16

Analytical Report 1606193 22

AnalyticalQCSummaryReport 1606193 39

Subcontract Report 1606193 65

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 71585

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: 6-16-16 PAGE 1 OF 2
PO #: 5164-D DHL WORK ORDER #: 1606193
PROJECT LOCATION OR NAME: OAKGROVE-
CLENT 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: HCl, HNO_3, H_2SO_4 ❑ NaOH ❑, ICE, UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ (METHOD 8021); TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑; GRO (METHOD 8015) ❑ DRO (METHOD 8105) ❑; VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑; SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑; 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑; 8321 HERB ❑ T PHOS; AMMONIA ❑; METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑; RCRA ❑ TX11 ❑; PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑; CHLORIDE ❑ ANIONS ❑; TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑; TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑; RCI ❑ FLASHPOINT ❑ DGAS ❑; TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑; SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	FIELD NOTES
FGD-3	01	6-14-16	1100	W	P	4				X		
FGD-4	02		1155	W	P	4				X		
FGD-6	03		1255	W	P	4				X		
FGD-2	04		1350	W	P	4				X		
FGD-8	05		1500	W	P	4				X		
FGD-1	06	6-15-16	1555	W	P	4				X		
FGD-11	07		1005	W	P	4				X		
FGD-12	08		1105	W	P	4				X		
FGD-5	09		1200	W	P	4				X		
MW-07	10		1320	W	P	4				X		
MW-05	11		1415	W	P	4				X		
MW-09	12		1605	W	P	4				X		
BL-10	13	6-16-16	0835	W	P	4				X		
MW-02	14		1040	W	P	4				X		
MW-08	15		1250	W	P	4				X		

RELINQUISHED BY: (Signature) DATE/TIME 6-16-16 1730 RECEIVED BY: (Signature) FedEx
RELINQUISHED BY: (Signature) FedEx DATE/TIME 6/17/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return 3

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☑
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 5.3, 5.1.5.1 THERM #: -78
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ☒ NOT USED
CARRIER: ❑ LONE STAR ☒ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

№ 71586

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 2 OF 2
PO #: 5164-D DHL WORK ORDER #: 1606193
PROJECT LOCATION OR NAME: OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BRAYTON

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

PRESERVATION: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO [METHOD 8015] ❑ DRO [METHOD 8105] ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ ___ ❑ | RCRA ❑ TX11 ❑ ___ | PH ❑ HEX. CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ❑ ANIONS ___ ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	SEE ATTACHED	FIELD NOTES
DUP-1	16	6-16-16	1250	W	P	4				X		X	
EB-1	17	1	1330	W	P	4				X		X	

OK 6/17/16

RELINQUISHED BY: (Signature) DATE/TIME 6-16-16 1730 RECEIVED BY: (Signature) FedEx
RELINQUISHED BY: (Signature) FedEx DATE/TIME 6/17/16 10:20 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return 4

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☒
OTHER ❑ ___

LABORATORY USE ONLY:
RECEIVING TEMP: 5.3 5.1 THERM #: 76
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:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR
SUITE 4004
ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 16JUN16
ACTWGT: 52.90 LB
CAD: 6995323/SSFO1704
DIMS: 23x16x14 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

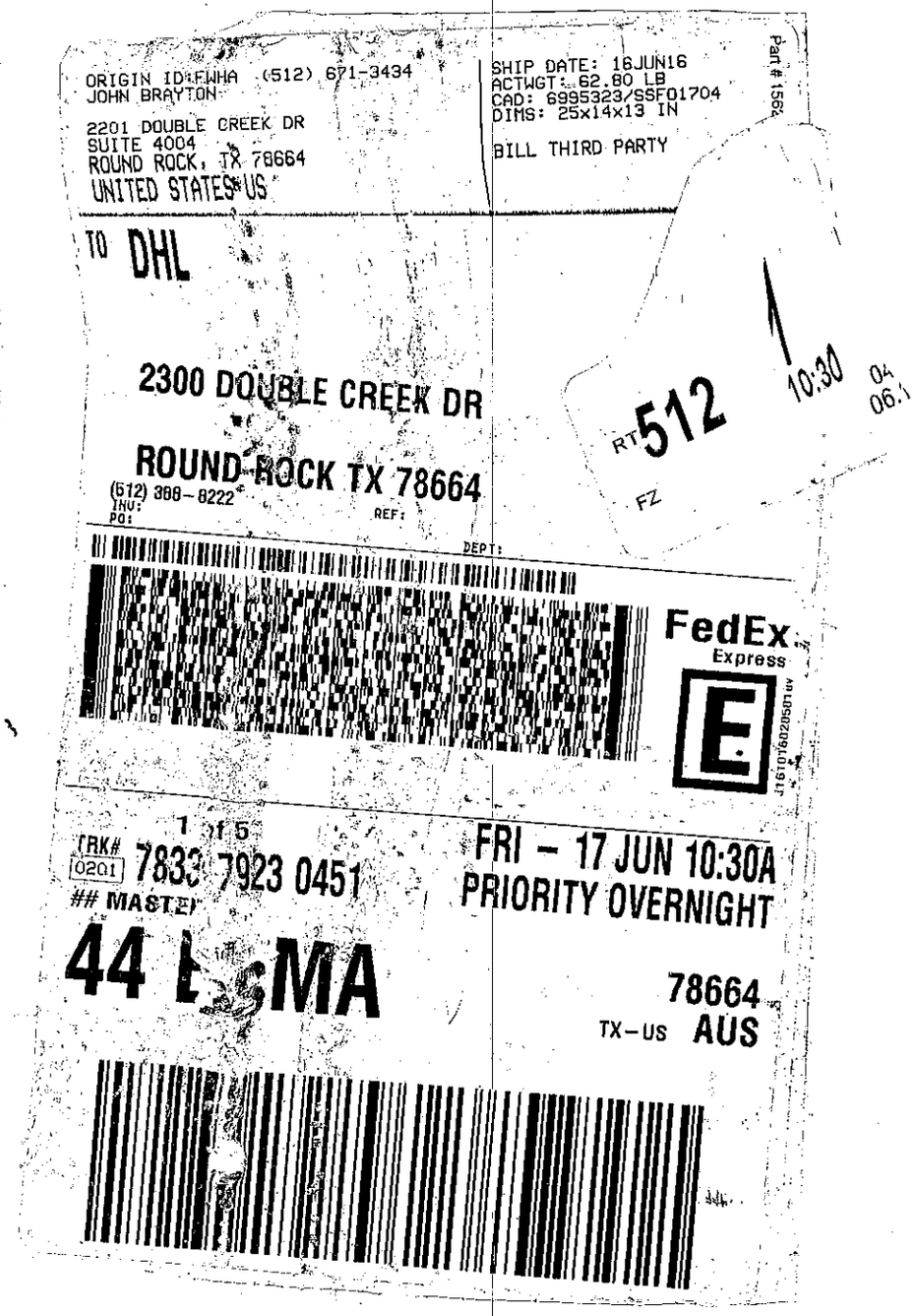
2 of 5
MPS# 0263 7833 7923 0462
Mstr# 7833 7923 0451

FRI - 17 JUN 10:30A
PRIORITY OVERNIGHT

44 BSMA

0201

78664
TX-US AUS



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: 62.80 LB
CAD: 6995323/SSFO1704
DIMS: 25x14x13 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

1 of 5
TRK# 0201 7833 7923 0451

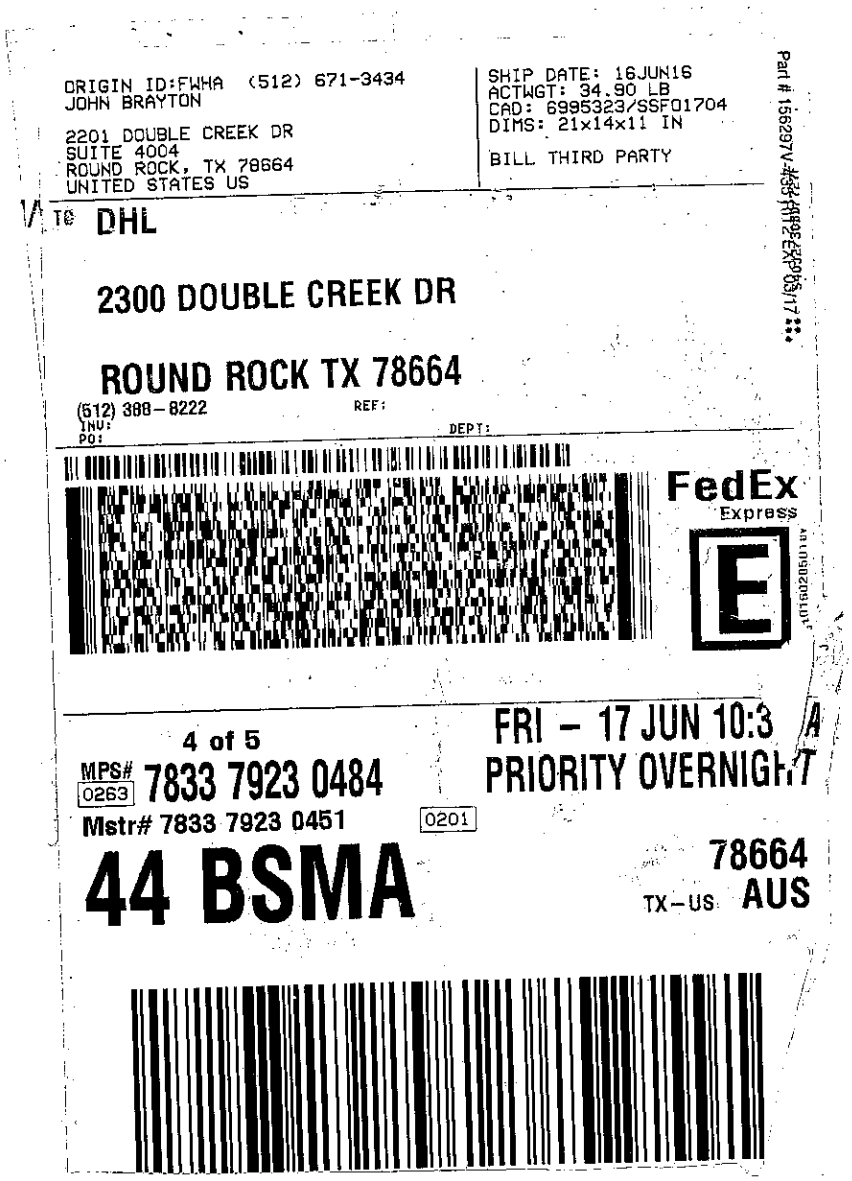
FRI - 17 JUN 10:30A
PRIORITY OVERNIGHT

MASTER

44 BSMA

78664
TX-US AUS

RT 512
FZ
10:30



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-##### EXP 06/17

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 388-8222 REF:

INV: DEPT:

PO:

FedEx Express

4 of 5

MPS# 0263 7833 7923 0484

Mstr# 7833 7923 0451

0201

FRI - 17 JUN 10:3 A

PRIORITY OVERNIGHT

44 BSMA

78664

TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Pastor, Behling & Wheeler** Date Received: **6/17/2016**

Work Order Number **1606193** Received by **JT**

Checklist completed by: _____ 6/17/2016 Reviewed by _____ 6/17/2016
Signature Date Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 5.1 5.1
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
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 _____

DHL Analytical, Inc. **Date:** *03-Aug-16*

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.

DHL Analytical, Inc.

Date: *03-Aug-16*

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

DHL Analytical, Inc.

Date: *03-Aug-16*

CLIENT:	Pastor, Behling & Wheeler	**Client Sample ID:**	FGD-3
Project:	Oak Grove	**Lab ID:**	1606193-01
Project No:	5164-D	**Collection Date:**	06/14/16 11:00 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Oak Grove	**Lab ID:**	1606193-02
Project No:	5164-D	**Collection Date:**	06/14/16 11:55 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Oak Grove	**Lab ID:**	1606193-03
Project No:	5164-D	**Collection Date:**	06/14/16 12:55 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Oak Grove	**Lab ID:**	1606193-04
Project No:	5164-D	**Collection Date:**	06/14/16 01:50 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Oak Grove	**Lab ID:**	1606193-05
Project No:	5164-D	**Collection Date:**	06/14/16 03:00 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Oak Grove	**Lab ID:**	1606193-06
Project No:	5164-D	**Collection Date:**	06/15/16 03:55 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Oak Grove	**Lab ID:**	1606193-07
Project No:	5164-D	**Collection Date:**	06/15/16 10:05 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Oak Grove	**Lab ID:**	1606193-08
Project No:	5164-D	**Collection Date:**	06/15/16 11:05 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Oak Grove	**Lab ID:**	1606193-09
Project No:	5164-D	**Collection Date:**	06/15/16 12:00 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-07
Project:	Oak Grove	**Lab ID:**	1606193-10
Project No:	5164-D	**Collection Date:**	06/15/16 01:20 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-05
Project:	Oak Grove	**Lab ID:**	1606193-11
Project No:	5164-D	**Collection Date:**	06/15/16 02:15 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-09
Project:	Oak Grove	**Lab ID:**	1606193-12
Project No:	5164-D	**Collection Date:**	06/15/16 04:05 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	AL-10
Project:	Oak Grove	**Lab ID:**	1606193-13
Project No:	5164-D	**Collection Date:**	06/16/16 08:35 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-02
Project:	Oak Grove	**Lab ID:**	1606193-14
Project No:	5164-D	**Collection Date:**	06/16/16 10:40 AM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	MW-08
Project:	Oak Grove	**Lab ID:**	1606193-15
Project No:	5164-D	**Collection Date:**	06/16/16 12:50 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	DUP-1
Project:	Oak Grove	**Lab ID:**	1606193-16
Project No:	5164-D	**Collection Date:**	06/16/16 12:50 PM
Lab Order:	1606193	**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℃	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	**Client Sample ID:**	EB-1
Project:	Oak Grove	**Lab ID:**	1606193-17
Project No:	5164-D	**Collection Date:**	06/16/16 01:30 PM
Lab Order:	1606193	**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℃	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	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	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: 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	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: 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	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	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: 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	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

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	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 **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	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 **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	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 **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	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 **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	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_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			

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_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	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_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	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_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	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: 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	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: 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	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

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	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 **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	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

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℃**
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℃**
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	

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℃**
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℃**
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℃**
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℃**
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	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_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℃**
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	

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_160617B

Sample ID	**ICV-160617**	Batch ID:	**R86395**	TestNo:	**M4500-H+ B**	Units:	**pH Units@21.9℃**
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℃**
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℃**
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	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: 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	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: 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	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

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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 65 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

66

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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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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

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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	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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:

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1606193

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

LR48016
1606589

		Date/Time			Date/Time
Relinquished by:		6/17/16 1730	**Received by:**		6/17/16 1730
Relinquished by:			**Received by:**		

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1606193

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

		Date/Time			Date/Time
Relinquished by:		6/17/16 1730	**Received by:**	Lonestar	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			SM 7500 Ra B M*						
Radium-228			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 1 **Custody Seals Broken** 0 ☐ **Temperature:** NA **C** **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken 0 **Chain of Custody Record** ☐ ✓ **Labels in Tact** ☐ ✓ **Radiation Survey Complete** ☐ NA

Anomalies

Inspected By: _____ **DATE** 6/21/16

QA or Designee Review: _____ **DATE** _____

Sample Custodian Review: _____ **DATE** 6/21/16

Project Notes:

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

Order No.: 1608276

RE: Luminant - Oak Grove

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-16

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1608276 ..... **8**

WorkOrderSampleSummary 1608276 ..... **9**

PrepDatesReport 1608276 ..... **10**

AnalyticalDatesReport 1608276 ..... **15**

Analytical Report 1608276 ..... **20**

AnalyticalQCSummaryReport 1608276 ..... **36**

Subcontract Report 1608276 ..... **70**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

Nº 72318
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 2
PO #: 5164-D DHL WORK ORDER #: 1608276
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT PROJECT #: 5164-D COLLECTOR: J. BEAUTON

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: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 PCB ☐ | 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ | 8321 HERB ☐ T PHOS, AMMONIA ☐ | METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ ___ ☐ | RCRA ☐ TX11 ☐ ___ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS ___ ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
FGD-2	01	8-24-16	1020	W	P	4		X		X	X	X	
FGD-3	02		1115	W	P	4		X		X	X	X	
FGD-4	03		1200	W	P	4		X		X	X	X	
FGD-6	04		1250	W	P	4		X		X	X	X	
FGD-5	05		1340	W	P	4		X		X	X	X	
FGD-1	06		1430	W	P	4		X		X	X	X	
MW-07	07		1520	W	P	4		X		X	X	X	
MW-05	08		1620	W	P	4		X		X	X	X	
DUP-01	09		1620	W	P	4		X		X	X	X	
EB-1	10		1640	W	P	4		X		X	X	X	
FGD-8	11		1735	W	P	4		X		X	X	X	
AL-10	12	8-25-16	0850	W	P	4		X		X	X	X	
MW-02	13		1000	W	P	4		X		X	X	X	
MW-09	14		1105	W	P	4		X		X	X	X	
FGD-11	15		1205	W	P	4		X		X	X	X	

RELINQUISHED BY: (Signature) DATE/TIME 8-26-16 1730 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) DATE/TIME 8/27/16 10:00 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ ___

LABORATORY USE ONLY:
RECEIVING TEMP: 1.8, 4.0, 3.5 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 72319

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 2 OF 2
PO #: 5164-D DHL WORK ORDER #: 1608276
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE
CLENT 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: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021] | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO (METHOD 8015] ❑ DRO (METHOD 8105] ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ T PHOS, AMMONIA ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | RCRA ❑ TX11 ❑ ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ❑ ANIONS ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ | SEE ATTACHED

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
FGD-12	14	8-25-16	1305	W	P	4		X		X	X	X	

RELINQUISHED BY: (Signature) DATE/TIME 8-26-16 RECEIVED BY: (Signature) 1730
RELINQUISHED BY: (Signature) DATE/TIME 8/27/16 RECEIVED BY: (Signature) 1000
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☒
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 1.5, 1.0, 3.5 THERM #: 28
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:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 26AUG16
ACTWGT: 56.00 LB
CAD: 6991003/SSFO1704
DIMS: 24x14x14 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

1 of 3

TRK# 0201 7839 3247 1021

MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BSMA

78664
TX-US AUS

ORIGIN ID:FWHA (512) 671-3434
JOHN BRAYTON

2201 DOUBLE CREEK DR STE 4004

ROUND ROCK, TX 78664
UNITED STATES US

SHIP DATE: 26AUG16
ACTWGT: 55.50 LB
CAD: 6991003/SSFO1704
DIMS: 24x14x14 IN

BILL THIRD PARTY

TO DHL

2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

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

FedEx Express

2 of 3

MPS# 0263 7839 3247 1032

Mstr# 7839 3247 1021 0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BSMA

78664
TX-US AUS

MPS# 0263 7839 3247 1043

SATURDAY 12:00
PRIORITY OVERNIGH

XO BSMA

78664
TX-US
AUS

5169367 27Aug 00:46 MEMH 512C1/6323/0R60

Part # 156297V-496 RIT2 APV EXP 08/17

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name Pastor, Behling & Wheeler

Date Received: 8/27/2016

Work Order Number 1608276

Received by JB

Checklist completed by: _____ 8/29/2016
Signature | Date

Reviewed by _____ 8/29/2016
Initials | Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *26-Sep-16*

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.

DHL Analytical, Inc.

Date: *26-Sep-16*

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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160831B
	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_160906C
	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-01
Project No:	5164-D	**Collection Date:**	08/24/16 10:20 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-02
Project No:	5164-D	**Collection Date:**	08/24/16 11:15 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-03
Project No:	5164-D	**Collection Date:**	08/24/16 12:00 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-04
Project No:	5164-D	**Collection Date:**	08/24/16 12:50 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-05
Project No:	5164-D	**Collection Date:**	08/24/16 01:40 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-06
Project No:	5164-D	**Collection Date:**	08/24/16 02:30 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-07
Project No:	5164-D	**Collection Date:**	08/24/16 03:20 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-08
Project No:	5164-D	**Collection Date:**	08/24/16 04:20 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	DUP-01
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-09
Project No:	5164-D	**Collection Date:**	08/24/16 04:20 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	EB-1
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-10
Project No:	5164-D	**Collection Date:**	08/24/16 04:40 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-11
Project No:	5164-D	**Collection Date:**	08/24/16 05:35 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-12
Project No:	5164-D	**Collection Date:**	08/25/16 08:50 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-13
Project No:	5164-D	**Collection Date:**	08/25/16 10:00 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-14
Project No:	5164-D	**Collection Date:**	08/25/16 11:05 AM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-15
Project No:	5164-D	**Collection Date:**	08/25/16 12:05 PM
Lab Order:	1608276	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove	**Lab ID:**	1608276-16
Project No:	5164-D	**Collection Date:**	08/25/16 01:05 PM
Lab Order:	1608276	**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℃	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	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	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: 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	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: 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	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	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: 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			

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

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	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 **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	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 **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	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 **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: 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	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 **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	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 **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			

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_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	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_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	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_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			

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

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	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 **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	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 **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	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 **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	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 **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	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 **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			

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

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	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

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	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

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	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_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	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_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	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: 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℃**

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℃**

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	

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: 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℃**
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	

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: TITRATOR_160831A

Sample ID	**ICV-160831**	Batch ID:	**R87906**	TestNo:	**M4500-H+ B**	Units:	**pH Units@21.9℃**
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℃**
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℃**
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℃**
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℃**
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℃**
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	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: 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	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

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:

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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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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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

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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

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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

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1608276

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

2d60843 L857240

		Date/Time			Date/Time
Relinquished by:	[signature]	8/29/16 1735	Received by:	[signature]	8/29/16 1735
Relinquished by:			Received by:	[signature]	8/31/16 1045

CSL

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1608276

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

70160843

		Date/Time		Date/Time
Relinquished by:	Barla	8/29/16 1735	Received by:	8/29/16 1735
Relinquished by:			Received by:	Amber Taylor 8/31/16 1045

CSL

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	Plastic	500 ml	HNO3, pH < 2	✓	Yes	Yes

Radium-226	SM 7500 Ra B M*
Radium-228	EPA 904*/9320*

CONTAINER INSPECTION

 # Coolers 1 **Custody Seals Broken** N **Temperature:** Amb **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken N **Chain of Custody Record** ✓ **Labels in Tact** ✓ **Radiation Survey Complete** N/A

Anomalies

Inspected By: Amber Taylor **DATE** 8/31/16

QA or Designee Review: [signature] **DATE** 8/31/16

Sample Custodian Review: [signature] **DATE** 8/31/16

Project Notes:

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-17

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1610036 ..... **9**

WorkOrderSampleSummary 1610036 ..... **11**

PrepDatesReport 1610036 ..... **12**

AnalyticalDatesReport 1610036 ..... **16**

Analytical Report 1610036 ..... **20**

AnalyticalQCSummaryReport 1610036 ..... **36**

Subcontract Report 1610036 ..... **60**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 72887
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 MENNIE
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
CLENT 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

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES: BTEX ❑ MTBE ❑ (METHOD 8021)	TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑	GRO (METHOD 8015) ❑ DRO (METHOD 8105) ❑	VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑	SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑	8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑	8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑	8321 HERB ❑ T PHOS, AMMONIA ❑	METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑	RCRA ❑ TX11 ❑ _____ ❑	PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑	CHLORIDE ❑ ANIONS _____ ❑	TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑	TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑	RCI ❑ FLASHPOINT ❑ DGAS ❑	TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑	CCR SAMPLING	FIELD NOTES
MW-02	01	10-4-16	0950	W	P	4		X		X	X																	X	
AL-10	02		1050	W	P	4		X		X	X																	X	
MW-09	03		1145	W	P	4		X		X	X																	X	
MW-05	04		1240	W	P	4		X		X	X																	X	
DUP-01	05		1240	W	P	4		X		X	X																	X	
MW-07	06		1325	W	P	4		X		X	X																	X	

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	10-5-16	1730 Fedex
Fedex	10/6/16	9:25
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

3

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

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 72886

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: 10-5-16 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1610036
PROJECT LOCATION OR NAME: LUMINANT - OAK GROVE - FGD POND AREA
CLENT PROJECT #: 5164-D COLLECTOR: J. BEAMON

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

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: CCR SAMPLING	FIELD NOTES
FGD-11	07	10-4-16	1615	W	P	4		X		X	X	X	
FGD-12	08	10-4-16	1710	W	P	4		X		X	X	X	
FGD-8	09	10-5-16	0755	W	P	4		X		X	X	X	
FGD-1	10		0845	W	P	4		X		X	X	X	
FGD-5	11		0930	W	P	4		X		X	X	X	
FGD-2	12		1020	W	P	4		X		X	X	X	
FGD-4	13		1110	W	P	4		X		X	X	X	
FGD-6	14		1155	W	P	4		X		X	X	X	
FGD-3	15		1250	W	P	4		X		X	X	X	
EB-1	16		1320	W	P	4		X		X	X	X	

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8021] TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ VOC [METHOD 8260] ☐ VOC 8260/5035 ☐ SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ VOC 624 ☐ VOC 8260 ☐ 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐ 8321 HERB ☐ T PHOS, AMMONIA ☐ METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ RCRA ☐ TX11 ☐ PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ CHLORIDE ☐ ANIONS ☐ TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ RCI ☐ FLASHPOINT ☐ DGAS ☐ TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐

RELINQUISHED BY: (Signature) DATE/TIME 10-5-16 1730 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) Fedex DATE/TIME 10/6/16 9:30 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return 4

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐ X
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 4.9 | 3.4 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

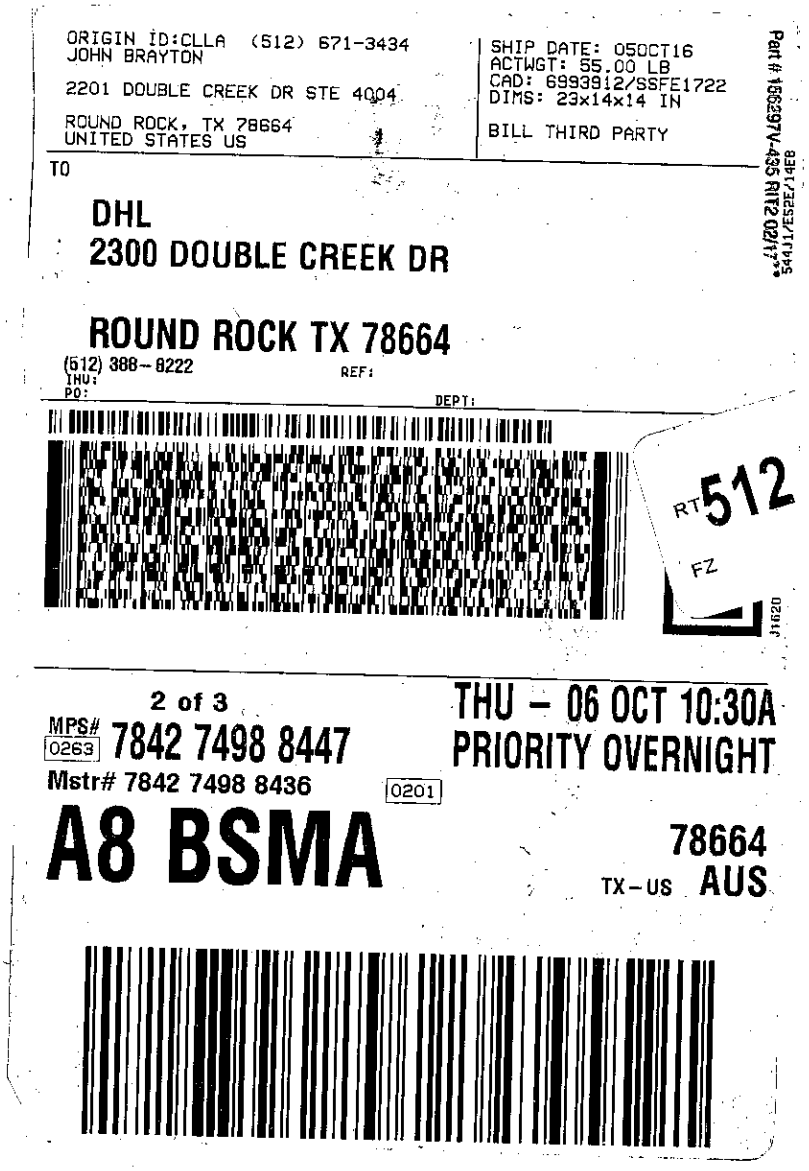
Appendix IV
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Fluoride
Lead
Lithium
Mercury
Molybdenum
Selenium
Thallium
Radium 226 and 228

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 # 156397V-435 RITZ 02/17
5441/E52E/14EB

TO
DHL
2300 DOUBLE CREEK DR

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

RT 512
FZ
J1620

2 of 3
MPS# 0263 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

TO

DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222

INV:
PO:

REF:

DEPT:

FedEx Express

1 of 3

TRK# 0201 7842 7498 8436

MASTER

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

RT 512 FZ

TO

DHL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222

INV:
PO:

REF:

DEPT:

FedEx Express

3 of 3

MPS# 0263 7842 7498 8458

Mstr# 7842 7498 8436 0201

THU - 06 OCT 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

DHL Analytical, Inc.

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 Date

Reviewed by Initials 10/6/2016 Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 4.9, 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
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *02-Nov-16*

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.

DHL Analytical, Inc.

Date: *02-Nov-16*

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_161012A
	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_161012A
	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_161012A
	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_161012A

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_161012A
	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_161012A
	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_161012A
	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	**Client Sample ID:**	MW-02
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-01
Project No:	5164-D	**Collection Date:**	10/04/16 09:50 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	AL-10
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-02
Project No:	5164-D	**Collection Date:**	10/04/16 10:50 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	MW-09
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-03
Project No:	5164-D	**Collection Date:**	10/04/16 11:45 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	MW-05
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-04
Project No:	5164-D	**Collection Date:**	10/04/16 12:40 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	DUP-01
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-05
Project No:	5164-D	**Collection Date:**	10/04/16 12:40 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	MW-07
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-06
Project No:	5164-D	**Collection Date:**	10/04/16 01:25 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-07
Project No:	5164-D	**Collection Date:**	10/04/16 04:15 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-08
Project No:	5164-D	**Collection Date:**	10/04/16 05:10 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-09
Project No:	5164-D	**Collection Date:**	10/05/16 07:55 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-10
Project No:	5164-D	**Collection Date:**	10/05/16 08:45 AM
Lab Order:	1610036	**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	J	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℃	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	**Client Sample ID:**	FGD-5
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-11
Project No:	5164-D	**Collection Date:**	10/05/16 09:30 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-12
Project No:	5164-D	**Collection Date:**	10/05/16 10:20 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-13
Project No:	5164-D	**Collection Date:**	10/05/16 11:10 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-6
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-14
Project No:	5164-D	**Collection Date:**	10/05/16 11:55 AM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-15
Project No:	5164-D	**Collection Date:**	10/05/16 12:50 PM
Lab Order:	1610036	**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℃	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	**Client Sample ID:**	EB-1
Project:	Luminant - Oak Grove - Ash Landfill	**Lab ID:**	1610036-16
Project No:	5164-D	**Collection Date:**	10/05/16 01:20 PM
Lab Order:	1610036	**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℃	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
Project: Luminant - Oak Grove - Ash Landfill

ANALYTICAL QC SUMMARY REPORT

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	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	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: 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	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: 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	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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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	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: 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			

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: 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℃**

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℃**

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	

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: 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℃**
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℃**
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℃**
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℃**
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	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: 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	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

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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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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

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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

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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

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QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1610036

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				

10/10/16

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
1610977

		Date/Time			Date/Time
Relinquished by:	J Banks	10/6/16 1730	**Received by:**	Lorestan	10/6/16 1730
Relinquished by:			**Received by:**		10/11/16 1010

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

Work Order: 1610036

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					
	FGD-1	Aqueous	-10C	10/05/16 08:45 AM	500HDPEHNO3		1				
11	FGD-5	Aqueous	-11B	10/05/16 09:30 AM	500HDPEHNO3	1					
	FGD-5	Aqueous	-11C	10/05/16 09:30 AM	500HDPEHNO3		1				
12	FGD-2	Aqueous	-12B	10/05/16 10:20 AM	500HDPEHNO3	1					
	FGD-2	Aqueous	-12C	10/05/16 10:20 AM	500HDPEHNO3		1				
13	FGD-4	Aqueous	-13B	10/05/16 11:10 AM	500HDPEHNO3	1					
	FGD-4	Aqueous	-13C	10/05/16 11:10 AM	500HDPEHNO3		1				
14	FGD-6	Aqueous	-14B	10/05/16 11:55 AM	500HDPEHNO3	1					
	FGD-6	Aqueous	-14C	10/05/16 11:55 AM	500HDPEHNO3		1				
15	FGD-3	Aqueous	-15B	10/05/16 12:50 PM	500HDPEHNO3	1					
	FGD-3	Aqueous	-15C	10/05/16 12:50 PM	500HDPEHNO3		1				
16	EB-1	Equip Blank	-16B	10/05/16 01:20 PM	500HDPEHNO3	1					
	EB-1	Equip Blank	-16C	10/05/16 01:20 PM	500HDPEHNO3		1				

10/10/16

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

L865260
20160977

		Date/Time			Date/Time
Relinquished by:		10/6/16 1730	**Received by:**		10/6/16 1730
Relinquished by:			**Received by:**		10/10/16 0900

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

Radium-226
Radium-228

SM 7500 Ra B M*
EPA 904*/9320*

CONTAINER INSPECTION

Coolers 1 Custody Seals Broken Ø Temperature: 4.6/5.6 C Ice Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø Chain of Custody Record ✓ Labels in Tact ✓ Radiation Survey Complete N/A

Anomalies several labels had water damage making them illegible: FGD-4, FGD-6, FGD-3, FGD-11

Inspected By: _____ DATE 10/10/16

QA or Designee Review: Raymond Thomas DATE 10/10/16

Sample Custodian Review: Dawn Mann DATE 10/10/16

Project Notes:

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

Order No.: 1612277

RE: Oak Grove FGD Pond Area

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-16-17

Table of Contents

Miscellaneous Documents **3**

CaseNarrative 1612277 ..... **6**

WorkOrderSampleSummary 1612277 ..... **7**

PrepDatesReport 1612277 ..... **8**

AnalyticalDatesReport 1612277 ..... **11**

Analytical Report 1612277 ..... **14**

AnalyticalQCSummaryReport 1612277 ..... **23**

Subcontract Report 1612277 ..... **40**

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 73694

CHAIN-OF-CUSTODY

CLIENT: PBW
ADDRESS: 2201 Double Creek Drive Suite 4004
PHONE: 512 671 3434 FAX/E-MAIL: 512 671 3446
DATA REPORTED TO: Will Vienne
ADDITIONAL REPORT COPIES TO:

DATE: 12/22/16 PAGE 1 OF 1
PO #: 5164-D DHL WORK ORDER #: 1612277
PROJECT LOCATION OR NAME: OAK GROVE FGD POND AREA
CLENT PROJECT #: 5164-D COLLECTOR: CHRIS KAKOLEWSKI

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: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ (METHOD 8021) | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO (METHOD 8015) ❑ DRO (METHOD 8105) ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | RCRA ❑ TX11 ❑ ____ ❑ | PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑ | CHLORIDE ❑ ANIONS ____ ❑ | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ | CCR

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	CCR	FIELD NOTES
FGD-6	01	12/22/16	915	W	P	4		3		X	1	X	
FGD-4	02	12/22/16	1025	W	P	4		3		X	1	X	
FGD-2	03	12/22/16	1130	W	P	4		3		X	1	X	
FGD-5	04	12/22/16	1225	W	P	4		3		X	1	X	
FGD-1	05	12/22/16	1325	W	P	4		3		X	1	X	
~~MW-07~~		~~12/22/16~~	~~1425~~	~~W~~	~~P~~	~~4~~		~~3~~		~~X~~	~~1~~	X	CK
FGD-3	06	12/22/16	1525	W	P	4		3		X	1	X	
~~DUP-01~~		~~12/22/16~~	~~1010~~	~~W~~	~~P~~	~~4~~		~~3~~		~~X~~	~~1~~	X	CK
~~DUP-02~~		~~12/22/16~~	~~1310~~	~~W~~	~~P~~	~~4~~		~~3~~		~~X~~	~~1~~	X	CK
FGD-8	07	12/23/16	0820	W	P	4		3		X	1	X	
FGD-12	08	12/23/16	0930	W	P	4		3		X	1	X	
FGD-11	09	12/22/16	1625	W	P	4		3		X	1	X	

RELINQUISHED BY: (Signature) Chris Kakolewski DATE/TIME 12/23/16 1440 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ☒
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 0.1, 0.2, 0.1 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

DHL Analytical, Inc.

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 Date Reviewed by Initials 12/27/2016 Date

Carrier name Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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? NO		Checked by
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 _____

Page 1 of 1

DHL Analytical, Inc. **Date:** *31-Jan-17*

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.

DHL Analytical, Inc.

Date: *31-Jan-17*

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
	FGD-12	12/23/16 09:30 AM	Aqueous	M2540C	TDS Preparation	12/29/16 03:29 PM	78513
1612277-09A	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_161230B
	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_161230B
	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_161230B
	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_161230B

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_161230B
	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_161230B
	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_161230B
	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_161230B
	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_161230B
	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	**Client Sample ID:**	FGD-6
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-01
Project No:	5164-D	**Collection Date:**	12/22/16 09:15 AM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-4
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-02
Project No:	5164-D	**Collection Date:**	12/22/16 10:25 AM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-2
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-03
Project No:	5164-D	**Collection Date:**	12/22/16 11:30 AM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-5
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-04
Project No:	5164-D	**Collection Date:**	12/22/16 12:25 PM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-1
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-05
Project No:	5164-D	**Collection Date:**	12/22/16 01:25 PM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-3
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-06
Project No:	5164-D	**Collection Date:**	12/22/16 03:25 PM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-8
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-07
Project No:	5164-D	**Collection Date:**	12/23/16 08:20 AM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-12
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-08
Project No:	5164-D	**Collection Date:**	12/23/16 09:30 AM
Lab Order:	1612277	**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℃	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	**Client Sample ID:**	FGD-11
Project:	Oak Grove FGD Pond Area	**Lab ID:**	1612277-09
Project No:	5164-D	**Collection Date:**	12/22/16 04:25 PM
Lab Order:	1612277	**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℃	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	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	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: 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	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

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	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 **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	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 **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	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 **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	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_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	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_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	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_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	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: 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	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: 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	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

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℃**
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℃**
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	

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℃**
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℃**
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℃**
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	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: 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	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: 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	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

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:

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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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
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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

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 42 *EMail: outreach@esclabsciences.com - Tel: (918) 251-2515*

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	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD 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

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 43 *EMail: outreach@esclabsciences.com - Tel: (918) 251-2515*

DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664
TEL: *(512) 388-8222* FAX: *(512) 388-8229*

CHAIN-OF-CUSTODY RECORD

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

C881420
20161291

		Date/Time			Date/Time
Relinquished by:	[signature]	12/27/16 1730	**Received by:**	Dorester	12/27/16 1730
Relinquished by:			**Received by:**	[signature]	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** Ø **Temperature:** fmb C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø **Chain of Custody Record** ☑ **Labels in Tact** ☑ **Radiation Survey Complete** N/A

Anomalies

Inspected By: _____ **DATE** 12/29/16

QA or Designee Review: Raymond Thomas **DATE** 12/29/16

Sample Custodian Review: Latrice Nowodu **DATE** 12/29/16

Project Notes:

Appendix C

Statistical Approach to Establishing Baseline Concentrations

Appendix C. STATISTICAL APPROACH TO ESTABLISHING BASELINE CONCENTRATIONS

This appendix summarizes the statistical approach used for establishing baseline groundwater quality concentrations for the FGD Pond Area Coal Combustion Residual (CCR) groundwater monitoring system. The following statistical approach was selected to demonstrate groundwater compliance under the CCR Rule:

- Use of interwell data evaluations, which compare new sample data to data from upgradient or background monitoring wells.

- Use of upper prediction limits (UPLs) to develop site-specific background concentrations for all Appendix III and Appendix IV constituents. 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 evaluations under the CCR Rule.

- After every detection monitoring event, Appendix III constituent concentrations from each compliance well are compared to background UPLs to ascertain if a statistically significant increase above background exists. Background UPLs are based on a 1-of-2 resampling approach, meaning that if one or more constituent concentrations in a compliance well are above their respective baseline concentration, a resample can be collected to validate or invalidate the baseline concentration exceedance.

- If assessment monitoring is required, the 95% lower confidence limit of the mean (LCL) is calculated after each assessment monitoring event for each Appendix IV constituent and compliance well. The data set used to calculate LCLs is based on current and historical constituent concentrations for a compliance well. A statistically significant increase over the Groundwater Protection Standard (GWPS) has occurred at a CCR unit when the LCL for at least one assessment monitoring constituent at a well is greater than the appropriate GWPS. Development of the GWPSs is discussed in Section C.4.

This approach follows the Statistical Analysis Plan (SAP) (Golder, 2022) and conforms to the 40 CFR 257 rules as well as EPA's *Unified Guidance: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (EPA, 2009) (hereafter, referred to as the Unified Guidance) 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 methodology is designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment.

Section 257.94(b) of the CCR Rule requires that a minimum of eight independent groundwater samples from each background and downgradient well be collected and analyzed for the constituents listed in Appendix III and IV to Part 257 no later than October 17, 2017. To satisfy this requirement, eight groundwater monitoring events were performed from November 2015 through December 2016 using the two upgradient/background wells (FGD-8 and FGD-11) and the seven downgradient compliance wells (FGD-1, FGD-2, FGD-3, FGD-4, FGD-5, FGD-6, and FGD-12) in the FGD Pond Area CCR monitoring well system.

Prior to performing background data evaluations, data from the upgradient wells were prepared for analysis. Methods for handling field duplicate samples and handling non-detects were implemented during this data preparation phase, as presented in Section C.1. Statistical assumptions were evaluated to assess the independence of background data prior to calculating the UPLs, as discussed in Section C.2. In order to calculate UPLs, the distribution of each data set was defined and a site-wide Type I experiment wise error rate was established. UPLs based on a 1-of-2 resampling approach were calculated for detected constituents to establish baseline values for wells hydraulically upgradient of the PAP, as further described in Section C.3. Details about the approach used to evaluate detection and assessment monitoring data after baseline concentrations were established are provided in Section C.4.

C.1 Data Preparation

Analytical data from wells in the groundwater monitoring network at a CCR unit during each sampling event are first reviewed for usability after final data packages are received from the laboratory. The analytical data are then prepared for statistical analysis. The raw sample data can be found in Tables C-1 and C-2 for the Appendix III and Appendix IV constituents, respectively.

Methods for handling duplicate and non-detect data are implemented during this data preparation phase to comply with the performance standards outlined in 40 CFR 257.93. Field duplicates and data rejected after data validation are removed from the data set. Only the primary samples are retained for the statistical evaluation.

In accordance with EPA guidance, non-detects were handled by using one of two approaches depending on the percentage of detected concentrations:

- If a constituent was detected in at least 85% of samples, a simple substitution method was used in which half of the sample detection limit was substituted as a proxy concentration (EPA, 2009; EPA, 2000).

- If a constituent was detected in at least 50% of the samples but no more than 85% of the samples, the Robust Regression Order Statistics (RROS) method was used to estimate summary statistics such as the mean and standard deviation (EPA, 2009).

If the constituent was detected in fewer than 50% of the samples, non-detects were handled by using nonparametric statistical approaches to evaluate the data and to prepare summary statistics (EPA, 2009; EPA, 2000). J-flagged data, estimated concentrations between the sample detection limit and the reporting limit, were defined as detected concentrations.

C.2 Statistical Assumptions

In accordance with Section 257.94(g)(6), the background groundwater sample data used in calculating the UPLs were evaluated for seasonal and spatial variability as well as temporal correlation in the data to assess the independence and usability of the background data to calculate UPLs. Statistical independence was checked by testing for:

- Spatial stationarity,
- Temporal stationarity,
- Lack of autocorrelation, and
- Lack of statistical data outliers.

The statistical software **R** (The R Foundation, 2023) and the EnvStats package (Envstats, 2023) were used to perform the statistical tests to check the validity of independent samples.

To identify the statistical significance across the wells and/or detected Appendix III or Appendix IV constituents, a Type I experiment wise error rate, α, of 0.05 was used and a single test error rate was defined for each statistical test. The single test error rate, was based on the number of constituents detected (d^*), and in some cases the number of constituents detected at least 50% of the time, for a given constituent list. For instance, the single test error rate associated with a statistical test for one of the seven detected Appendix III constituents (d^*=7) equals $1-(1-\alpha)^{1/d^*} = 1-(1-\alpha)^{1/7} = 0.0073$. Table C-3 provides a list of the single test error rates used when testing the statistical assumptions.

Spatial Stationarity

Spatial stationarity is defined as the lack of variability across upgradient well locations that are unaffected by the monitored CCR unit. The one-way analysis of variance (ANOVA) or Kruskal-Wallis test was performed to identify spatial variability. The ANOVA and Kruskal-Wallis tests are appropriate only when there is no evidence of heteroscedasticity, meaning variances are equal across wells. The Fligner or Levene test was performed to test for heteroscedasticity, using α=0.01 error rate, as recommended by the Unified Guidance (EPA, 2009). The ANOVA and Kruskal-Wallis tests used a single test error rate based on the number of tests performed for each constituent list. Results of the ANOVA and Kruskal-Wallis test are presented in Table C-4.

For the FGD Pond Area, none of the Appendix III and Appendix IV constituents among the upgradient wells had statistically significant spatial variability; heteroscedasticity was present so spatial variability could not be identified for arsenic, cobalt, and lithium . The arsenic background sample results in well FGD-8 included three non-detect results and five detects, with three samples having arsenic concentrations that slightly exceeded the MCL for arsenic of 0.01 mg/L and higher arsenic concentrations than those observed in samples from downgradient wells. Arsenic sample concentrations in the other background well, FGD-11, were all non-detect, which resulted in the heteroscedasticity determination. The arsenic sample concentrations for FGD-8 are considered representative of background and usable based on the location of FGD-8 relative to the FGD Ponds and the construction history of the nearest FGD Pond, FGD-C, which was only put into service near the end of the background sampling period after arsenic concentrations that exceeded the MCL had been detected. The background sample concentrations for cobalt and lithium are generally within the natural range of concentrations in the downgradient and other upgradient well. There is no obvious source of the spatial variability observed in the well samples other than natural chemical variability in the uppermost aquifer. As such, the background sample concentrations represent the natural range of Appendix III and Appendix IV constituent concentrations in the uppermost aquifer and are considered usable data for detecting a release from the CCR unit.

Temporal Stationarity and Lack of Autocorrleation

Temporal stationarity is the lack of temporal variability. Temporal variation refers to the concept that concentration levels vary over time, and can be present across a group of wells and/or constituents at

an individual well or for a single constituent. The Mann-Kendall trend test was performed to identify linearly increasing or decreasing trends at each upgradient well. By definition temporal variability also includes autocorrelation. Autocorrelation is the statistical dependence between pairs of concentrations across a sequence of time. That means, pairs of consecutive concentrations exhibit stronger similarity in concentration levels than expected from pairs collected at random times (EPA, 2009). The rank von Neumann ratio test was performed to identify autocorrelation in the upgradient wells. This test was not designed to handle tied values such as non-detect concentrations, and so it was only performed for upgradient wells and constituents with at least 50% detected concentrations. Results of the Mann-Kendall test and rank von Neumann ratio test are presented in Table C-5.

For the FGD Pond Area, no linear trend was identified at MW-8 for Appendix III and Appendix IV constituents. FGD-11 had increasing linear trends and autocorrelation for boron, calcium, and combined Radium-226 and 228; and barium was identified as having autocorrelation only. The cases with significant trends and/or autocorrelation have concentrations within the range of detected baseline concentrations in the downgradient and other upgradient well and are, therefore, considered usable data.

Handling Outliers

Outliers are "extreme, unusual-looking measurements" and the Unified Guidance recommends testing for outliers to attempt to determine whether a suspect outlier was drawn from the same sample population as the rest of the data.

Before establishing baseline values for the detection monitoring or assessment monitoring programs, two steps were taken to check for suspect outliers for each detected constituent across the upgradient wells: a box plot was created to identify suspect outliers as a basis to identify suspect outliers, and if the constituent had at least 50% detected concentrations then the Dixon's test was performed as a formal test to check if a suspect outlier is also a statistical outlier. Box plots and results for the Dixon's test were generated using the statistical software **R** (The R Foundation, 2023). Box plots are provided in Figures C-1 through C-18 and Table C-6 presents the suspect outliers based on the box plots and presents the results from the Dixon's test, based on a 95% level of confidence.

The suspect outliers based on box plots are for Appendix III are field pH (one low concentration of 6.14 s.u.) and sulfate (one high concentration of 476 mg/L). The suspect outliers identified for Appendix IV

are arsenic (one high concentration of 0.0146 mg/L), beryllium (one high concentration of 0.000417 J mg/L), chromium (one high concentration of 0.0107 mg/ L), lead (one high concentration of 0.00381 mg/ L), lithium (two high concentrations of 0.116 and 0.149 mg/ L), and molybdenum (three detected concentrations, 0.00238 J, 0.00404 J, and 0.0261 mg/L). The Dixon's test is appropriate for data sets of fewer than 25 samples, and so Dixon's test was used to evaluate outliers in the baseline data sets. Since there were less than 50% detects for arsenic, beryllium, and molybdenum, the Dixon's test was not performed. The Dixon's test assumes that a data set with the suspect outlier removed is normally distributed (or lognormally distributed if the data are transformed to the natural-log scale). Furthermore, the Dixon's test can only test if one detected concentration (i.e., the minimum or the maximum) is a statistical outlier. Since two high suspect outliers were identified for lithium, the Dixon's test was performed only for the highest lithium detection. And when the maximum lithium detection was removed, the remaining data could not be defined as normal or lognormal, so Dixon's test could not be performed. The Dixon's test was used to test if the suspect outliers for field pH, sulfate, chromium and lead were statistical outliers. For field pH, the results of the Dixon's test did not indicate that the low suspect outlier was a statistical outlier. For sulfate, chromium, and lead, the results of the Dixon's tests indicated that these suspect outliers were also considered statistical outliers. Although the high sulfate concentration was identified as a statistical outlier, it is within the range of baseline concentrations for downgradient wells. Even though chromium and lead each have a statistical outlier and beryllium, lithium, and molybdenum have suspect outliers, each of these Appendix IV constituents had maximum concentrations below the MCL (or RSL for lithium and molybdenum) and within the range of detected baseline concentrations in the downgradient wells. The beryllium suspect outlier is one of the two baseline upgradient detections; three suspect outliers for molybdenum are the only baseline upgradient detections; and the arsenic suspected outlier is one of the five baseline upgradient detections. The suspect and statistical outliers are attributed to natural variability in the groundwater quality and were kept in the baseline data set.

C.3 Statistical Approach for Calculating UPLs

UPLs were calculated for each detected constituent across the upgradient wells to establish baseline values for background. UPLs were calculated to include a 1-of-2 retesting strategy to ensure comparisons are statistically powerful and to achieve the SWFPR. A 1-of-2 retesting strategy means that if one or more constituent concentrations in a compliance well are above their respective baseline concentration, a resample can be collected to validate or invalidate the baseline concentration exceedance.

Background data distributions were defined in accordance with EPA guidance (EPA, 2000; EPA, 2002; EPA, 2009; EPA, 2017; SWDIV, 1998). UPLs were calculated based on the site-wide false positive rate (SWFPR) and defined background data distribution. Power rates were defined for each calculated UPL. The open source, statistical software **R** (The R Foundation, 2023) was used to perform all statistical distribution tests and to calculate UPLs.

Achieving the SWFPR

UPLs were computed using a significance level that ensures a cumulative SWFPR or Type I experiment wise error rate for yearly monitoring that is no more than 10%. That means, a single test error rate for the UPLs must be considerably lower than 0.10. The single test error rate depends on the number of detected constituents and number of compliance wells evaluated in the CCR monitoring program, defined as: $1-(1-\alpha)^{1/cw}$, where:

- α=0.10,
- c=7 or 14, the number detected constituents for the monitoring program for Appendix III and Appendix IV constituents, respectively; and
- w=7, the number of downgradient compliance wells at FGD Pond Area.

The single test error rate for the UPLs is 0.0021 and 0.0011 for the detected Appendix III constituents and Appendix IV constituents, respectively. The Unified Guidance recommends defining the single test error rate for nonparametric UPLs as: $1-(1-\alpha)^{1/c}$, and so the single test error rate for nonparametric UPLs is 0.015 and 0.0075 for the detected Appendix III constituents and Appendix IV constituents, respectively. Since field pH has two bounds, a lower and upper prediction limit, the SWPFR for field pH is one-half of the appropriate SWFPR value shown above.

Defining a Distribution and Type of UPL

The type of UPL calculated is based on a data set's defined distribution. Figure C-19 outlines the steps that were taken to define whether a data set follows a normal, gamma, lognormal, or nonparametric distribution. Distributional test results and defined distributions are presented in Table C-7.

The type of UPL computed (e.g., parametric or nonparametric) was based on the detection frequency and the defined data distribution. For a constituent with no detections in the baseline data, the UPL was set to the reporting limit (EPA, 2009). For a constituent with at least 50% detections, the UPL was

adjusted for non-detected concentration(s), as described previously in the Data Preparation section, Section C.1, and the appropriate UPL calculation was based on results from the distributional tests. If no parametric distribution (normal, gamma, or lognormal) was appropriate, then a nonparametric UPL was estimated. The confidence level used for each UPL was based on the appropriate single test error rate.

Defining Power Rate associated with each UPL

The power of each UPL was evaluated and a power rate was defined as good, acceptable, or low. A power rate was defined as 'good' when the power at both 3 standard deviations and 4 standard deviations were above 85%; a power rate was defined as 'acceptable' when power at either 3 standard deviations or 4 standard deviations was between 59% and 85%; and a power rate was defined as 'low' occurs when power at both 3 standard deviations and 4 standard deviations were below 85%.

C.4 Detection and Assessment Monitoring Data Evaluations

Detection and assessment monitoring constituent concentrations are compared to the appropriate baseline value for background or GWPS to determine whether a significant difference exists between the initial and current site conditions. The appropriate baseline value for detection monitoring is the Appendix III constituent's UPL and the appropriate baseline value for assessment monitoring is the Appendix IV constituent's GWPS (Table C-8). The GWPS for each Appendix IV constituent is established as follows:

- For constituents with an established MCL, the GWPS is the highest of the MCL, UPL, or reporting limit for that constituent; or
- For constituents with no established MCL, the GWPS is the highest of the UPL, reporting limit, or the specified regional screening level (RSL) for that constituent (note: future revisions to the Rule may allow additional flexibility in establishing GWPS for states with EPA-approved CCR permit programs for Appendix IV constituents that do not have a MCL).

For detection monitoring, if any concentration exceeds the appropriate baseline value, then a resample may be collected, analyzed, and compared to the appropriate baseline value—if this resample exceeds the appropriate baseline value, then a statistically significant increase over background is indicated.

For assessment monitoring, a 95% confidence interval of the mean is estimated for each detected Appendix IV constituent in a downgradient well using the current and previous sampling event concentrations. The confidence interval contains both a LCL and an upper confidence limit (UCL). The

Unified Guidance states that "for testing under compliance/assessment monitoring, a [LCL] around the true parameter is utilized. If the LCL exceeds the standard [GWPS], there is statistically significant evidence in favor that the compliance standard has been violated." A constituent is in-compliance when the LCL for the constituent is less than the appropriate GWPS. (EPA, 2009).

The 95% confidence interval (i.e., the LCL and UCL) is based on the constituent concentrations from the current year's sampling events and historical sampling events at a given well. Confidence intervals are calculated based on the defined data distribution. The data distribution is defined in accordance with EPA guidance (EPA, 2000; EPA, 2002; EPA, 2009; EPA, 2017; SWDIV, 1998). The type of confidence interval computed (e.g., parametric or nonparametric) is based on the detection frequency and the defined data distribution for each data set, as described in Section C.3. For a constituent with no detected concentration measurements, the LCL (and UCL) is set to the reporting limit (EPA, 2009). For a constituent with at least 50% detections, the LCL (and UCL) calculation adjusts for non-detected concentration(s) as described in Section C.1, and the appropriate LCL (and UCL) calculation is used based on results from the distributional tests. If no parametric distribution (normal, lognormal, or gamma) can be defined for a data set or there are fewer than 50% detections, then a nonparametric, approximate 95% confidence interval of the median is estimated for the LCL and UCL.

C.5 REFERENCES

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Tables

Table C-1. CCR Groundwater Baseline Detection Monitoring
Data Summary - FGD Pond Area

Sample Location	Date Sampled	B	Ca	Cl	Fl	field pH	SO_4	TDS
Upgradient Wells								
FGD-8	11/4/2015	0.0843	69.2	271	0.173 J	6.92	24.4	803
	12/17/2015	0.0791	65.2	248	0.361 J	6.67	50.1	721
	2/9/2016	0.0721	296	1,910	0.331 J	6.14	110	5,100
	4/14/2016	0.0805	323	1,920	0.218	6.39	68	6,210
	6/14/2016	0.0869	336	2,070	<0.100	6.57	476	6,130
	8/24/2016	0.119	21.1	107	0.186 J	6.92	41.6	400
	10/5/2016	0.0794	394	1,890	0.413	6.68	184	4,470
	12/23/2016	0.069	340	1,990	<0.100	6.83	144	4,330
FGD-11	11/4/2015	0.048	9.57	15	<0.100	6.58	9.96	145
	12/17/2015	0.0544	10.7	9.85	0.13 J	6.74	11	115
	2/9/2016	0.0912	71.5	438	0.548	6.9	37.5	1,160
	4/14/2016	0.0963	72.5	393	0.671	6.34	32.9	1,120
	6/15/2016	0.0979	55.1	356	0.331 J	6.57	32.4	900
	8/25/2016	0.103	154	759	0.128 J	6.76	68.8	1,960
	10/4/2016	0.127	181	894	0.579	6.78	71.8	2,130
	12/22/2016	0.125	201	1,150	0.127 J	6.85	89.5	2,870
Downgradient Wells								
FGD-1	11/3/2015	0.065	11	36.4	0.363 J	6.31	32	245
	12/17/2015	0.0706	10.6	37.7	0.384 J	6.33	33.3	224
	2/9/2016	0.0539	11.4	38.9	0.383 J	6.81	36.3	235
	4/14/2016	0.0867	12.2	38.6	0.229	6.24	35.7	77
	6/15/2016	0.066	12	39	0.302 J	6.75	41.2	258
	8/24/2016	0.0601	13.5	42.1	0.225 J	6.58	46.6	193
	10/5/2016	0.0629	14.2	38.7	0.483	6.78	44.2	266
	12/22/2016	0.058	13.7	42.6	0.326 J	5.79	49.3	271
FGD-2	11/3/2015	0.1	77.1	460	0.224	6.47	147	1,370
	12/17/2015	0.0636	24.8	133	0.347 J	6.77	53.2	515
	2/9/2016	0.0885	44.6	250	0.315 J	7.06	98.9	750
	4/14/2016	0.136	53.8	285	0.192	6.54	103	924
	6/14/2016	0.0729	26.8	138	0.122 J	6.73	62.2	564
	8/24/2016	0.219	79.9	421	<0.100	6.75	158	1,060
	10/5/2016	0.182	58.3	310	0.243 J	6.76	114	910
	12/22/2016	0.251	95.3	570	<0.100	6.70	174	1,450
FGD-3	11/3/2015	0.343	108	439	0.505	6.51	479	1,950
	12/17/2015	0.255	109	399	<0.100	6.64	478	1,640
	2/9/2016	0.214	91.4	326	0.74	6.76	474	1,610
	4/14/2016	0.231	98.1	314	0.69	6.59	396	1,980
	6/14/2016	0.207	80.1	267	0.173 J	6.59	338	1,440
	8/24/2016	0.112	90.4	279	0.463	6.89	357	1,490
	10/5/2016	0.212	88.1	264	0.723	6.85	324	1,370
	12/22/2016	0.196	82.6	290	1.32	6.1	392	1,490
FGD-4	11/3/2015	0.0694	46.1	200	0.294 J	6.71	37.8	679
	12/17/2015	0.0777	47.8	211	0.295 J	6.44	38.2	647
	2/9/2016	0.0581	45.3	195	0.32 J	6.85	45	653
	4/14/2016	0.0726	50.3	182	0.323	6.59	55.4	726
	6/14/2016	0.0728	47.5	210	<0.100	6.68	37.9	689
	8/24/2016	0.343	52.5	208	0.148 J	6.74	53.3	704
	10/5/2016	0.0672	48.1	182	0.376 J	6.85	56	672
	12/22/2016	0.0628	44.5	181	0.251 J	6.29	65.4	676
FGD-5	11/4/2015	0.0719	30.2	230	0.334	6.92	54.7	1,040
	12/17/2015	0.0798	32.5	254	0.333 J	6.74	56.1	845
	2/9/2016	0.0926	89.5	356	0.495	6.6	62.8	942
	4/14/2016	0.107	101	359	0.491	6.71	50.8	1,510
	6/15/2016	0.11	88.9	368	0.284 J	6.73	55.1	735
	8/24/2016	0.0394	102	372	0.168 J	6.89	58.8	770
	10/5/2016	0.0995	99.9	344	0.38 J	6.92	57.3	1,260
	12/22/2016	0.0982	90.6	301	0.291 J	6.1	65.5	893
FGD-6	11/3/2015	0.0968	79.3	355	0.227	6.92	33.8	1,070
	12/17/2015	0.103	89.9	342	0.469	6.52	65.9	940
	2/9/2016	0.0791	31.8	252	0.354 J	7.12	59.5	940
	4/14/2016	0.0936	36.4	259	0.442	6.71	57.9	1,140
	6/14/2016	0.0955	33.9	237	<0.100	6.48	49.8	813
	8/24/2016	0.0355	35.6	285	0.147 J	6.95	64.7	750
	10/5/2016	0.102	35.3	275	0.364 J	6.94	60.2	1,010
	12/22/2016	0.0847	35.6	286	0.204 J	6.34	64.4	905
FGD-12	11/4/2015	0.0651	16.6	19.4	<0.100	6.68	20	217
	12/17/2015	0.0671	13.2	15.5	0.159 J	6.47	16.6	161
	2/9/2016	0.065	11.1	13.5	0.157 J	6.99	14.1	179
	4/14/2016	0.0753	14.7	25.4	0.109	6.47	15.8	163
	6/15/2016	0.0711	11.2	19.5	0.101 J	6.52	13.4	253
	8/25/2016	0.0858	52.8	296	<0.100	6.86	33.8	817
	10/4/2016	0.0682	12.5	17.8	0.129 J	6.74	10.5	142
	12/23/2016	0.0512	260	1,250	0.112 J	6.95	174	3,270

Notes:
1. All concentrations in mg/L. pH in standard units.

Table C-2. CCR Groundwater Baseline Assessment Monitoring
Data Summary - FGD Pond Area

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	Fl	Pb	Li	Hg	Mo	Se	Th	Ra 226/228
Upgradient Wells																
FGD-8	11/4/2015	<0.0008	<0.002	0.119	<0.0003	<0.0003	0.00542	<0.003	0.173 J	<0.0003	0.149	<0.00008	0.0261	<0.002	<0.0005	2.05
	12/17/2015	<0.0008	<0.002	0.179	<0.0003	<0.0003	0.00373 J	0.00646	0.361 J	<0.0003	0.116	<0.00008	0.00404 J	<0.002	<0.0005	1.93
	2/9/2016	<0.0008	0.0115	0.892	<0.0003	<0.0003	0.00234 J	0.00609	0.331 J	0.000406 J	0.0104	<0.00008	<0.002	0.00231 J	<0.0005	5.32
	4/14/2016	<0.0008	0.0146	0.965	<0.0003	<0.0003	0.00202 J	0.00876	0.218 J	0.0016	0.016	<0.00008	<0.002	0.00211 J	<0.0005	9.31
	6/14/2016	<0.0008	0.00639	0.792	<0.0003	<0.0003	<0.002	0.0158	<0.100	0.00137	0.015	<0.00008	<0.002	<0.002	<0.0005	4.23
	8/24/2016	<0.0008	<0.002	0.102	0.000417 J	<0.0003	0.0107	0.015	0.186 J	0.00381	0.0265	<0.00008	<0.002	<0.002	<0.0005	1.27
	10/5/2016	<0.0008	0.00661	0.753	<0.0003	<0.0003	0.00672	0.00899	0.413	0.000908 J	0.0224	<0.00008	<0.002	<0.002	<0.0005	7.31
	12/23/2016	<0.0008	0.0119	0.894	<0.0003	<0.0003	0.00259 J	0.00745	<0.100	0.00228	0.0185	<0.00008	<0.002	0.00217 J	<0.0005	5.87
FGD-11	11/4/2015	<0.0008	<0.002	0.0527	<0.0003	<0.0003	<0.002	<0.003	<0.1	0.000727 J	0.0144	<0.00008	<0.002	<0.002	<0.0005	2.34
	12/17/2015	<0.0008	<0.002	0.0676	0.000303 J	<0.0003	<0.002	<0.003	0.13 J	0.000987 J	0.016	<0.00008	<0.002	<0.002	<0.0005	2.42
	2/9/2016	<0.0008	<0.002	0.271	<0.0003	<0.0003	<0.002	<0.003	0.548	<0.0003	0.011	<0.00008	<0.002	<0.002	<0.0005	4.03
	4/14/2016	<0.0008	<0.002	0.26	<0.0003	<0.0003	0.00222 J	<0.003	0.671	0.0012	0.011	<0.00008	<0.002	<0.002	<0.0005	4.12
	6/15/2016	<0.0008	<0.002	0.216	<0.0003	<0.0003	<0.002	<0.003	0.331 J	0.000407 J	0.0126	<0.00008	0.00238 J	<0.002	<0.0005	4.40
	8/25/2016	<0.0008	<0.002	0.439	<0.0003	<0.0003	0.00465 J	<0.003	0.128 J	0.00179	0.011	<0.00008	<0.002	<0.002	<0.0005	7.81
	10/4/2016	<0.0008	<0.002	0.55	<0.0003	<0.0003	<0.002	<0.003	0.579	0.000618 J	0.0124	<0.00008	<0.002	<0.002	<0.0005	4.26
	12/22/2016	<0.0008	<0.002	0.734	<0.0003	<0.0003	0.00258 J	<0.003	0.127 J	0.000635 J	0.0124	<0.00008	<0.002	<0.002	<0.0005	9.03
Downgradient Wells																
FGD-1	11/3/2015	<0.0008	<0.002	0.0311	<0.0003	<0.0003	<0.002	<0.003	0.363 J	<0.0003	0.034	<0.00008	<0.002	<0.002	<0.0005	2.12
	12/17/2015	<0.0008	<0.002	0.0263	<0.0003	<0.0003	<0.002	<0.003	0.384 J	<0.0003	0.0306	<0.00008	<0.002	<0.002	<0.0005	2.35
	2/9/2016	<0.0008	<0.002	0.0315	<0.0003	<0.0003	0.00437 J	0.0033 J	0.383 J	0.000379 J	0.0314	<0.00008	<0.002	<0.002	<0.0005	1.74
	4/14/2016	<0.0008	<0.002	0.0296	<0.0003	<0.0003	<0.002	<0.003	0.229 J	<0.0003	0.0338	<0.00008	<0.002	<0.002	<0.0005	<1.719
	6/15/2016	<0.0008	<0.002	0.0276	<0.0003	<0.0003	<0.002	<0.003	0.302 J	<0.0003	0.0321	<0.00008	<0.002	<0.002	<0.0005	1.92
	8/24/2016	<0.0008	<0.002	0.0294	<0.0003	<0.0003	<0.002	<0.003	0.225 J	<0.0003	0.033	<0.00008	<0.002	<0.002	<0.0005	2.43
	10/5/2016	<0.0008	<0.002	0.0319	<0.0003	<0.0003	<0.002	0.00447 J	0.483	<0.0003	0.0331	<0.00008	<0.002	<0.002	<0.0005	0.94
	12/22/2016	<0.0008	<0.002	0.0418	<0.0003	<0.0003	<0.002	<0.003	0.326 J	<0.0003	0.0385	<0.00008	<0.002	<0.002	<0.0005	<0.918
FGD-2	11/3/2015	<0.0008	<0.002	0.146	<0.0003	<0.0003	0.00244 J	<0.003	0.224 J	<0.0003	0.0224	<0.00008	<0.002	0.0203	<0.0005	2.22
	12/17/2015	<0.0008	<0.002	0.103	<0.0003	<0.0003	0.00386 J	<0.003	0.347 J	0.00145	0.0183	<0.00008	<0.002	0.0127	<0.0005	2.27
	2/9/2016	<0.0008	<0.002	0.133	<0.0003	<0.0003	0.00426 J	<0.003	0.315 J	<0.0003	0.0221	<0.00008	<0.002	0.0181	<0.0005	2.48
	4/14/2016	<0.0008	<0.002	0.129	<0.0003	<0.0003	<0.002	<0.003	0.192 J	<0.0003	0.0196	<0.00008	<0.002	0.0166	<0.0005	2.23
	6/14/2016	<0.0008	<0.002	0.091	<0.0003	<0.0003	<0.002	<0.003	0.122 J	<0.0003	0.0243	<0.00008	<0.002	0.0189	<0.0005	1.94
	8/24/2016	<0.0008	<0.002	0.144	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.019	<0.00008	<0.002	0.0185	<0.0005	3.24
	10/5/2016	<0.0008	<0.002	0.129	<0.0003	<0.0003	0.00549	<0.003	0.243 J	0.000693 J	0.0199	<0.00008	<0.002	0.0176	<0.0005	2.42
	12/22/2016	<0.0008	<0.002	0.158	<0.0003	<0.0003	<0.002	<0.003	<0.1	<0.0003	0.0217	<0.00008	<0.002	0.022	<0.0005	2.14
FGD-3	11/3/2015	<0.0008	0.00226 J	0.0417	<0.0003	0.00492	<0.002	0.0436	0.505	<0.0003	0.176	<0.00008	<0.002	0.0881	0.0017	4.11
	12/17/2015	<0.0008	0.00215 J	0.0371	0.000475 J	0.00372	<0.002	0.0399	<0.1	<0.0003	0.14	<0.00008	<0.002	0.0798	0.0016	4.36
	2/9/2016	<0.0008	0.00206 J	0.0407	<0.0003	0.00343	<0.002	0.0417	0.74	0.000438 J	0.13	<0.00008	<0.002	0.0907	0.0015 J	4.41
	4/14/2016	<0.0008	0.00218 J	0.0371	<0.0003	0.00212	<0.002	0.0326	0.69	<0.0003	0.119	<0.00008	<0.002	0.064	0.00137 J	<1.626
	6/14/2016	<0.0008	0.00205 J	0.0392	<0.0003	0.00156	<0.002	0.0261	0.173 J	<0.0003	0.107	<0.00008	<0.002	0.0447	0.00126 J	2.31
	8/24/2016	<0.0008	0.00221 J	0.0387	<0.0003	0.00146	<0.002	0.0232	0.463	<0.0003	0.0974	<0.00008	<0.002	0.0272	0.00123 J	3.02
	10/5/2016	<0.0008	0.00225 J	0.039	<0.0003	0.00152	<0.002	0.0226	0.723	<0.0003	0.113	<0.00008	<0.002	0.0276	0.00114 J	2.90
	12/22/2016	<0.0008	0.00226 J	0.0437	<0.0003	0.00173	<0.002	0.0266	1.32	<0.0003	0.11	<0.00008	<0.002	0.0245	0.00124 J	2.81
FGD-4	11/3/2015	<0.0008	<0.002	0.126	<0.0003	<0.0003	<0.002	<0.003	0.294 J	<0.0003	0.0433	<0.00008	<0.002	<0.002	<0.0005	2.40
	12/17/2015	<0.0008	<0.002	0.105	<0.0003	<0.0003	<0.002	<0.003	0.295 J	<0.0003	0.0436	0.000229	0.00211 J	0.00214 J	<0.0005	<2.091
	2/9/2016	<0.0008	<0.002	0.113	<0.0003	<0.0003	<0.002	<0.003	0.32 J	<0.0003	0.0419	0.000288	<0.002	<0.002	<0.0005	<1.442
	4/14/2016	<0.0008	<0.002	0.12	<0.0003	<0.0003	0.00208 J	<0.003	0.323 J	0.0271	0.0357	0.000232	<0.002	<0.002	<0.0005	1.77
	6/14/2016	<0.0008	<0.002	0.128	<0.0003	0.000561 J	<0.002	<0.003	<0.1	<0.0003	0.0477	<0.00008	<0.002	<0.002	<0.0005	1.41
	8/24/2016	<0.0008	<0.002	0.111	<0.0003	<0.0003	<0.002	<0.003	0.148 J	0.000578 J	0.0383	<0.00008	<0.002	<0.002	<0.0005	0.82
	10/5/2016	<0.0008	<0.002	0.106	<0.0003	<0.0003	<0.002	<0.003	0.376 J	0.000489 J	0.0353	<0.00008	<0.002	<0.002	<0.0005	1.61
	12/22/2016	<0.0008	<0.002	0.114	<0.0003	<0.0003	0.0023 J	<0.003	0.251 J	<0.0003	0.0273	<0.00008	<0.002	<0.002	<0.0005	0.89
FGD-5	11/4/2015	<0.0008	<0.002	0.13	<0.0003	0.000557 J	0.0121	<0.003	0.334 J	<0.0003	0.17	<0.00008	0.0445	<0.002	<0.0005	1.97
	12/17/2015	<0.0008	<0.002	0.237	<0.0003	0.000593 J	0.0391	0.0164	0.333 J	0.000369 J	0.156	<0.00008	0.0203	<0.002	<0.0005	4.86
	2/9/2016	<0.0008	<0.002	0.261	<0.0003	<0.0003	<0.002	0.00441 J	0.495	<0.0003	0.158	<0.00008	<0.002	<0.002	<0.0005	3.49
	4/14/2016	<0.0008	<0.002	0.224	<0.0003	0.000392 J	0.00477 J	<0.003	0.491	<0.0003	0.164	<0.00008	0.0183	<0.002	<0.0005	2.19
	6/15/2016	<0.0008	<0.002	0.174	<0.0003	<0.0003	0.00599	<0.003	0.284 J	<0.0003	0.162	<0.00008	0.0144	<0.002	<0.0005	1.68
	8/24/2016	<0.0008	<0.002	0.173	<0.0003	<0.0003	0.0189	<0.003	0.168 J	0.00045 J	0.145	<0.00008	0.00814	<0.002	<0.0005	1.04
	10/5/2016	<0.0008	<0.002	0.229	<0.0003	<0.0003	0.00304 J	<0.003	0.38 J	<0.0003	0.153	<0.00008	0.00355 J	<0.002	<0.0005	2.04
	12/22/2016	<0.0008	<0.002	0.261	<0.0003	<0.0003	<0.002	0.00471 J	0.291 J	<0.0003	0.152	<0.00008	<0.002	<0.002	<0.0005	1.34
FGD-6	11/3/2015	<0.0008	<0.002	0.124	<0.0003	<0.0003	0.00253 J	<0.003	0.227 J	<0.0003	0.0112	<0.00008	<0.002	<0.002	<0.0005	2.17
	12/17/2015	<0.0008	<0.002	0.135	<0.0003	<0.0003	<0.002	<0.003	0.469	<0.0003	0.00964 J	<0.00008	<0.002	<0.002	<0.0005	3.16
	2/9/2016	<0.0008	<0.002	0.132	<0.0003	<0.0003	<0.002	<0.003	0.354 J	<0.0003	0.0105	<0.00008	<0.002	<0.002	<0.0005	2.51
	4/14/2016	<0.0008	<0.002	0.122	<0.0003	<0.0003	0.0568	<0.003	0.442	<0.0003	0.011	<0.00008	<0.002	<0.002	<0.0005	2.56
	6/14/2016	<0.0008	<0.002	0.16	0.000309 J	0.000404 J	<0.002	0.00657	<0.1	0.00132	0.0092 J	<0.00008	<0.002	<0.002	<0.0005	3.47
	8/24/2016	<0.0008	0.00725	0.127	<0.0003	<0.0003	0.00334 J	0.00399 J	0.147 J	0.000656 J	0.00885 J	<0.00008	0.00244 J	<0.002	<0.0005	1.36
	10/5/2016	<0.0008	0.00536	0.117	<0.0003	<0.0003	0.00427 J	0.00414 J	0.364 J	<0.0003	0.00985 J	<0.00008	<0.002	<0.002	<0.0005	2.18
	12/22/2016	<0.0008	0.00458 J	0.129	<0.0003	<0.0003	<0.002	0.00352 J	0.204 J	<0.0003	0.0102	<0.00008	<0.002	<0.002	<0.0005	1.27
FGD-12	11/4/2015	<0.0008	<0.002	0.0884	<0.0003	<0.0003	0.0124	<0.003	<0.1	0.000678 J	0.0234	<0.00008	0.00221 J	<0.002	<0.0005	2.62
	12/17/2015	<0.0008	<0.002	0.0781	<0.0003	<0.0003	<0.002	<0.003	0.159 J	0.000775 J	0.022	<0.00008	<0.002	<0.002	<0.0005	3.89
	2/9/2016	<0.0008	<0.002	0.0664	<0.0003	<0.0003	<0.002	<0.003	0.157 J	0.000339 J	0.0211	<0.00008	<0.002	<0.002	<0.0005	2.30
	4/14/2016	<0.0008	<0.002	0.104	<0.0003	<0.0003	0.00425 J	<0.003	0.109 J	0.00371	0.0255	<0.00008	<0.002	<0.002	<0.0005	2.02
	6/15/2016	<0.0008	<0.002	0.107	0.00039 J	<0.0003	0.00269 J	0.00323 J	0.101 J	0.00513	0.0192	0.000134 J	<0.002	<0.002	<0.0005	4.07
	8/25/2016	<0.0008	0.00451 J	0.262	0.000629 J	<0.0003	0.0135	0.00412 J	<0.1	0.00842	0.0204	<0.00008	<0.002	<0.002	<0.0005	3.43
	10/4/2016	<0.0008	0.00402 J	0.122	0.00062 J	<0.0003	0.0133	0.00395 J	0.129 J	0.0084	0.0259	<0.00008	<0.002	0.00292 J	<0.0005	2.17
	12/23/2016	<0.0008	0.00938	0.557	<0.0003	<0.0003	0.00435 J	0.00609	0.112 J	0.00216	0.0755	<0.00008	<0.002	0.00786	<0.0005	5.43

Notes:
1. All concentrations in mg/L. Ra combined in pCi/L.

Table C-3. Single-Test Error Rates to Achieve Type 1 Experimentwise Error Rate of α=0.05
FGD Pond Area - Upgradient Wells (FGD-8 and FGD-11)

Constituent List		Single-Test Error Rate (# of Detected Constituents) for Spatial and Temporal Tests	
		FGD-8	FGD-11
Appendix III	Constituents Detected	0.0073 (7)	0.0073 (7)
	Constituents Detected≥50%	0.0073 (7)	0.0073 (7)
Appendix IV	Constituents Detected	0.0051 (10)	0.0073 (7)
	Constituents Detected≥50%	0.0073 (7)	0.013 (4)

Table C-4. Summary of Spatial Analysis - Results from ANOVA or Kruskal-Wallis Test
FGD Pond Area - Upgradient Wells (FGD-8 and FGD-11)

Constituent List	Constituent	# Detects/ # Samples Upgradient Wells	# Detects/ # Samples at FGD-8	# Detects/ # Samples at FGD-11	Defined Distribution for Residuals[1]	Levene's or Fligner's Test[2]		ANOVA or Kruskal-Wallis[3]	
						p-value	Heteroscedasticity present?	p-value	Statistically Significant[4]?
Appendix III	Boron	16/16	8/8	8/8	Normal	0.15	No	0.45	No
	Calcium	16/16	8/8	8/8	Lognormal	0.93	No	0.11	No
	Chloride	16/16	8/8	8/8	Not Normal or Lognormal	7.8E-01	No	0.14	No
	Fluoride	13/16	6/8	7/8	Not Normal or Lognormal	0.15	No	0.64	No
	field pH	16/16	8/8	8/8	Normal	0.38	No	0.67	No
	Sulfate	16/16	8/8	8/8	Lognormal	0.61	No	0.045	No
	Total Dissolved Solids	16/16	8/8	8/8	Lognormal	0.81	No	0.10	No
Appendix IV	Antimony	0/16	0/8	0/8	--	--	--	--	--
	Arsenic	5/16	5/8	0/8	Nonparametric (all NDs at FGD-11)	8.7E-04	Yes	--	--
	Barium	16/16	8/8	8/8	Normal	0.024	No	0.12	No
	Beryllium	2/16	1/8	1/8	Not Normal or Lognormal	0.84	No	0.93	No
	Cadmium	0/16	0/8	0/8	--	--	--	--	--
	Chromium	10/16	7/8	3/8	Not Normal or Lognormal	0.13	No	0.035	No
	Cobalt	7/16	7/8	0/8	Nonparametric (all NDs at FGD-11)	9.8E-04	Yes		--
	Fluoride	13/16	6/8	7/8	Not Normal or Lognormal	0.15	No	0.64	No
	Lead	13/16	6/8	7/8	Not Normal or Lognormal	0.048	No	0.60	No
	Lithium	16/16	8/8	8/8	Lognormal	4.7E-03	Yes	--	--
	Mercury	0/16	0/8	0/8	--	--	--	--	--
	Molybdenum	3/16	2/8	1/8	Not Normal or Lognormal	3.7E-01	No	0.44	No
	Selenium	3/16	3/8	0/8	Not Normal or Lognormal	0.070	No	0.064	No
	Thallium	0/16	0/8	0/8	--	--	--		--
	Radium-226 + Radium 228	16/16	8/8	8/8	Normal	0.51	No	0.92	No

1-a=0.01, Distribution Test

2-Heteroscedasticity based on Levene when data Normal or Lognormal, otherwise Fligner Test; a=0.01

3-ANOVA used when residuals are Normal or Lognormal, otherwise Kruskal-Wallis Test

4-a=0.0073 for Appendix III and Appendix IV

Table C-5. Summary of Mann-Kendall Trend Test and rank von Neumann Autocorrelation Test
FGD Pond Area - Upgradient Wells (FGD-8 and FGD-11)

Upgradient Well	Constituent List	Analyte	# Detects/ # Samples	Mann-Kendall Trend Test		rank von Neumann Autocorrelation Test	
				p-value	Statistically Significant?	p-value	Statistically Significant?
FGD-8	Appendix III	Boron	8/8	0.90	No	0.17	No
		Calcium	8/8	0.11	No	0.90	No
		Chloride	8/8	0.39	No	0.90	No
		Fluoride	6/8	0.62	No	0.80	No
		field pH	8/8	0.62	No	0.20	No
		Sulfate	8/8	0.17	No	0.98	No
		Total Dissolved Solids	8/8	1	No	0.69	No
	Appendix IV	Antimony	0/8	--	--	--	--
		Arsenic	5/8	0.31	No	0.24	No
		Barium	8/8	0.54	No	0.29	No
		Beryllium	1/8	0.66	No	--	--
		Cadmium	0/8	--	--	--	--
		Chromium	7/8	0.90	No	0.49	No
		Cobalt	7/8	0.17	No	0.026	No
		Fluoride	6/8	0.62	No	0.80	No
		Lead	6/8	0.046	No	0.15	No
		Lithium	8/8	0.54	No	0.34	No
		Mercury	0/8	--	--	--	--
		Molybdenum	2/8	0.049	No	--	--
		Selenium	3/8	0.89	No	--	--
		Thallium	0/8	--	--	--	--
		Radium-226 + Radium 228	8/8	0.54	No	0.85	No
FGD-11	Appendix III	Boron	8/8	0.0020	Yes (increasing)	8.9E-04	Yes
		Calcium	8/8	0.0044	Yes (increasing)	5.6E-03	Yes
		Chloride	8/8	0.019	No	0.031	No
		Fluoride	7/8	0.90	No	0.61	No
		field pH	8/8	0.27	No	0.76	No
		Sulfate	8/8	9.4E-03	No	7.8E-03	No
		Total Dissolved Solids	8/8	0.019	No	0.031	No
	Appendix IV	Antimony	0/8	--	--	--	--
		Arsenic	0/8	--	--	--	--
		Barium	8/8	9.4E-03	No	7.8E-03	Yes
		Beryllium	1/8	0.38	No	--	--
		Cadmium	0/8	--	--	--	--
		Chromium	3/8	0.20	No	--	--
		Cobalt	0/8	--	--	--	--
		Fluoride	7/8	0.90	No	0.61	No
		Lead	7/8	0.90	No	0.012	No
		Lithium	8/8	0.52	No	0.71	No
		Mercury	0/8	--	--	--	--
		Molybdenum	1/8	1	No	--	--
		Selenium	0/8	--	--	--	--
		Thallium	0/8	--	--	--	--
		Radium-226 + Radium 228	8/8	4.4E-03	Yes (increasing)	5.6E-03	Yes

Statistical Significance when p-value less than single test error rates (see Table C-3).

Table C-6. Summary of Observed Suspect Outliers, Dixon's Test and Rosner's Test- Normality
FGD Pond Area - Combined Upgradient Wells (FGD-8 and FGD-11)

Constituent List	Constituent	Suspect Outlier for Low or High Concentration?	Suspect Outlier Concentration (Date Sampled)	p-values for Distributional Tests without Outlier, Detect Data - Normality			Is Distribution without Outlier(s) Normal?	p-values for Distributional Tests without Outlier, Detect Data - Lognormality			Is Distribution without Outlier(s) Lognormal?	Conclusion of Dixon Test
				Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation		Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation		
Appendix III	field pH	Low	6.14 mg/L (2/9/2016 at FGD-8)	0.86	0.44	0.51	Yes	0.83	0.393	0.457	Yes	6.14 mg/L Not a Statistical Low Outlier (p-value=1) based on Normality
	Sulfate	High	476 mg/L (6/14/2016 at FGD-8)	0.22	0.070	0.066	Yes	0.79	0.733	0.753	Yes	476 mg/L Statistical High Outlier (p-value<0.0001) based on Normality
Appendix IV	Arsenic	High	0.0146 mg/L (4/14/2016 at FGD-8)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects
	Beryllium	High	0.000417 J mg/L (8/24/2016 at FGD-8)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects
	Chromium	High	0.0107 mg/L (8/24/2016 at FGD-8)	0.040	0.10	0.11	Yes	0.074	0.24	0.31	Yes	0.0107 mg/L Statistical High Outlier (p-value=0.027) based on Normality
	Lead	High	0.00381 mg/L (8/24/2016 at FGD-8)	0.70	0.39	0.41	Yes	0.99	0.80	0.93	Yes	0.00381 mg/L Statistical High Outlier (p-value=0.023) based on Normality
	Lithium	High	0.116 mg/L (12/17/2015 at FGD-8) 0.149 mg/L (11/4/2015 at FGD-8)	1.6E-05	2.1E-06	5.3E-06	No	0.026	3.3E-04	4.0E-04	No	Not Performed, data not Normal or Lognormal
	Molybdenum	High	0.00238 J mg/L (6/15/2016 at FGD-11) 0.00404 J mg/L (12/17/2015 at FGD-8) 0.0261 mg/L (11/4/2015 at FGD-8)	--	--	--	--	--	--	--	--	Not Performed, <50% Detects

NOTE:
Dixon's Test can be performed for only one value.
Statistical Significance for Distributional tests for Dixon's test are based on 95% level of confidence, or α=0.05.

Table C-7. Summary of Distributional Tests
Oak Grove - Combined Upgradient Wells (FGD-8 and FGD-11)

Constituent List	Constituent	# Detects/ # Samples	% Detects	Defined Distribution	Tests for Normality			Can the Data be defined as Normal?
					Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation	
Appendix III	Boron	16/16	100	Normal	0.95	0.76	0.81	Yes
	Calcium	16/16	100	Normal	0.0097	0.032	0.063	Yes
	Chloride	16/16	100	Gamma	0.037	0.0098	0.024	No
	Fluoride	13/16	81	Normal	0.34	0.12	0.18	Yes
	field pH	16/16	100	Normal	0.45	0.14	0.15	Yes
	Sulfate	16/16	100	Gamma	0.0068	4.0E-05	6.6E-05	No
	Total Dissolved Solids	16/16	100	Gamma	0.038	0.023	0.046	No
Appendix IV	Antimony	0/16	0	All NDs	--	--	--	--
	Arsenic	5/16	31	Nonparametric, <50% Detects	--	--	--	--
	Barium	16/16	100	Normal	0.061	0.038	0.086	Yes
	Beryllium	2/16	13	Nonparametric, <50% Detects	--	--	--	--
	Cadmium	0/16	0	All NDs	--	--	--	--
	Chromium	10/16	63	Normal	0.13	0.021	0.021	Yes
	Cobalt	7/16	44	Nonparametric, <50% Detects	--	--	--	--
	Fluoride	13/16	81	Normal	0.34	0.12	0.18	Yes
	Lead	13/16	81	Normal	0.34	0.016	0.014	Yes
	Lithium	16/16	100	Nonparametric	9.2E-08	2.3E-06	7.4E-06	No
	Mercury	0/16	0	All NDs	--	--	--	--
	Molybdenum	3/16	19	Nonparametric, <50% Detects	--	--	--	--
	Selenium	3/16	19	Nonparametric, <50% Detects	--	--	--	--
	Thallium	0/16	0	All NDs	--	--	--	--
	Radium-226 + Radium 228	16/16	100	Normal	0.20	0.21	0.29	Yes

Note:
Statistical Significance for Distributional tests are based on 95% level of confidence, or α=0.05.
'-- No Distributional Test performed since <50% Detects

Table C-7. Summary of Distributional Tests
Oak Grove - Combined Upgradient Wells (FGD-8 and FGD-11)

Constituent List	Constituent	# Detects/ # Samples	% Detects	Defined Distribution	Tests for Gamma		Can the Data be defined as Gamma?
					Shapiro-Wilks Test	Probability Plot Correlation	
Appendix III	Boron	16/16	100	Normal	0.76	0.76	Yes
	Calcium	16/16	100	Normal	0.17	0.29	Yes
	Chloride	16/16	100	Gamma	0.11	0.17	Yes
	Fluoride	13/16	81	Normal	0.24	0.40	Yes
	field pH	16/16	100	Normal	0.12	0.12	Yes
	Sulfate	16/16	100	Gamma	0.16	0.092	Yes
	Total Dissolved Solids	16/16	100	Gamma	0.43	0.63	Yes
Appendix IV	Antimony	0/16	0	All NDs	--	--	--
	Arsenic	5/16	31	Nonparametric, <50% Detects	--	--	--
	Barium	16/16	100	Normal	0.12	0.24	Yes
	Beryllium	2/16	13	Nonparametric, <50% Detects	--	--	--
	Cadmium	0/16	0	All NDs	--	--	--
	Chromium	10/16	63	Normal	0.15	0.14	Yes
	Cobalt	7/16	44	Nonparametric, <50% Detects	--	--	--
	Fluoride	13/16	81	Normal	0.24	0.40	Yes
	Lead	13/16	81	Normal	0.58	0.51	Yes
	Lithium	16/16	100	Nonparametric	2.2E-05	5.4E-05	No
	Mercury	0/16	0	All NDs	--	--	--
	Molybdenum	3/16	19	Nonparametric, <50% Detects	--	--	--
	Selenium	3/16	19	Nonparametric, <50% Detects	--	--	--
	Thallium	0/16	0	All NDs	--	--	--
	Radium-226 + Radium 228	16/16	100	Normal	0.56	0.69	Yes

Note:
Statistical Significance for Distributional tests are based on 95% level of confidence, or α=0.05.
'-- No Distributional Test performed since <50% Detects

Table C-7. Summary of Distributional Tests
Oak Grove - Combined Upgradient Wells (FGD-8 and FGD-11)

Constituent List	Constituent	# Detects/ # Samples	% Detects	Defined Distribution	Tests for Lognormality			Can the Data be defined as Lognormal?
					Kolmogorov-Smirnov Test	Shapiro-Wilks Test	Probability Plot Correlation	
Appendix III	Boron	16/16	100	Normal	0.57	0.61	0.58	Yes
	Calcium	16/16	100	Normal	0.48	0.061	0.10	Yes
	Chloride	16/16	100	Gamma	0.17	0.010	0.014	Yes
	Fluoride	13/16	81	Normal	0.48	0.22	0.39	Yes
	field pH	16/16	100	Normal	0.38	0.11	0.11	Yes
	Sulfate	16/16	100	Gamma	0.92	0.94	0.82	Yes
	Total Dissolved Solids	16/16	100	Gamma	0.67	0.18	0.25	Yes
Appendix IV	Antimony	0/16	0	All NDs	--	--	--	--
	Arsenic	5/16	31	Nonparametric, <50% Detects	--	--	--	--
	Barium	16/16	100	Normal	0.18	0.10	0.17	Yes
	Beryllium	2/16	13	Nonparametric, <50% Detects	--	--	--	--
	Cadmium	0/16	0	All NDs	--	--	--	--
	Chromium	10/16	63	Normal	0.11	0.27	0.29	Yes
	Cobalt	7/16	44	Nonparametric, <50% Detects	--	--	--	--
	Fluoride	13/16	81	Normal	0.48	0.22	0.39	Yes
	Lead	13/16	81	Normal	0.99	0.92	0.94	Yes
	Lithium	16/16	100	Nonparametric	2.6E-03	1.3E-04	2.6E-04	No
	Mercury	0/16	0	All NDs	--	--	--	--
	Molybdenum	3/16	19	Nonparametric, <50% Detects	--	--	--	--
	Selenium	3/16	19	Nonparametric, <50% Detects	--	--	--	--
	Thallium	0/16	0	All NDs	--	--	--	--
	Radium-226 + Radium 228	16/16	100	Normal	0.17	0.45	0.53	Yes

Note:
Statistical Significance for Distributional tests are based on 95% level of confidence, or α=0.05.
'-- No Distributional Test performed since <50% Detects

Table C-8. Summary Statistics with Baseline Values[1] (UPLs and GWPS)
Oak Grove - Combined Upgradient Wells (FGD-8 and FGD-11)

Constituent List	Constituent	# Detects/ # Samples	% Detects	Minimum Detected Result	Maximum Detected Result	Baseline Value (UPL/ GWPS)	MCL or RSL[2]	Reporting Limit	UPL 1-of-2	Defined Distribution	single test error rate for annual SWFPR of 10%	Power Rate for UPL 1-of-2
Appendix III	Boron	16/16	100	0.048	0.127	0.14	--	0.03	0.14	Normal	0.0021	GOOD
	Calcium	16/16	100	9.57	394	470	--	0.3	470	Normal	0.0021	GOOD
	Chloride	16/16	100	9.85	2070	6300	--	1	6300	Gamma	0.0021	GOOD
	Fluoride	13/16	81.25	0.127	0.671	0.78	4	0.4	0.78	Normal	0.0021	GOOD
	field pH	16/16	100	6.14	6.92	6.1 - 7.2	--	--	6.1 - 7.2	Normal	0.0011	LOW, GOOD
	Sulfate	16/16	100	9.96	476	410	--	1	410	Gamma	0.0021	GOOD
	Total Dissolved Solids	16/16	100	115	6210	13000	--	10	13000	Gamma	0.0021	GOOD
Appendix IV	Antimony	0/16	0	ND	ND	0.006	0.006	0.0025	0.0025	All NDs	--	--
	Arsenic	5/16	31.25	0.00639	0.0146	0.015	0.01	0.005	0.015	Nonparametric, <50% Detects	0.0075	GOOD
	Barium	16/16	100	0.0527	0.965	2	2	0.01	1.3	Normal	0.0011	GOOD
	Beryllium	2/16	12.5	0.000303	0.000417	0.004	0.004	0.001	0.00042	Nonparametric, <50% Detects	0.0075	GOOD
	Cadmium	0/16	0	ND	ND	0.005	0.005	0.001	0.001	All NDs	--	--
	Chromium	10/16	62.5	0.00202	0.0107	0.1	0.1	0.005	0.012	Normal	0.0011	GOOD
	Cobalt	7/16	43.75	0.00609	0.0158	0.016	0.006	0.005	0.016	Nonparametric, <50% Detects	0.0075	GOOD
	Fluoride	13/16	81.25	0.127	0.671	4	4	0.25	0.84	Normal	0.0011	GOOD
	Lead	13/16	81	0.000406	0.00381	0.015	0.015	0.001	0.0039	Normal	0.0011	GOOD
	Lithium	16/16	100	0.0104	0.149	0.15	0.04	0.01	0.15	Nonparametric	0.0075	GOOD
	Mercury	0/16	0	ND	ND	0.002	0.002	0.0002	0.0002	All NDs	--	--
	Molybdenum	3/16	19	0.00238	0.0261	0.1	0.1	0.005	0.026	Nonparametric, <50% Detects	0.0075	GOOD
	Selenium	3/16	18.75	0.00211	0.00231	0.05	0.05	0.005	0.0023	Nonparametric, <50% Detects	0.0075	GOOD
	Thallium	0/16	0	ND	ND	0.002	0.002	0.0015	0.0015	All NDs	--	--
	Radium-226 + Radium 228	16/16	100	1.27	9.31	11	5	--	11	Normal	0.0011	GOOD

Notes:
1. All concentrations in mg/L. pH in standard units.
3. RSL provided for Cobalt, Lithium, Lead, and Molybdenum

Figures

Figure C−1. Appendix III − Boron

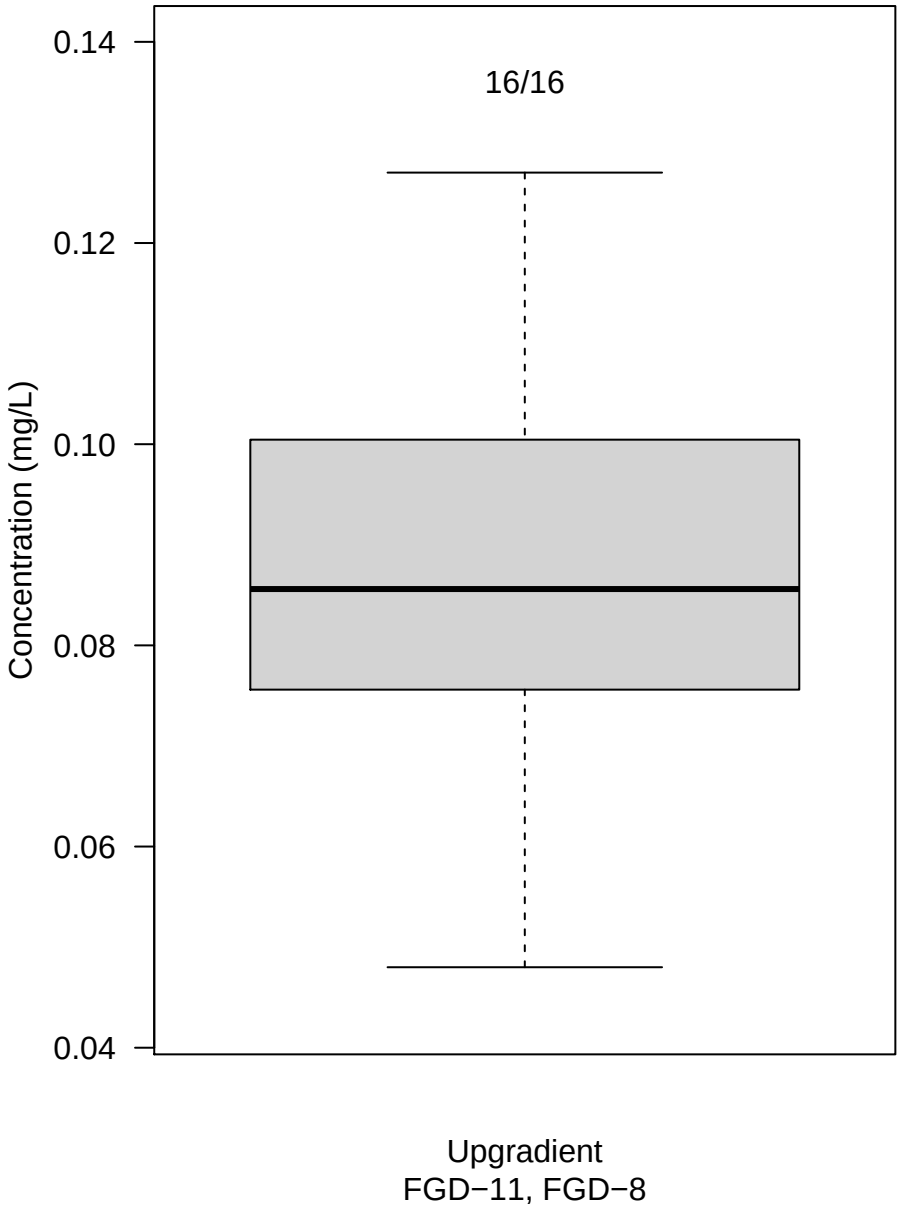


Figure C−2. Appendix III − Calcium

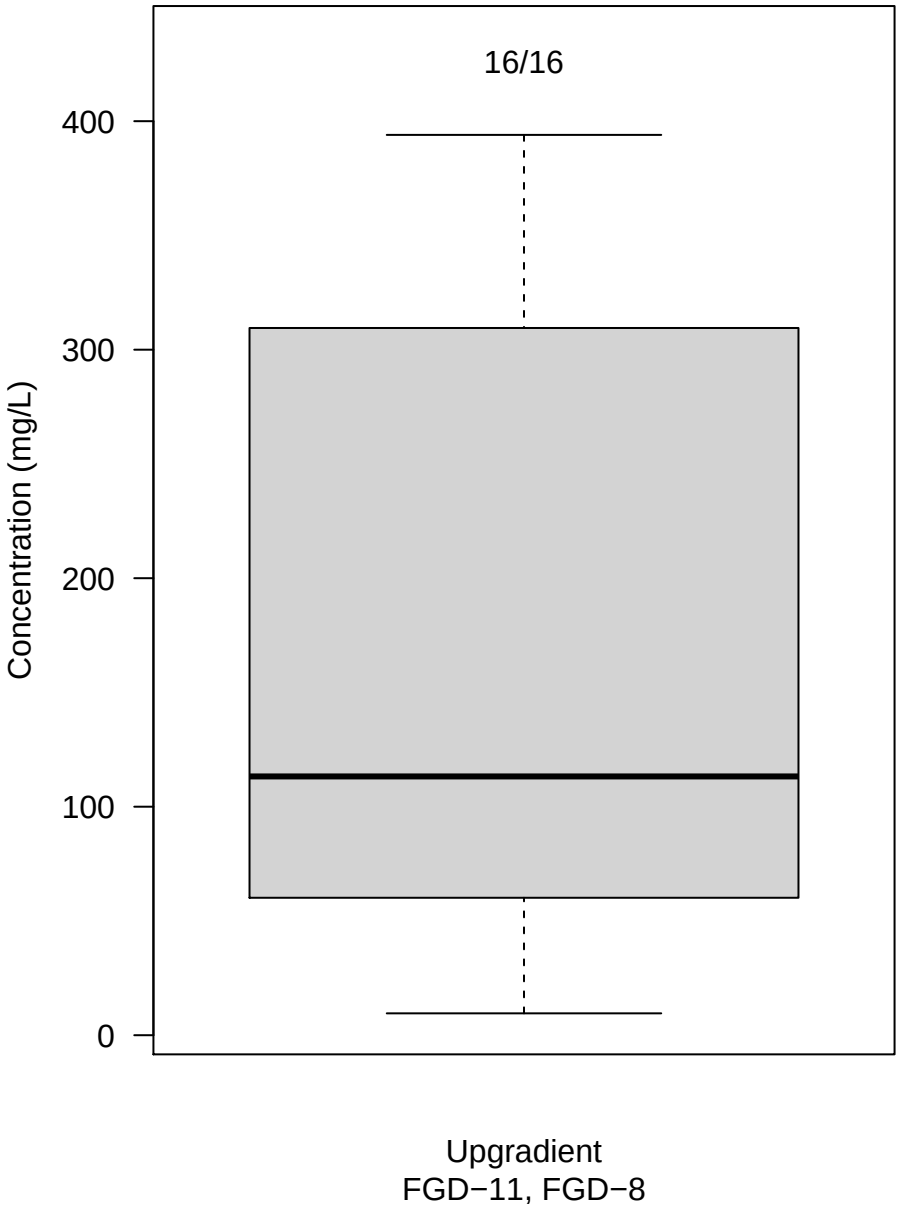


Figure C−3. Appendix III − Chloride

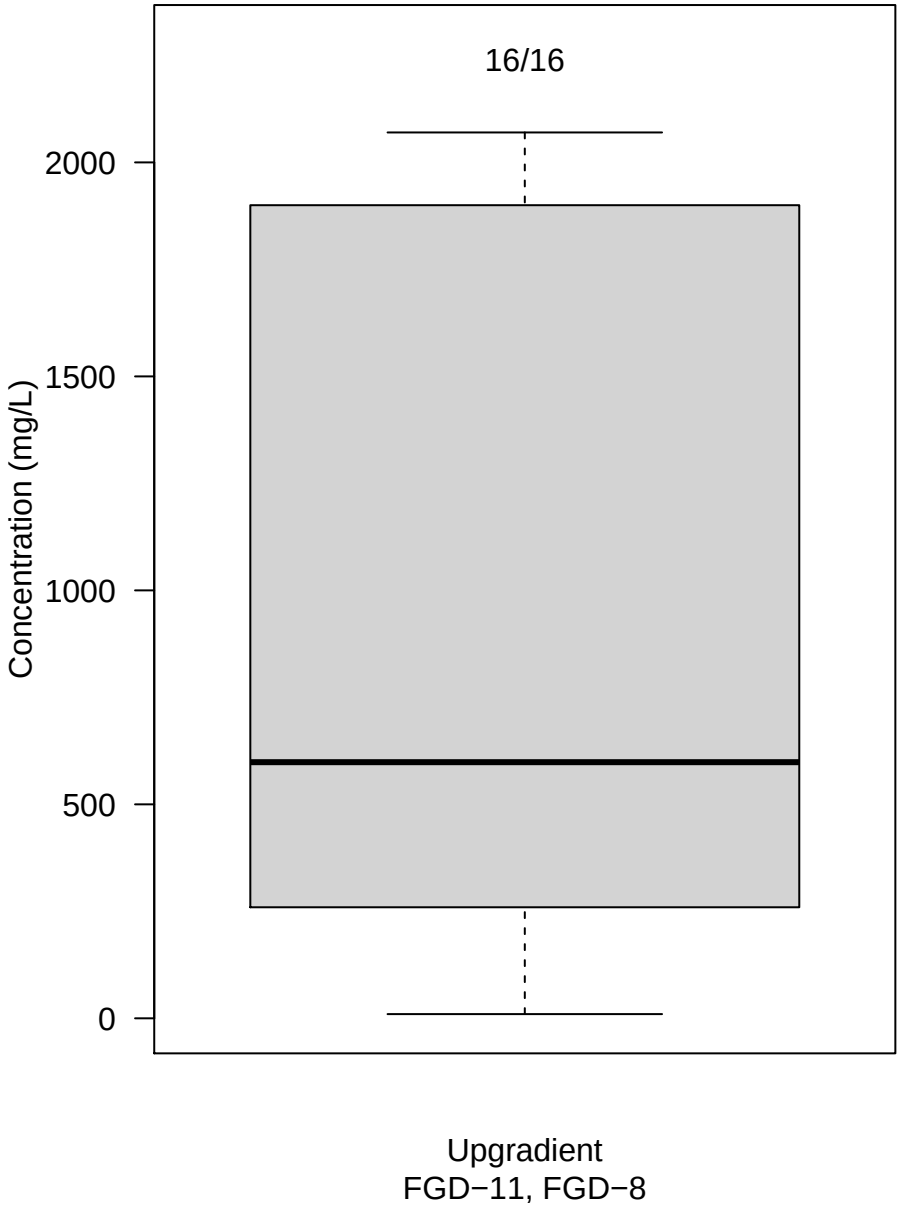


Figure C−4. Appendix III − Fluoride

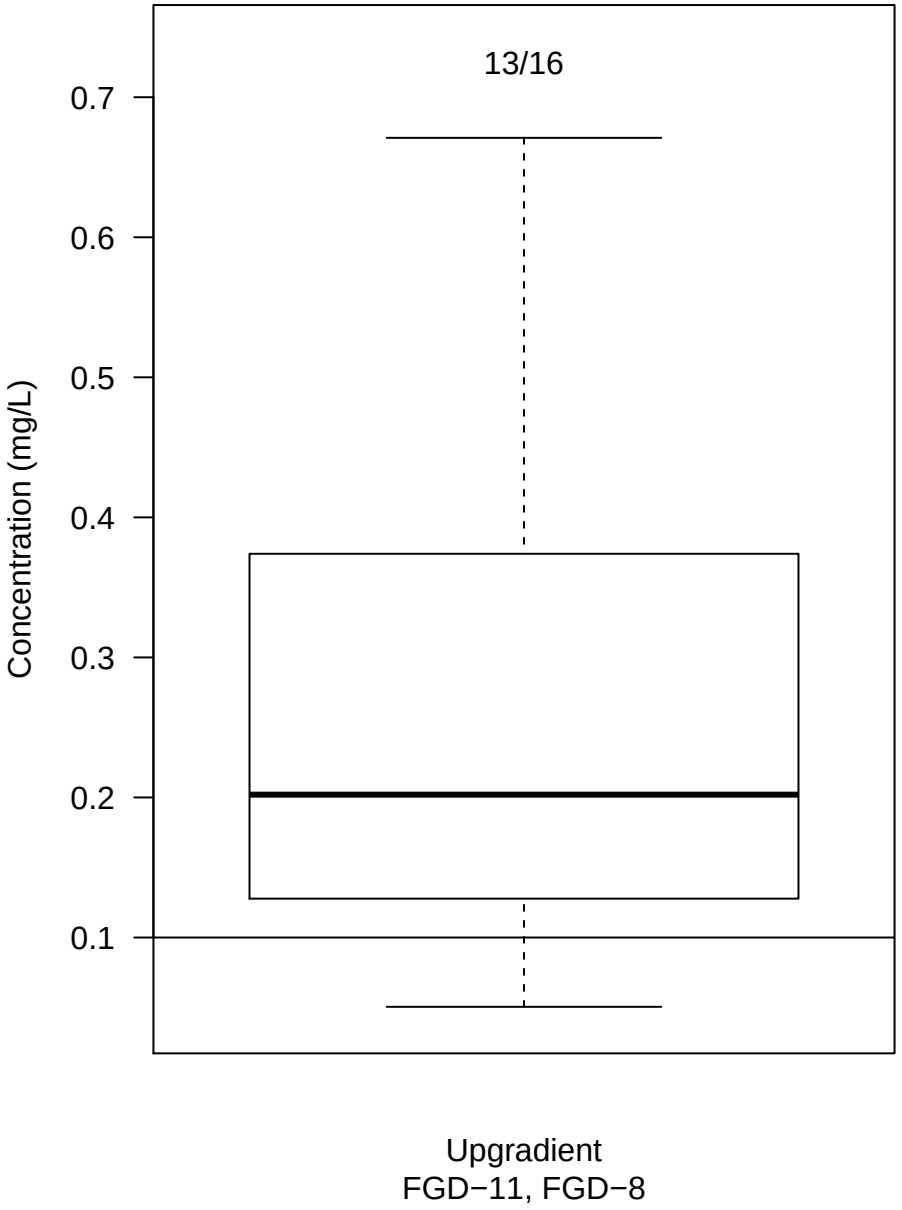


Figure C−5. Appendix III − field pH

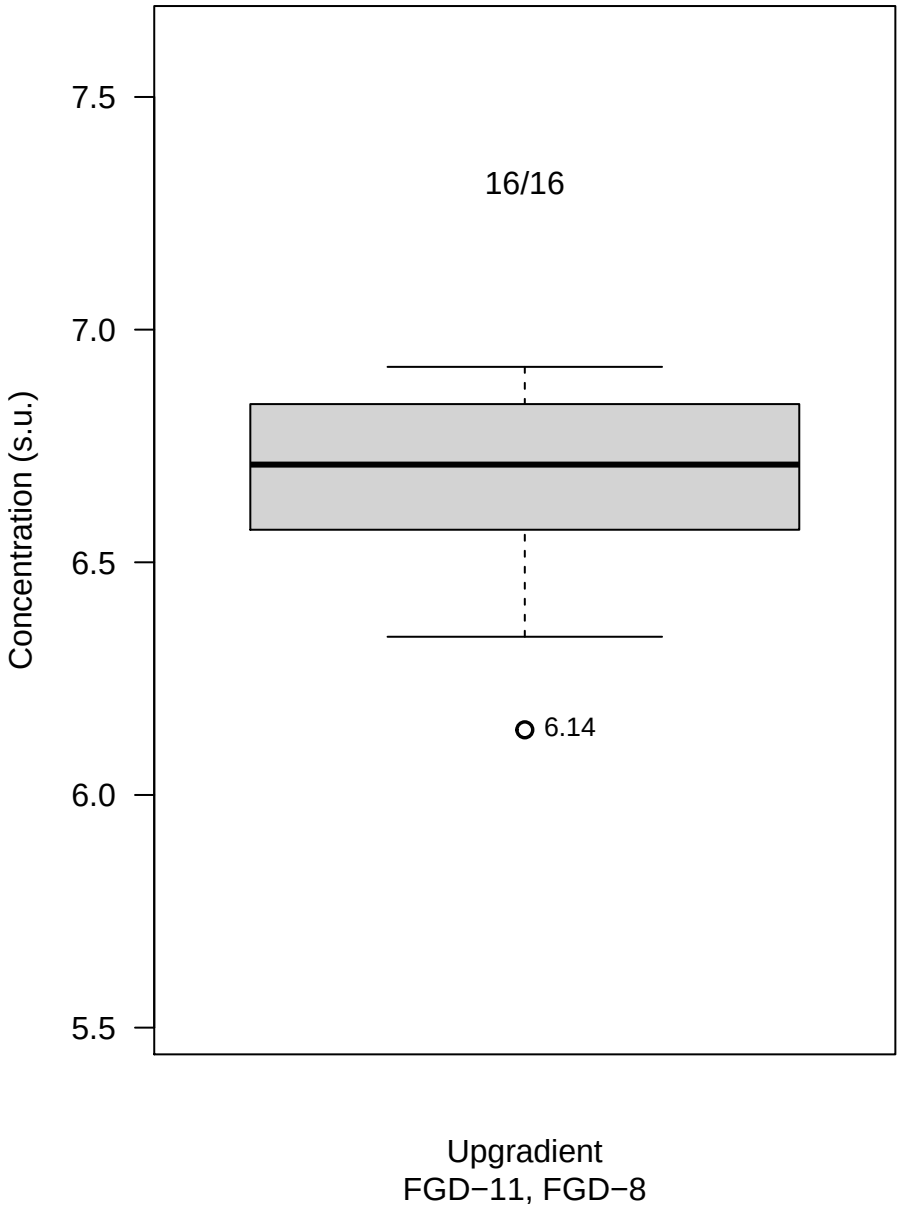


Figure C−6. Appendix III − Sulfate

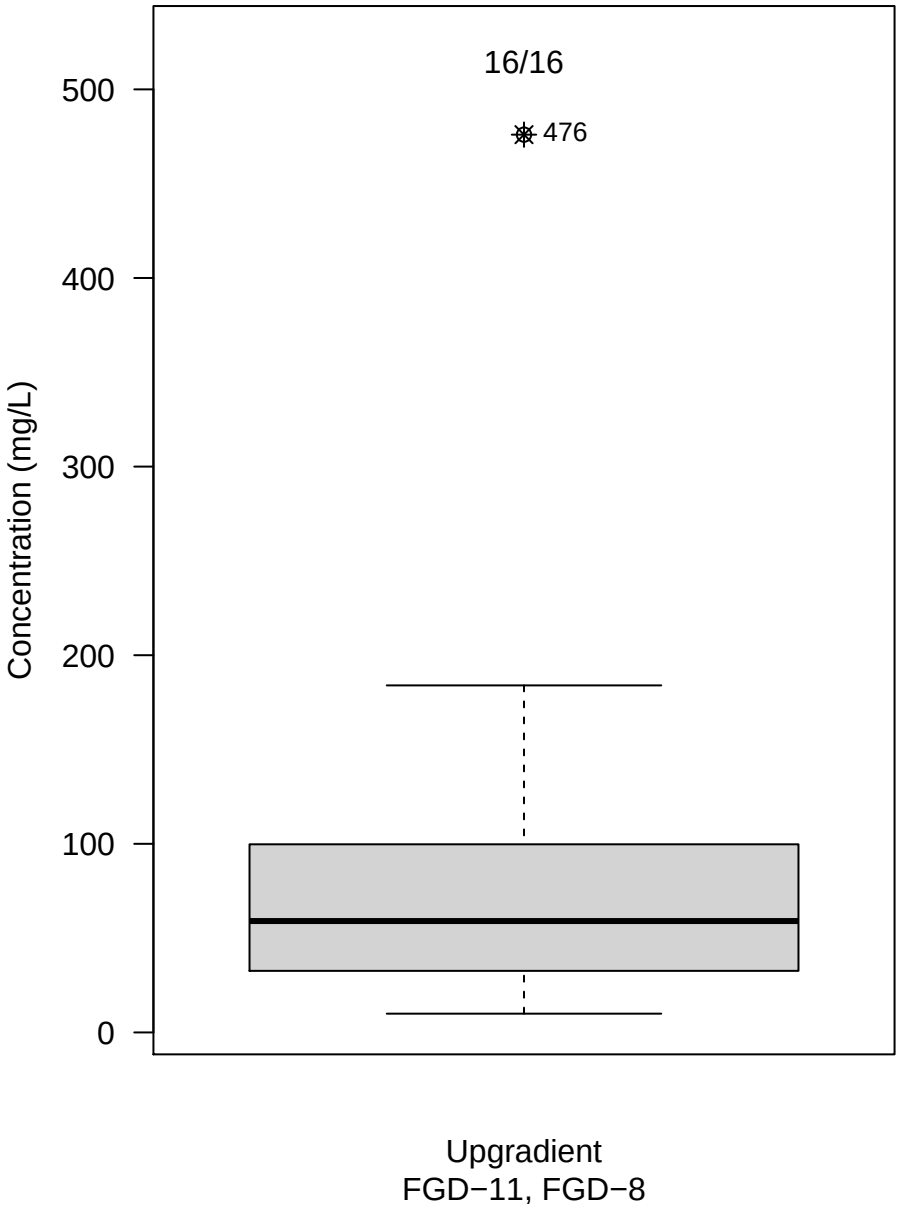


Figure C−7. Appendix III − Total Dissolved Solids

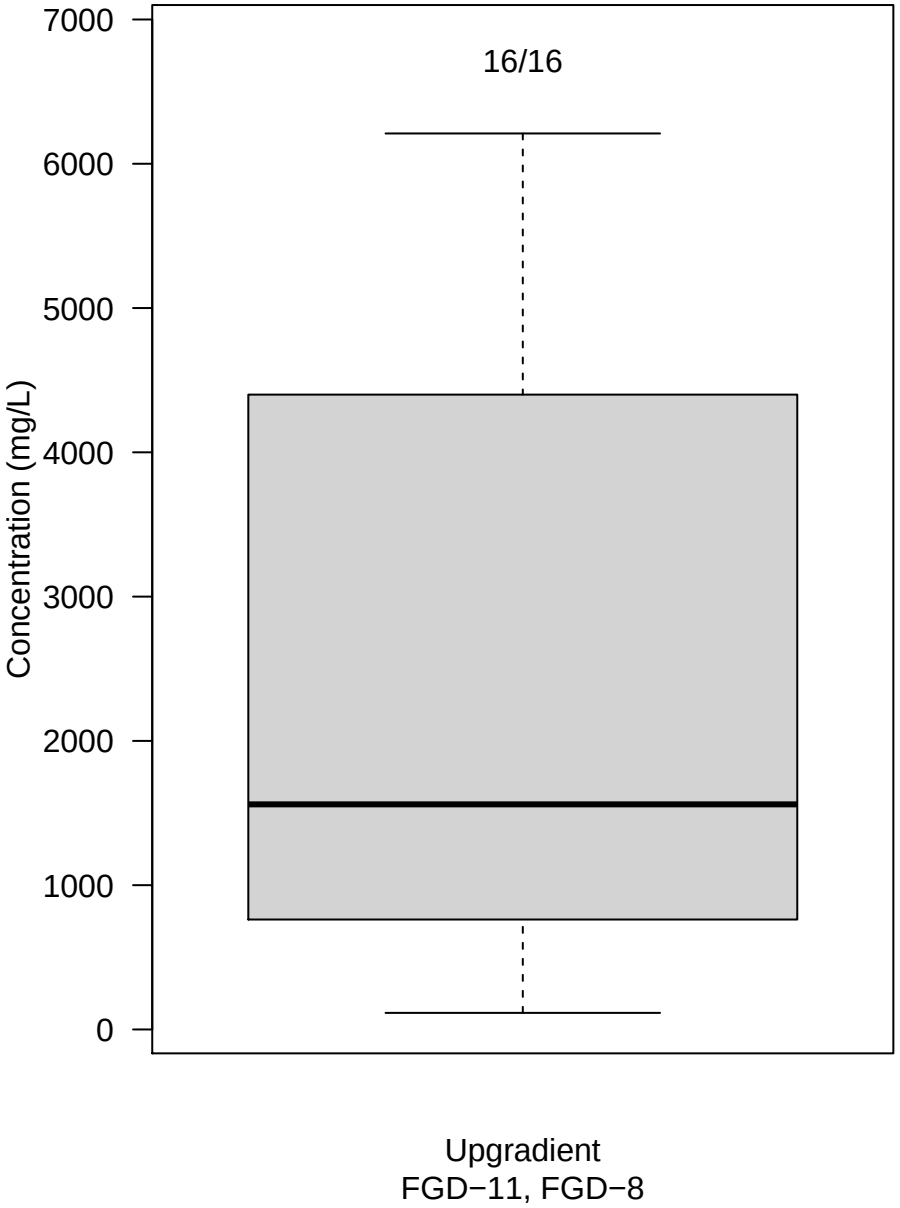


Figure C−8. Appendix IV − Arsenic

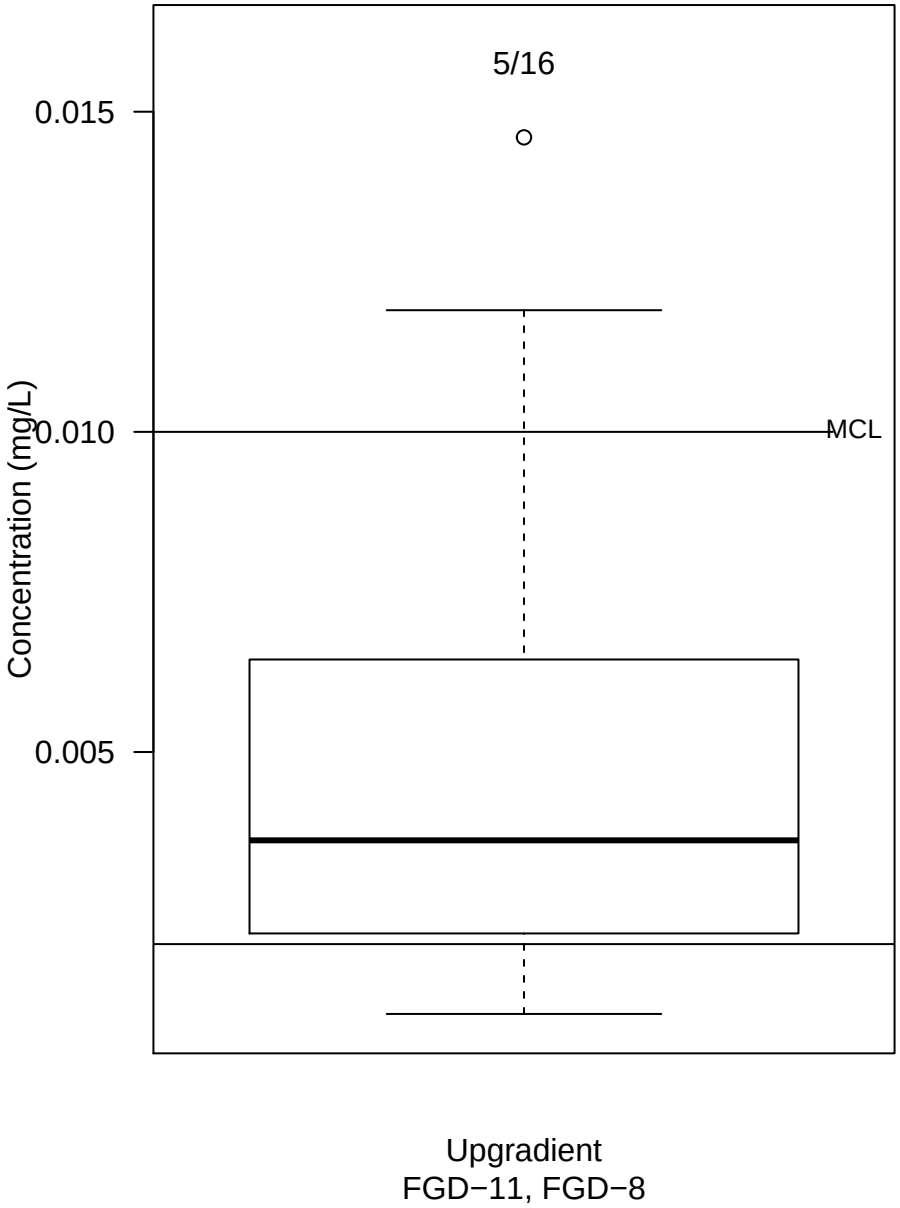


Figure C−9. Appendix IV − Barium

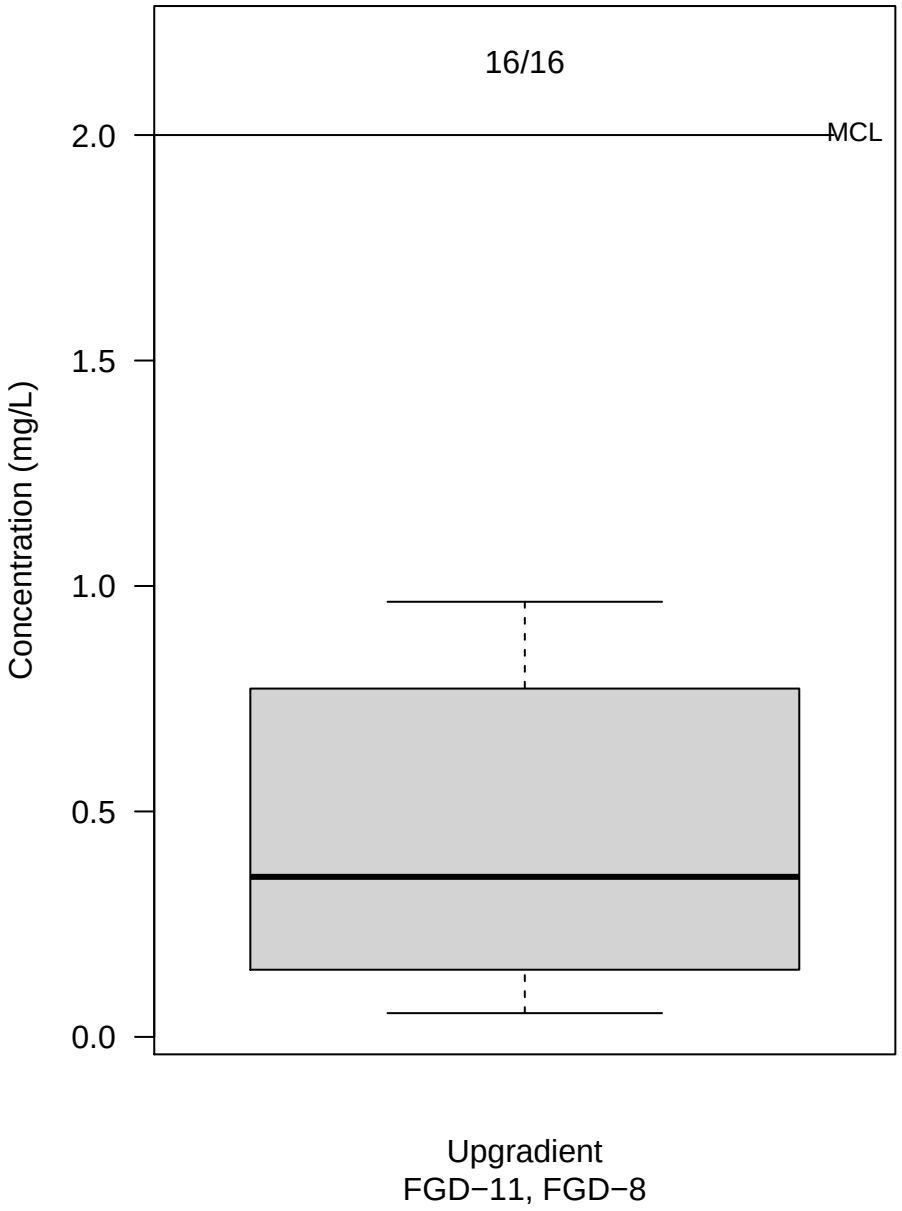


Figure C−10. Appendix IV − Beryllium

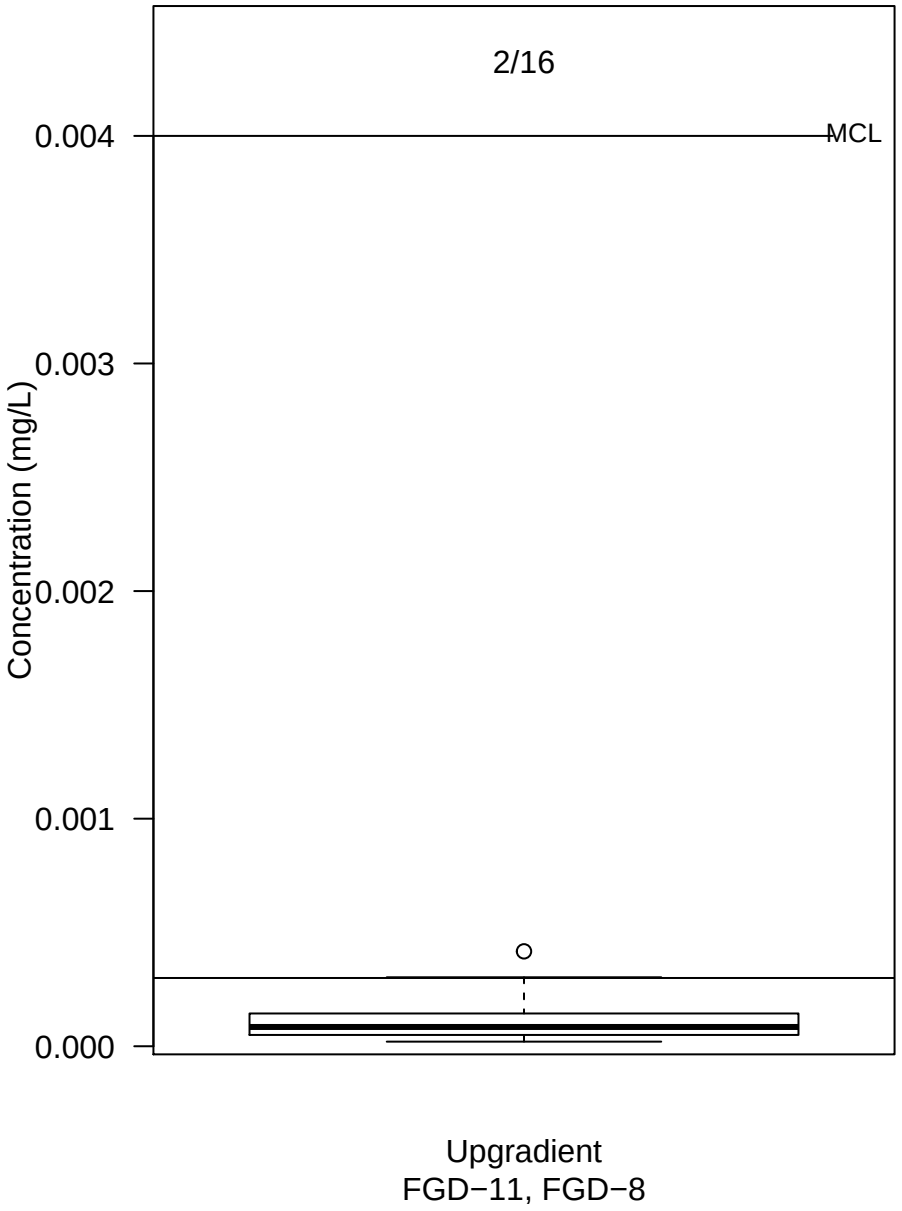


Figure C−11. Appendix IV − Chromium

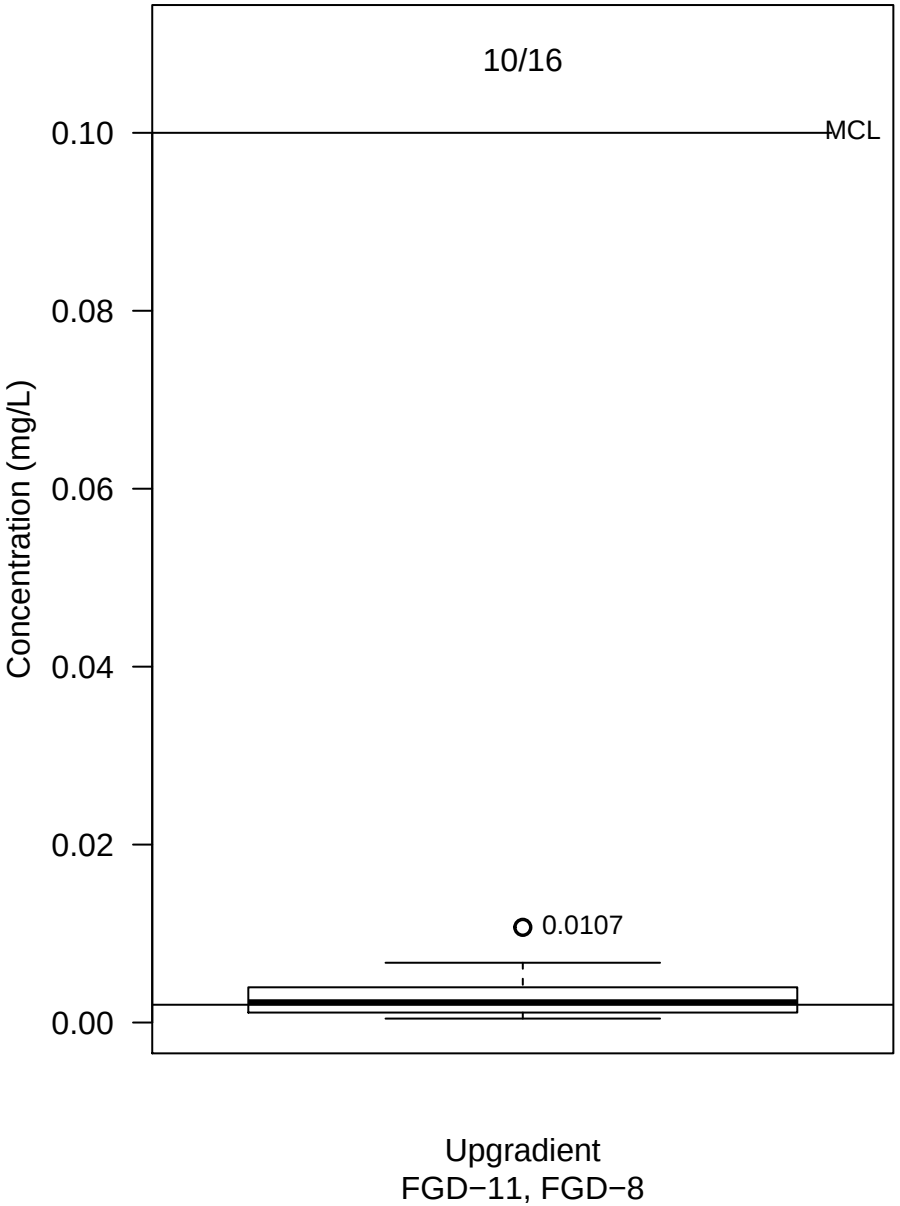


Figure C−12. Appendix IV − Cobalt

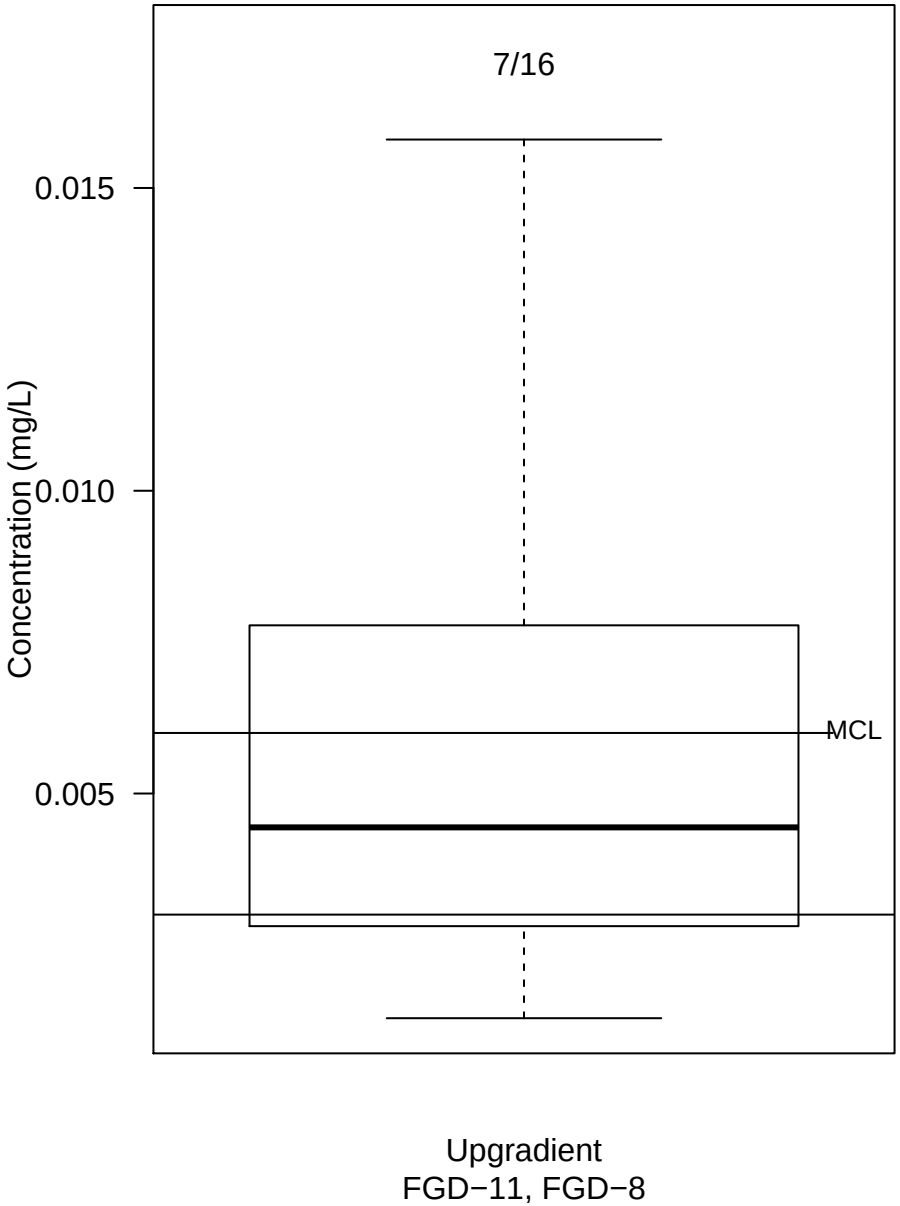


Figure C−13. Appendix IV − Fluoride

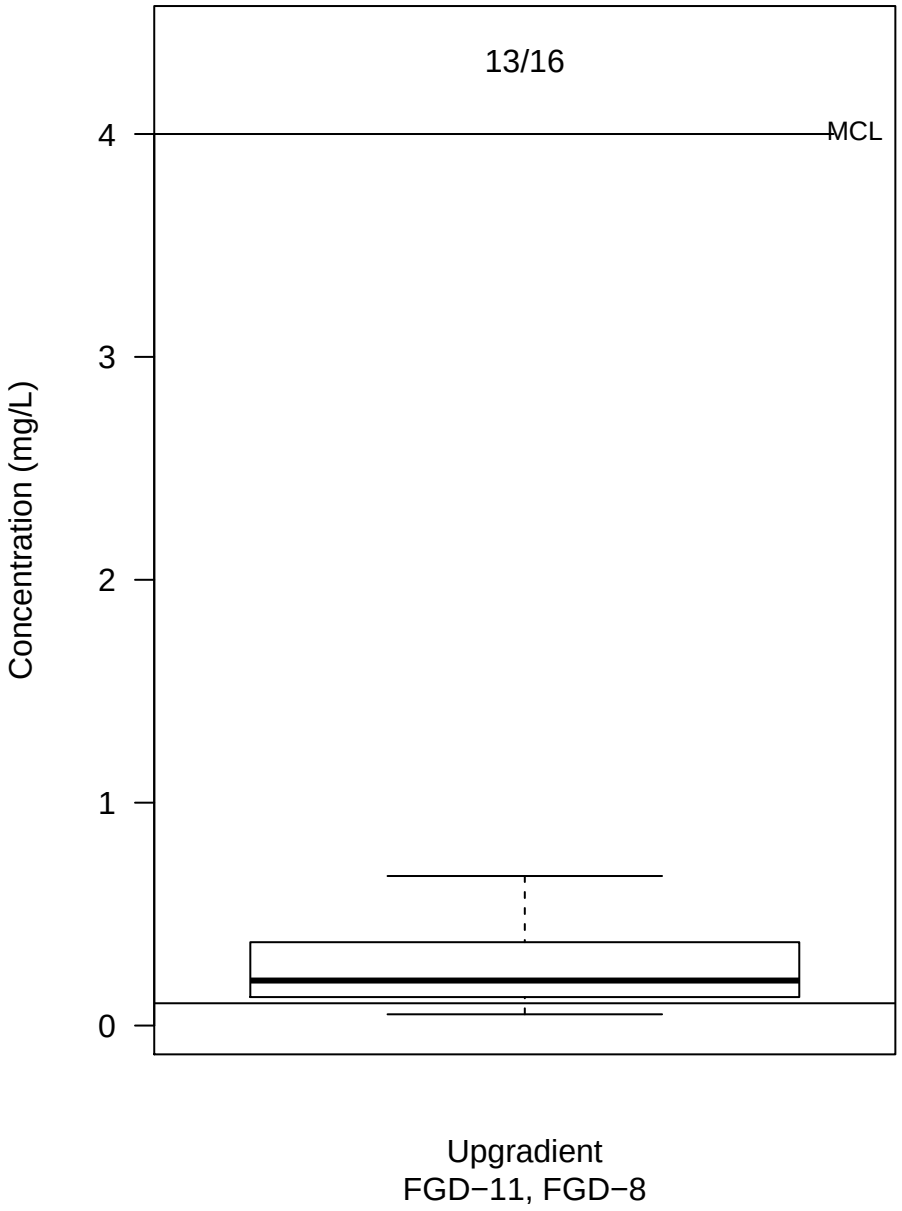


Figure C−14. Appendix IV − Lead

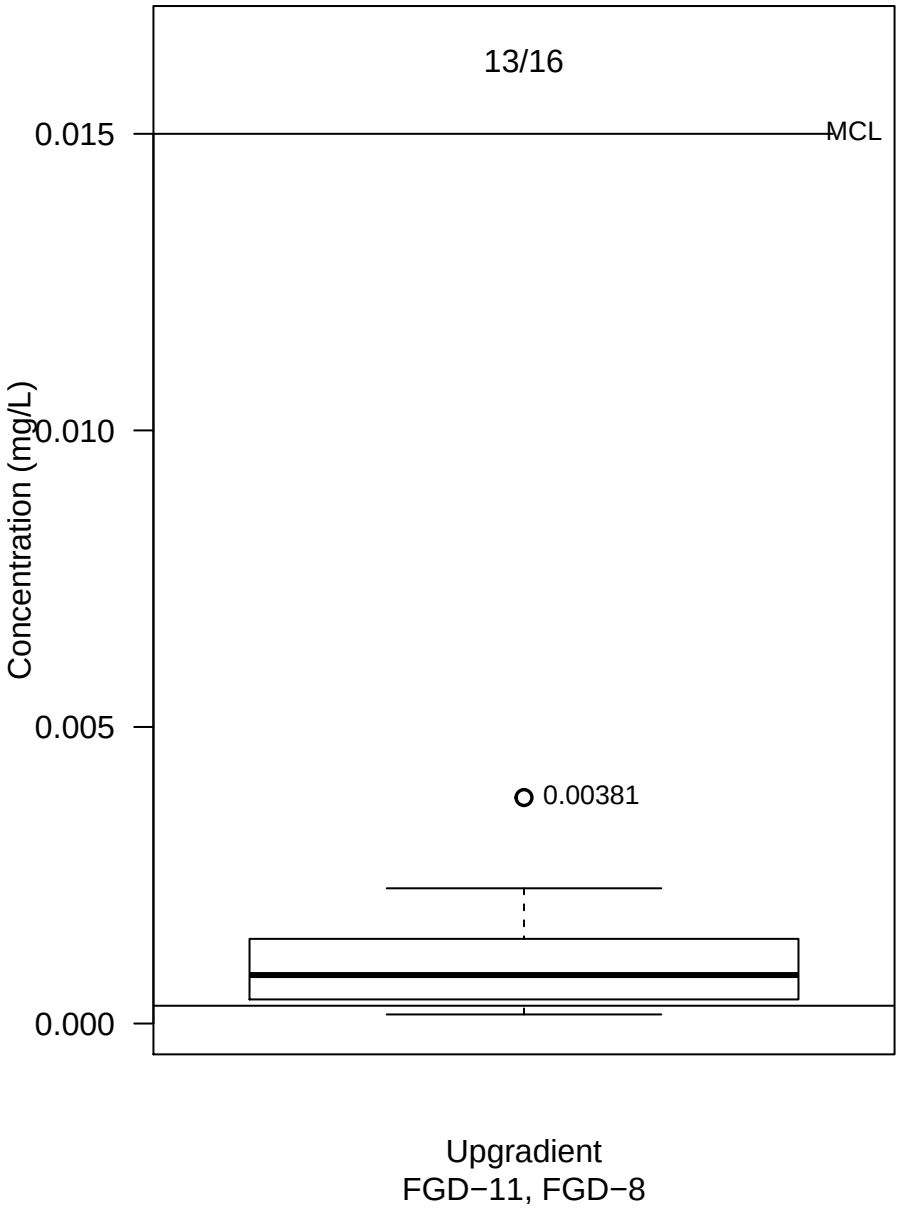


Figure C−15. Appendix IV − Lithium

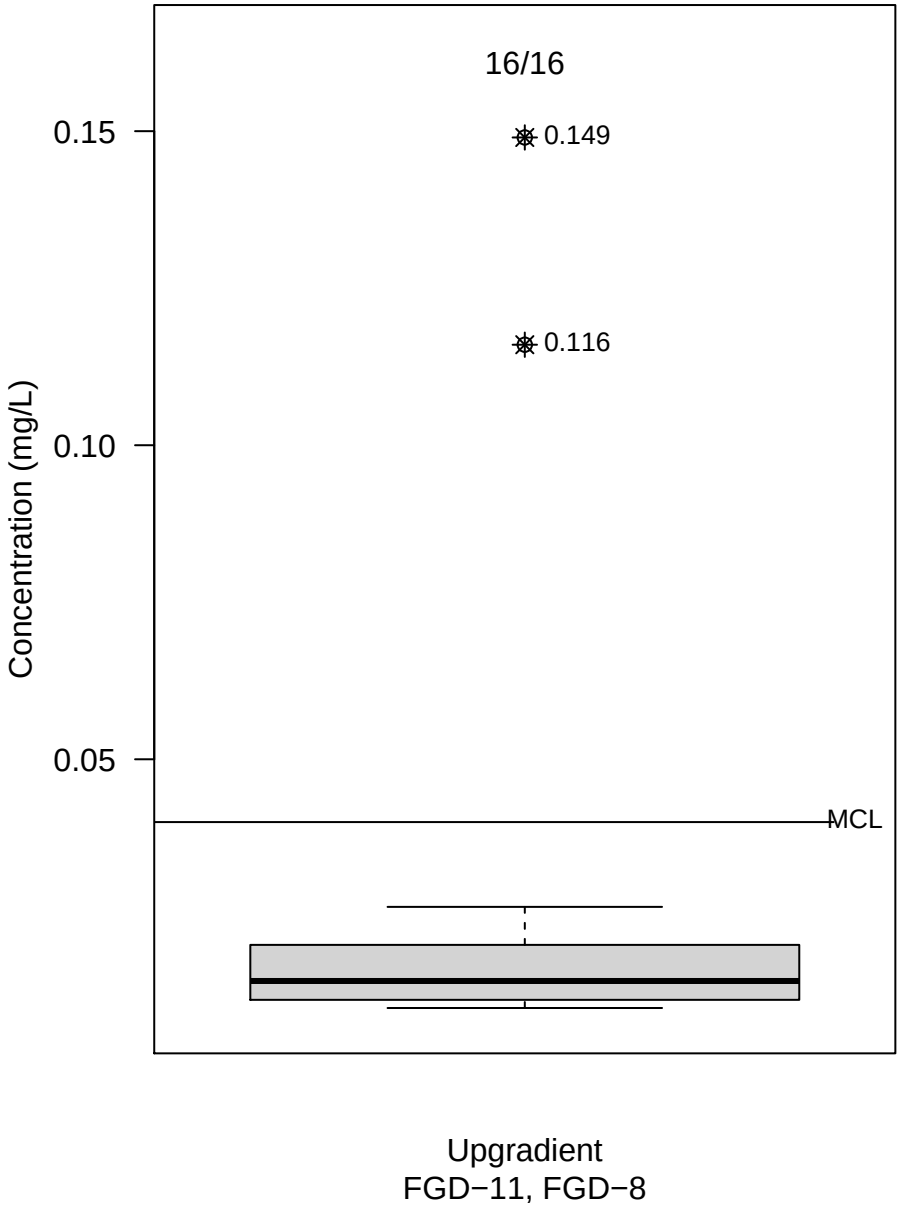


Figure C−16. Appendix IV − Molybdenum

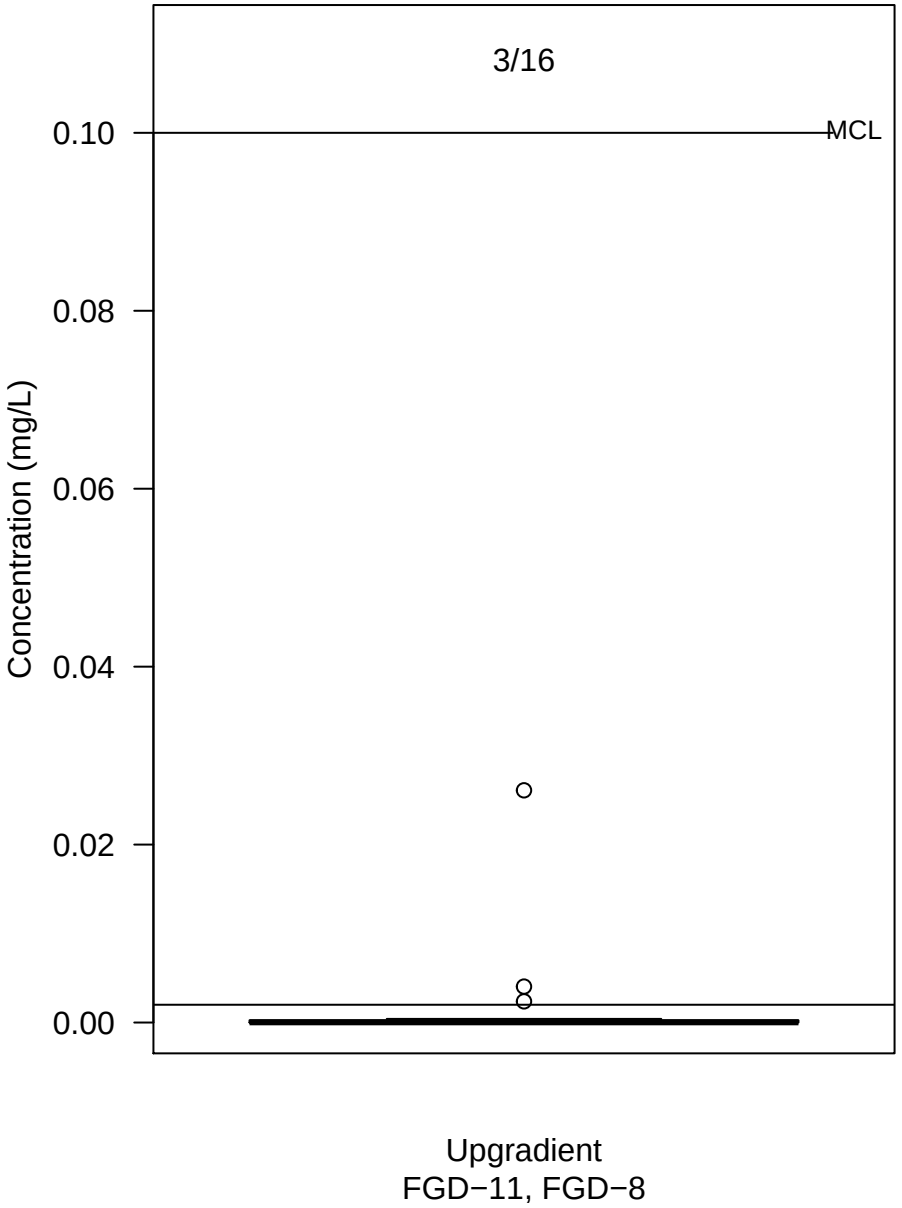


Figure C−17. Appendix IV − Selenium

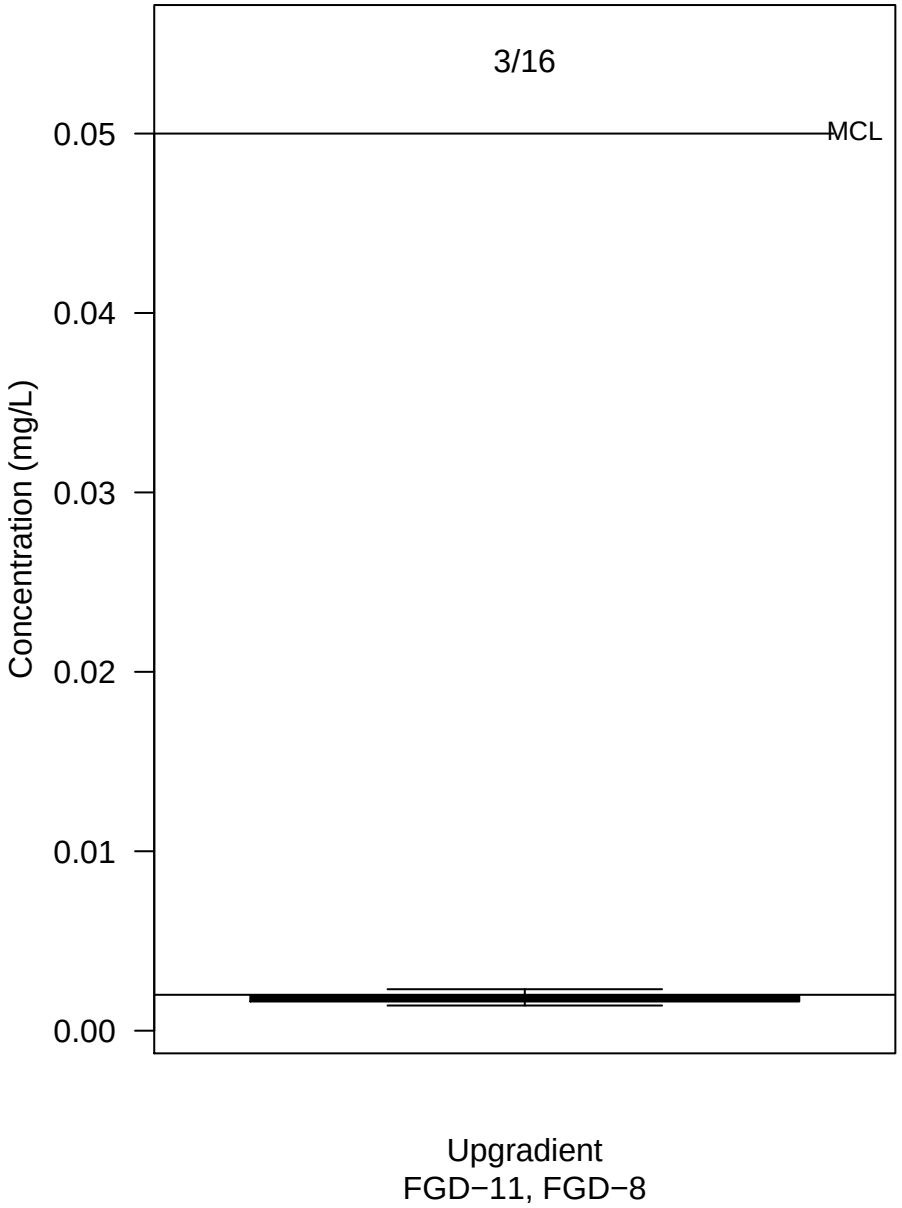
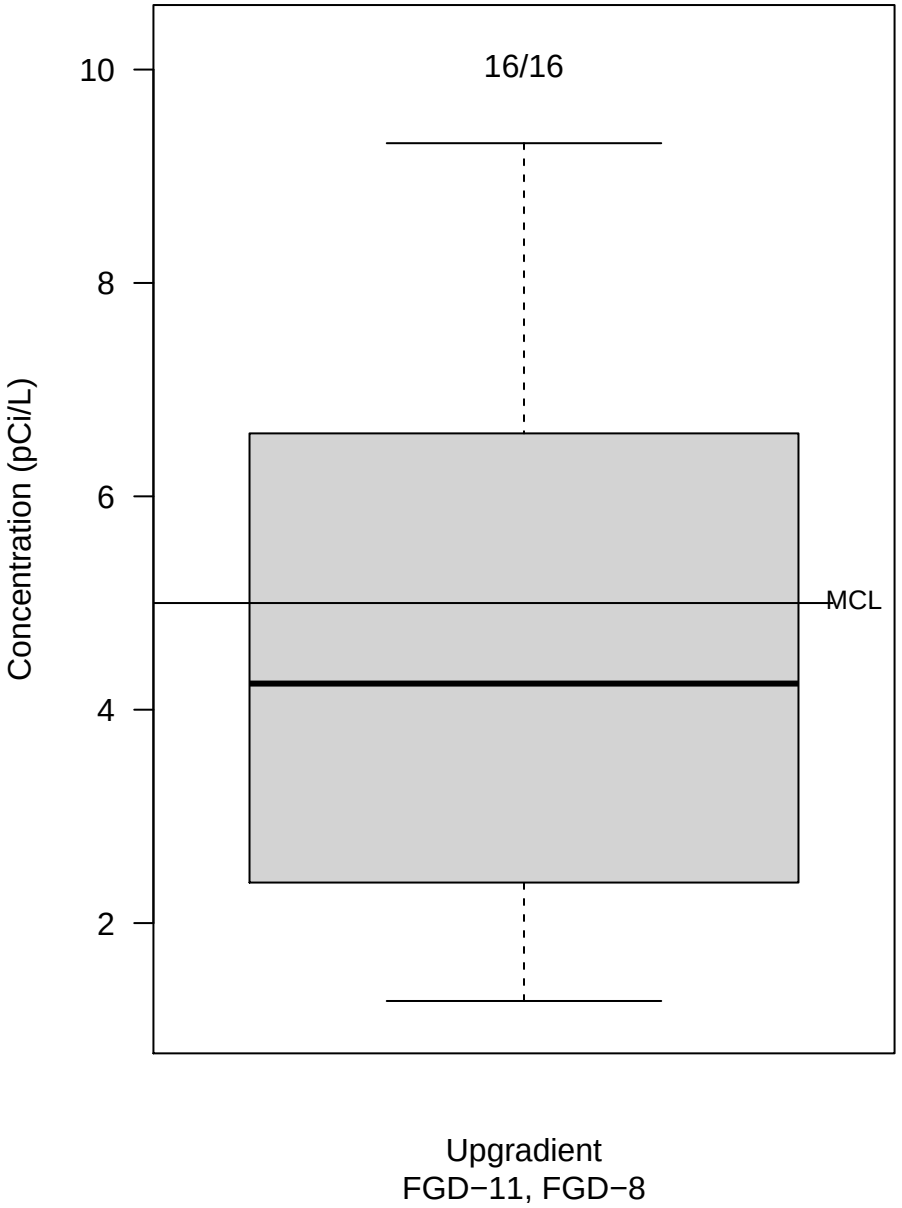
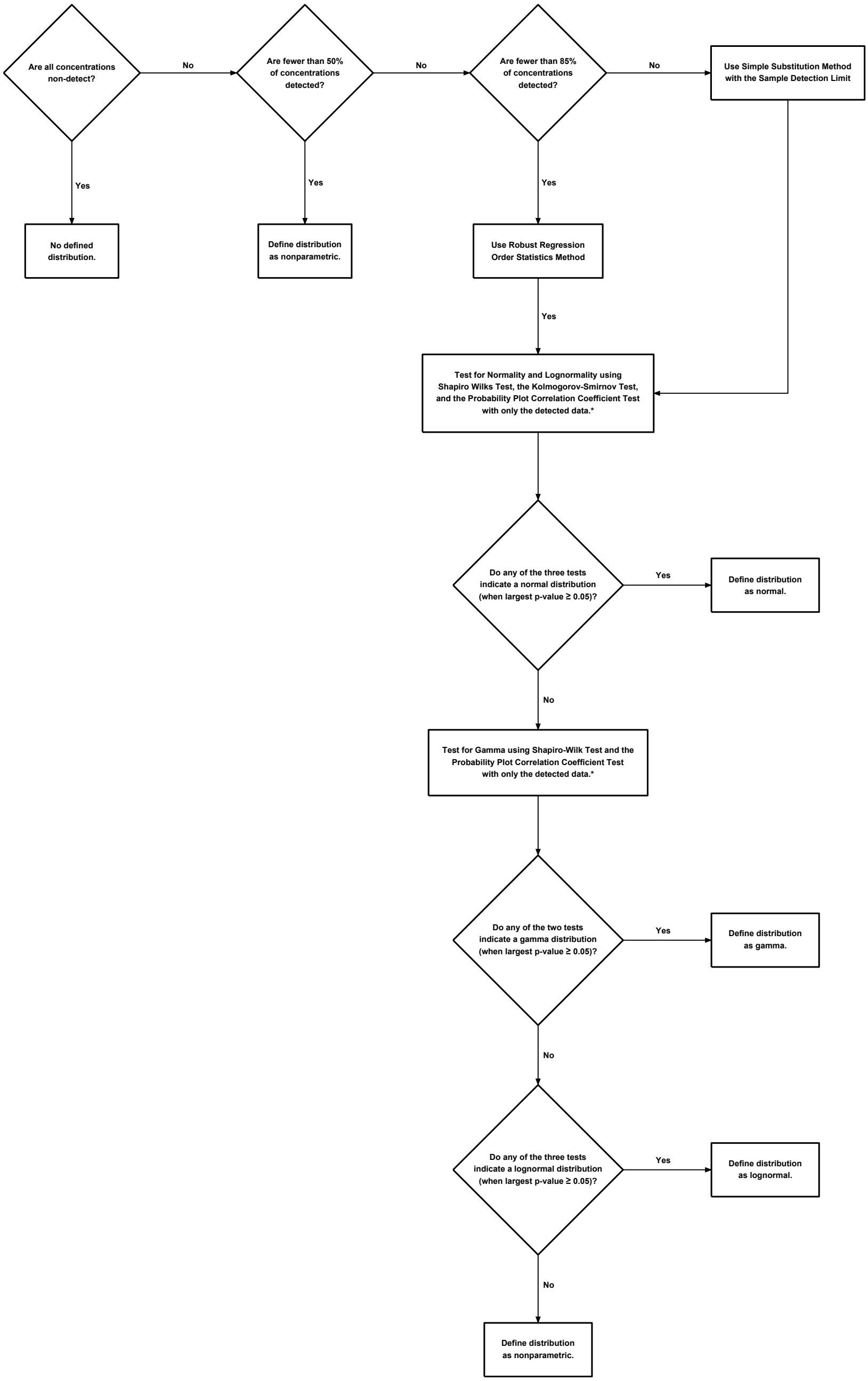


Figure C−18. Appendix IV − Radium−226 + Radium−228





Note:

* - Distributional tests can not be performed for the following cases:

1. For a data group with fewer than five detected samples, the Kolmogorov-Smirnov Test and the Probability Plot Correlation Coefficient Test can not be performed using only the detected concentrations.
2. For a data group with fewer than four detected samples, the Shapiro-Wilks Test can not be performed using only the detected concentrations.

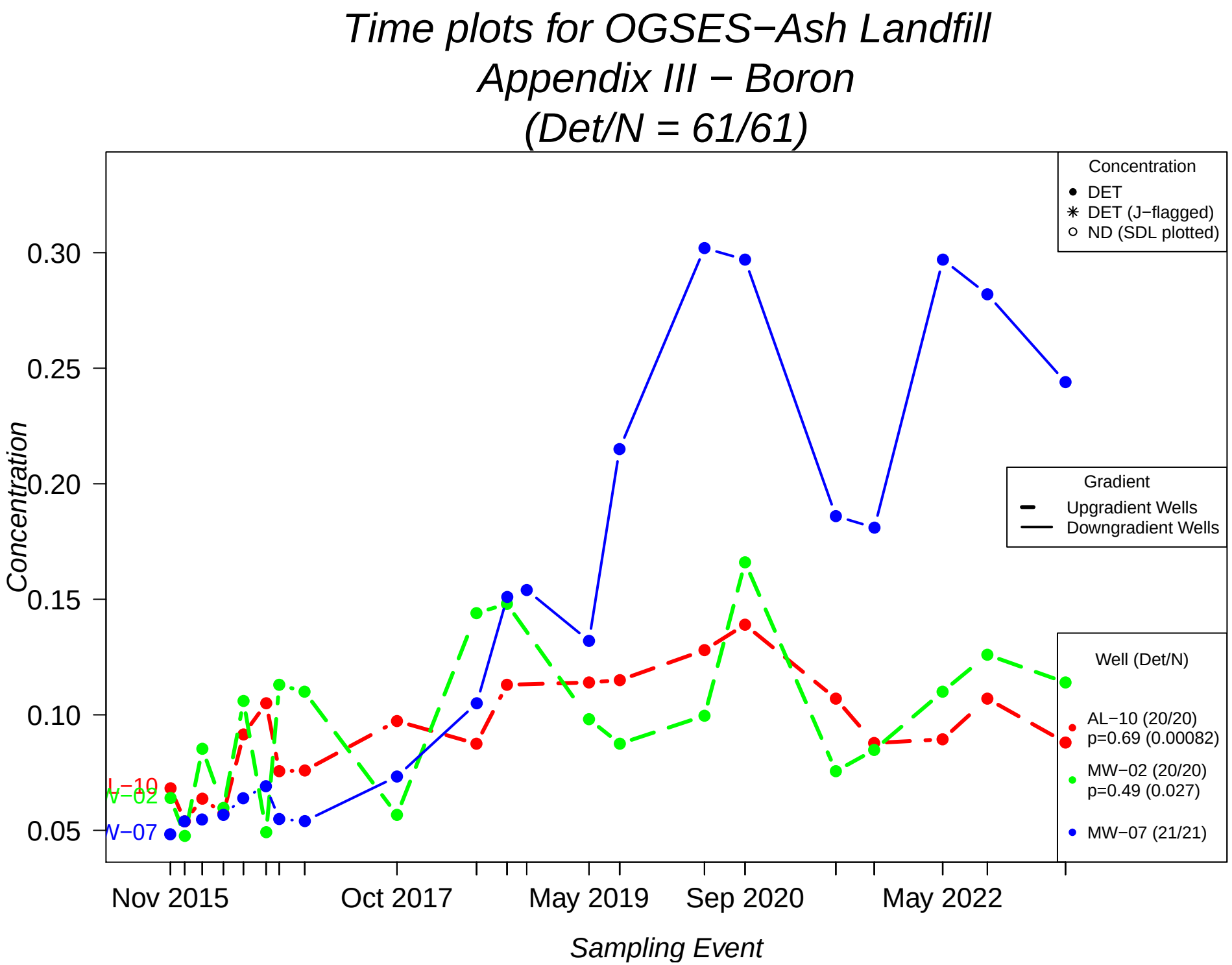
Figure C-19

PROCESS FOR DEFINING A DISTRIBUTION FOR A DATA SET

PROJECT:	BY:	REVISIONS
DATE: August 2023	CHECKED:	

Attachment 5

Time Plots for Downgradient Well MW-07 and Background Wells AL-1 and MW-02


Time plots for OGSES−Ash Landfill
Appendix III − Boron
(Det/N = 61/61)
Concentration
DET
DET (J−flagged)
ND (SDL plotted)
Gradient
Upgradient Wells
Downgradient Wells
Well (Det/N)
AL−10 (20/20)
p=0.69 (0.00082)
MW−02 (20/20)
p=0.49 (0.027)
MW−07 (21/21)
0.30
0.25
0.20
0.15
0.10
0.05
Concentration
L−10
V−02
V−07
Nov 2015
Oct 2017
May 2019
Sep 2020
May 2022
Sampling Event

Attachment 6

Ash Landfill 1 Groundwater Monitoring System Certification Addendum

DATE September 13, 2023 **Project No.** 23643-01

TO Eric Chavers
Luminant Generation Company LLC

FROM William Vienne, P.G. and Dan Bullock, P.E.
Bullock, Bennett & Associates, LLC

GROUNDWATER MONITORING SYSTEM CERTIFICATION ADDENDUM – ASH LANDFILL 1
OAK GROVE STEAM ELECTRIC STATION – ROBERTSON COUNTY, TEXAS

DOCUMENT RECORD

Issue No.	Date	Details of Revisions
Original	October 2017	Original Document
Addendum 1	September 2023	Update to the well construction summary table (Table 1)

INTRODUCTION

Oak Grove Management Company LLC operates the Oak Grove Steam Electric Station (OGSES) located approximately 10 miles north of the city of Franklin in Robertson County, Texas. The OGSES consists of two lignite-fired units with a combined operating capacity of 1,796 megawatts. Coal Combustion Residuals (CCR) including fly ash, bottom ash, and gypsum are generated as part of OGSES operations. CCR generated at the OGSES are managed in the Ash Landfill 1 and the FGD Ponds (FGD-A, FGD-B, and FGD-C) located at the OGSES facility.

SUMMARY OF CHANGES

The original Groundwater Monitoring System Certifications for the OGSES CCR units (PBW, 2017a; PBW, 2017b) were completed in 2017 in accordance with §257.91 of the federal CCR Rule. This addendum revises and replaces the well construction summary table in the 2017 Groundwater Monitoring System Certification for the Ash Landfill 1. The Ash Landfill 1 well construction summary table (Table 1) has been updated to provide well construction summary information for CCR well MW-02 and remove the well construction summary information for non-CCR well MW-04.

REFERENCES

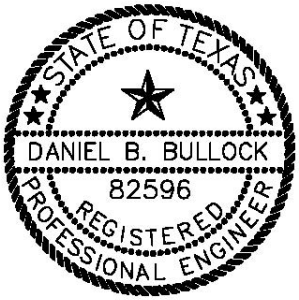
Pastor, Behling & Wheeler, LLC (PBW), 2017a. CCR Groundwater Monitoring System Certification – Oak Grove Steam Electric Station, Ash Landfill 1, Robertson County, Texas. August.

Pastor, Behling & Wheeler, LLC (PBW), 2017b. CCR Groundwater Monitoring System Certification – Oak Grove Steam Electric Station, FGD Ponds, Robertson County, Texas. August.

PROFESSIONAL CERTIFICATION

This document and all attachments were prepared by Bullock, Bennett & Associates, LLC under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that the September 13, 2023 Addendum to the Groundwater Monitoring System Certification for the Ash Landfill 1 at the Oak Grove Steam Electric Station has been prepared in accordance with the requirements of 40 C.F.R. §257.91.

Daniel B. Bullock, P.E.
Principal Engineer
Texas License No. 82596
Bullock, Bennett & Associates, LLC
Texas Engineering Firm No. F-8542



9/13/2023

TABLES

TABLE 1
CCR WELL CONSTRUCTION SUMMARY
ASH LANDFILL 1
OAG 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-02	09/10/08	567795	3197986	460.46	463.65	45	65	20	66	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.

Texas Commission on Environmental Quality

Registration Application for Coal Combustion Residuals (CCR) Waste Management

I. General Information

1. Reason for Submittal

Type of Registration Application

☐ New ☐ Major Amendment ☐ Minor Amendment

☒ Notice of Deficiency (NOD) Response ☐ Transfer ☐ Name Change

☐ Other

2. Application Fees

☒ $150 Application Fee

Payment Method

☐ Check ☒ Online through ePay portal <www3.tceq.texas.gov/epay/>

If paid online, enter ePay Trace Number: 582EA000467512

3. Facility Information

Facility information must match regulated entity information on the Core Data Form.

Applicant: ☐ Owner ☐ Operator ☒ Owner/Operator

Facility TCEQ Solid Waste Registration No: 32043

Facility EPA ID: TXD000728956

Regulated Entity Reference No. (if issued): RN100216191

Facility Name: OAK GROVE STEAM ELECTRIC STATION

Facility (Area Code) Telephone Number: 214-875-8338

Facility physical street address (city, state, zip code, county): 8127 OAK GROVE ROAD, FRANKLIN, TX, 77856, ROBERTSON

Facility mailing address (city, state, zip code, county): 6555 SIERRA DR, DALLAS, TX 75039, DALLAS

Latitude (Degrees, Minutes Seconds): 31° 11′ 06″

Longitude (Degrees, Minutes Seconds): 96° 29′ 07″

4. Publicly Accessible Website

Provide the URL address of a publicly accessible website where the owner or operator of a CCR unit will post information.
https://www.luminant.com/ccr/

5. Facility Landowner(s) Information

Facility landowner(s) name: OAK GROVE MANAGEMENT COMPANY LLC

Facility landowner mailing address: 6555 SIERRA DR

City: Irving State: TX Zip Code: 75039

(Area Code) Telephone Number: 214-875-8338

Email Address (optional):

6. CCR Waste Management Unit(s)

☒ Landfill Unit(s) ☒ Surface Impoundment(s)

For each existing landfill, new landfill and lateral expansion, existing surface impoundment, and new surface impoundment and lateral expansion(s) provide information on type of waste, the registered unit(s) in which they are managed, and sampling and analytical methods.

Submit the following tables:

Table I.6. – CCR Waste Management Units

Table I.6.A. – Waste Management Information

Table I.6.B. – Waste Managed in Registered Units

Table I.6.C. – Sampling and Analytical Methods

7. Description of Proposed Activities or Changes to Existing Facility

Provide a brief description of the proposed activities if application is for a new facility, or the proposed changes to an existing facility or registration conditions, if the application is for an amendment.

Oak Grove Management Company, LLC (Oak Grove) operates the Oak Grove Steam Electric Station (OGSES), which is located approximately 10 miles north of the town of Franklin in Robertson County, Texas. The OGSES consists of two coal/lignite-fired units with a combined operating capacity of approximately 1600 megawatts. Coal combustion residuals (CCR) including fly ash, bottom ash, and flue gas desulfurization (FGD) gypsum are generated as part of OGSES unit operation. The Texas Commission on Environmental Quality (TCEQ) Solid Waste Registration Number (SWR No.) for the OGSES is 32043. CCR is managed in one onsite landfill, Ash Landfill 1, and three surface impoundments, FGD-A, FGD-B, and FGD-C.

Ash Landfill 1 is the primary disposal facility for CCR generated at the OGSES and is located approximately 1200 feet southwest of the OGSES. Ash Landfill 1 is listed on the Notice of Registration (NOR) for the OGSES as Unit No. 010 and is regulated as a Class 2 non-hazardous industrial solid waste landfill under 30 TAC §335.

Gyspum/scrubber sludge that cannot be recycled and selected process wastewaters are managed in FGD-A, FGD-B, and FGD-C ponds. These ponds are collectively referred to as the FGD Ponds. Solids from the FGD Ponds are routinely removed as part of on-going operations and maintenance activities. These solids are placed in Ash Landfill 1 (WMU 010). The FGD Ponds are located approximately 1500 feet northwest of the OGSES. The FGD Ponds are list on the NOR for the OGSES as waste management units 011 (FGD-A), 012 (FGD-B), and 013 (FGD-C). The FGD Ponds are regulated as Class 2 non-hazardous surface impoundments under 30 TAC §335.

8. Primary Contact Information

Contact Name: Renee Collins Title: Sr. Director, Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: Texas Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

Email Address (optional): renee.collins@luminant.com

9. Notice Publishing

Party responsible for publishing notice:
☒ Applicant ☐ Consultant ☐ Agent in Service

Contact Name: Renee Collins Title: Sr. Director, Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: Texas Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

10. Alternative Language Notice

Is an alternative language notice required for this application? For determination, refer to Alternative Language Checklist on the Public Notice Verification Form (TCEQ-20244-Waste-NORI).

☐ Yes ☒ No

11. Public Place Location of Application

Name of the Public Place: Robertson County Carnegie Library
Physical Address: 315 East Dechard Street
City: Franklin County: Robertson State: TX Zip Code: 77856
(Area code) Telephone Number: 979-828-4331

12. Ownership Status of the Facility

☐ Corporation ☐ Limited Partnership
☐ Sole Proprietorship ☐ General Partnership ☒ Other (specify): Limited Liability Company

Does the Site Owner (Permittee/Registrant) own all the CCR units and all the facility property?

☒ Yes ☐ No

13. Property / Legal Description Information

Provide a legal description and supporting documents of the property where the management of CCR waste will occur; including a survey plat and a boundary metes and bounds description (30 TAC §352.231(g)).

Submit the following documents:

a. Property Legal Description
b. Property Metes and Bounds Description
c. Metes and Bounds Drawings
d. On-Site Easements Drawings

See APPENDIX A for Property/Legal Description Information for the following CCR units:
Ash Landfill 1
FGD Pond A
FGD Pond B
FGD Pond C

Property Owner Affidavit also located in APPENDIX A.

14. Operator Information

Identify the entity who will conduct facility operations, if the owner and operator are not the same.

Operator Name: Same as Owner

Operator mailing address:

City: State: Zip Code:

(Area Code) Telephone Number:

Email Address (optional):

15. Confidential Documents

Does the application contain confidential documents?

☐ Yes ☒ No

If "Yes", cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked "CONFIDENTIAL."

16. Permits and Construction Approvals

Permit or Approval	Received	Pending	Not Applicable
Hazardous Waste Management Program under the Texas Solid Waste Disposal Act	☒	☐	☐
Underground Injection Control Program under the Texas Injection Well Act	☐	☐	☒
National Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under Texas Water Code, Chapter 26	☒	☐	☐
Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA).	☒	☐	☐
National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA	☐	☐	☒
Other (describe):	☐	☐	☐
Other (describe):	☐	☐	☐
Other (describe)	☐	☐	☐

17. Legal Authority

The owner and operator of the facility shall submit verification of their legal status with the application. This shall be a one-page certificate of incorporation issued by the secretary of state. The owner or operator shall list all persons having over a 20% ownership in the facility.

See APPENDIX A for Certificate of Authority.

18. TCEQ Core Data Form

The TCEQ requires that a Core Data Form (TCEQ-10400) be submitted on all incoming applications, unless a Regulated Entity and Customer Reference Number has been issued by the TCEQ and no core data information has changed. For more information regarding the Core Data Form, call (512) 239-5175 or visit the TCEQ Website.

See APPENDIX A for TCEQ Core Data Form.

19. Other Governmental Entities Information

Coastal Management Program

Is the facility within the Coastal Management Program boundary?

☐ Yes ☒ No

Local Government Jurisdiction (If Applicable)
Within City Limits of: N/A
Within Extraterritorial Jurisdiction of: N/A

Is the facility located in an area in which the governing body of the municipality or county has prohibited the storage, processing or disposal of municipal or industrial solid waste?

☐ Yes ☒ No If "Yes", provide a copy of the ordinance or order as an attachment.

20. Attachments

Does the application include the following?

General Maps	☒ Yes	☐ No
General Topographic Map	☒ Yes	☐ No
Facility Layout Map	☒ Yes	☐ No
Surrounding Features Map	☒ Yes	☐ No
Process Flow Diagram	☒ Yes	☐ No
Land Ownership Map	☒ Yes	☐ No
Land Ownership List	☒ Yes	☐ No
Pre-printed Mailing Labels	☒ Yes	☐ No

Maps and drawings shall be legible and easily readable by eye without magnification. Scales and paper size shall be chosen based on the type of map submitted, the land area covered, and the amount of detail to be shown. See instructions for details regarding maps and drawings to be submitted in application.

See APPENDIX A for Attachments detailed in Item 20.

Per TCEQ request, a Process Flow Narrative has been included at the end of the Attachments found in APPENDIX A.

21. Verification of Compliance

Does the owner and operator verify that the design, construction, and operation of CCR landfill(s) and surface impoundment(s) meets the requirements of 30 TAC §352.231(f) (30 TAC §352.2; 40 CFR §257.52, and 40 CFR §§257.3-1 – 257.3-3).

☒ Yes ☐ No

As requested by TCEQ, please see the "Response to TCEQ CCR Unit Registration Comments" memorandums for Ash Landfill 1 and FGD Ponds provided by Golder in APPENDIX A.

II. Location Restrictions and Geology

See Instructions and Technical Guidance

22. Location Restrictions

Submit certifications and technical reports demonstrating compliance of CCR unit(s) with applicable location restrictions (30 TAC 352, Subchapter E) and comply with 30 TAC §352.231(d) and 30 TAC §352.4 for submission of engineering and geoscientific information.

A. **Placement above the uppermost aquifer** (30 TAC §352.601) (40 CFR §257.60). For those CCR units whose base is less than five feet above the upper limit of the uppermost aquifer, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.60(a) – (c).

B. **Wetlands** (30 TAC §352.611) (40 CFR §257.61). For CCR units located in wetlands, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.61(a) – (c).

C. **Fault areas** (30 TAC §352.621) (40 CFR §257.62). For CCR units located within 200 feet of the outermost damage zone of a fault, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.62(a) – (c).

D. **Seismic impact zones** (30 TAC §352.631) (40 CFR §257.63). For CCR units located in a seismic impact zone, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.63(a) – (c).

E. **Unstable areas** (30 TAC §352.641) (40 CFR §257.64). For CCR units located in unstable areas, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.64(a) – (d).

Location Restriction Demonstration reports for Ash Landfill 1 and FGD Ponds located in APPENDIX B. Location Restriction Evaluation memorandums also located in APPENDIX B.

23. Geology Summary Report

Submit a summary of the geologic conditions at the facility, including the relation of the geologic condition to each CCR unit. The summary must include enough information and data and include sources and references for the information. Include all groundwater monitoring data required by 40 CFR Part 257, Subpart D, (30 TAC §352.241, §352.601, §352.621, §352.631, and §352.641) and submitted in accordance of 30 TAC §352.4.

Note: Previously prepared documents may be submitted but must be supplemented or updated as necessary to provide the requested information (30 TAC §352.241(b)).

For Geology Summary, please refer to "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F. The Local Geology and Hydrogeology summary is located in Section 2.2 of each report.

All groundwater monitoring data summarized in "2020 Annual Groundwater Monitoring and Corrective Action Report" for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

III. Fugitive Dust Control Plan

24. Fugitive Dust Control Plan

A. **Submit a copy of the CCR Fugitive Dust Control Plan** (30 TAC §352.801) (40 CFR §257.80(b)), or the most recently amended plan. The initial plan or subsequent amended plan must be certified by a qualified Texas licensed professional engineer (Texas P.E.) that the plan meets the requirements of 30 TAC Chapter 352.

B. **Submit the most recent Annual CCR Fugitive Dust Control Report** (30 TAC §352.801) (40 CFR §257.80(c)) and include the report information.

CCR Fugitive Dust Control Plan and the 2021Annual CCR Fugitive Dust Control Report located in APPENDIX C.

IV. Landfill Criteria

See Instructions and Technical Guidance – No. 30 Coal Combustion Residuals Landfill

25. Landfill(s) for CCR Waste

Provide the following information below if there is a landfill; if there is more than one landfill, separate information is required for each landfill.

A. Landfill Characteristics

Describe the design, installation, construction, and operation of the landfill and submit a completed Table IV.A. – Landfill Characteristics.

Ash Landfill 1 consists of four landfill cells (Cells 1 through 4), each constructed with a 3-foot thick compacted clay liner (hydraulic conductivity ≤ 1×10-7 cm/sec). The landfill is constructed above-grade and is surrounded by an earthen perimeter berm that are also provided with a 3-foot-thick compacted clay liner. CCR placement extends above the top of the perimeter berms and the sides of the CCR placed above the berms are graded to slopes of approximately 3H:1V.
Ash Landfill 1 has been in operation since 2008. The current status of Cells 1 through 4 is as follows:

- Cell 1 has received CCR and is inactive. A final cover consisting of a 3-ft thick clay soil (hydraulic conductivity ≤ 1×10-7 cm/sec) overlain with 1.5-ft thick vegetative cover was placed over Cell 1 in 2015.
- Cell 2 has received CCR and is inactive. A final cover consisting of a 40-mil linear low-density polyethylene (LLDPE) geomembrane overlain with a geosynthetic drainage layer and 18 inches of soil was placed over Cell 2 in 2019.
- Cell 3 is active and used for CCR (primarily bottom ash) disposal.
- Cell 4 is active and used for CCR (primarily FGD gypsum) disposal. The eastern portion of Cell 4 is currently used to manage contact water.

Oak Grove is proposing a registration revision to allow for the vertical expansion of Ash Landfill 1. A registration revision package has been added to APPENDIX D for review. The revision package includes an updated final cover grading plan including stormwater management components, a Closure Plan Addendum, a Run-on and Run-off Control Plan revision, and an Unstable Areas Compliance Demonstration,

B. Liner Design

1. For existing landfills, provide attachments describing how the facility will comply with 30 TAC 352, Subchapter F (Design Criteria).

   Ash Landfill 1 is an Existing CCR Landfill as defined by the CCR rule. There are no design criteria for Existing CCR Landfills in either the state or federal CCR rule. 30 TAC 352, Subchapter F or 40 CFR 257.70

2. For new landfills or lateral expansions of existing landfills, submit pages describing how the facility will comply with 30 TAC §352.261 and 30 TAC §352.701. N/A

3. Complete Table IV.B. - Landfill Liner System and specify the type of liner used for the landfill.

4. Provide attachments describing the design, installation, and operation of the liner and leak detection system. The description must demonstrate that the liner and leak detection system will prevent discharge to the land, groundwater, and surface water. Submit a quality assurance project plan (QAPP) to ensure that each analysis is performed appropriately.

   The following Soil Liner Evaluation Reports (SLERs) are located in APPENDIX D for the construction of cells 1-4 of Ash Landfill 1:
   SLER-Phase 1 Ash Landfill
   SLER-Cell 1 West Dike Clay Liner Construction
   SLER-Cell 2 Ash Landfill
   SLER-Cell 3 Ash Landfill
   SLER-Cell 4 Ash Landfill

C. Leachate Collection and Removal

Submit design information and description of leachate collection and removal system in accordance with 30 TAC §352.701. N/A

Complete Table IV.C. - Landfill Leachate Collection System. N/A

D. Design of Liner and Leachate Collection and Removal System.

For a new landfill or lateral expansion of a CCR landfill, provide a qualified Texas P.E. certification and technical report that the design of the liner and the leachate collection and removal system meets the requirements of 30 TAC §352.711. N/A

E. Run-on and Run-off Controls

At time of application, attach pages describing how the facility will comply with the run-on and run-off system plan for an existing, new, or lateral expansion of a CCR landfill information. Provide a qualified Texas P.E. certification and technical report that the run-on and run-off control system plans meet the requirements of 30 TAC §352.811.

"Run-on and Run-off Control System Plan" for Ash Landfill 1 is located in APPENDIX D.

F. Inspection for Landfills

At time of application, attach pages describing how the facility will comply 30 TAC §352.841 and complete Table IV.D. – Inspection Schedule for Landfills. For existing CCR landfills, provide the most recent inspection report. All CCR landfills and any lateral expansions of a CCR landfill must be inspected for any structural weakness, malfunction, deterioration conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit, or any other conditions which may cause harm to human health and environment at a frequency specified in 40 CFR §257.84(a) and (b).

The 2021 Annual CCR Landfill inspection report is located in APPENDIX D.

V. Surface Impoundment Criteria

See Instructions and Technical Guidance – No. 31 Coal Combustion Residuals Surface Impoundment

26. Surface Impoundment(s) for CCR Waste

Provide the following information below if there is a surface impoundment; if there is more than one surface impoundment, separate information is required for each surface impoundment.

A. General Surface Impoundment(s) Characteristics

Provide information about the characteristics of the surface impoundment(s): incised, surface area (acres), storage volume (acres-feet), and depth (feet).

For all surface impoundment(s), include the following information:

1. Complete Table V.A. - Surface Impoundments Characteristics. List the surface impoundment(s) to be registered as a CCR unit(s), the wastes managed in each unit, and the rated capacity or size of each unit.

2. Describe the surface impoundment(s) and provide a plan view drawing with cross-sections, if available.

   See "History of Construction" report in APPENDIX E. A summary description of the impoundments is located in Section 3.5 and drawings are included in Attachment 1. "History of Construction-Addendum No. 1" in APPENDIX E provides updates on the completed retrofit of FGD Pond A.

3. Specify the minimum freeboard to be maintained and the basis of the design to prevent overtopping resulting from normal or abnormal operation; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error. Show that adequate freeboard will be available to prevent overtopping from a 100-year, 24-hour storm.

   Minimum freeboard of 2 feet in FGD-A and FGD-B and minimum freeboard 3 feet in FGD-C. See "Inflow Design Flood Control System Plan", Section 2.4 for FGD Ponds in APPENDIX E.

4. Waste Flow
   Describe the means that will be used to immediately shut off the flow of waste to the impoundment in the event of liner failure or to prevent overtopping.

   All inflows are controlled via pumps under controlled conditions, see "Inflow Design Flood Control System Plan", Section 2.0 for FGD Ponds in APPENDIX E.

5. Dike Construction ☒ Yes ☐ No

   If Yes, submit the dike certification (located at the end of the application).

   In October 2016, the initial certified Periodic Hazard Potential Classification Assessments, Periodic Structural Stability Assessments, and Periodic Safety Factor Assessments were completed for each FGD Pond (FGD-A, FGD-B, FGD-C) as required by 40 CFR 257.73(a), 257.73(d), and 257.73(e). In October 2021, the certified 5-Year Updates to these assessments were completed as required by 40 CFR 257.73 and 30 TAC 352.731, which identified no structural deficiencies. The most recent 2021 5-Year Assessment Updates are located in APPENDIX E. Based on the conclusion in the certified 5-year updates that no structural deficiencies exist, the facility is submitting these documents in lieu of the Dike Certification.

   The structural integrity of the dike system must be certified by a qualified Texas P.E. before the registration is issued. If the impoundment is not being used, the dike system must be certified before it can be put into use. The certification must be sealed by a qualified Texas P.E., along with the engineering firm's name and registration number (30 TAC §352.4).

A report shall accompany the dike certification which summarizes the activities, calculations, and laboratory and field analyses performed in support of the dike certification. Describe the design basis used in construction of the dikes. A QAPP should be included in the report to ensure that each analysis is performed appropriately and include:

(1) Slope Stability Analysis

(2) Hydrostatic and Hydrodynamic Analysis

(3) Storm Loading

(4) Rapid Drawdown

Earthen dikes should have a protective cover to minimize wind and water erosion and to preserve the structural integrity of the dike. Describe the protective cover used and describe its installation and maintenance procedures.

B. Liner Design

For surface impoundment(s), provide information about how the facility will comply with 30 TAC §352.711 for existing CCR surface impoundments. For new and lateral expansion of CCR surface impoundments provide information on how the facility will comply with 30 TAC §352.261, and 30 TAC §352.721, see Instructions and Technical Guidance No. 31 Coal Combustion Residuals Surface Impoundment. The qualified Texas P.E. must certify that the design of the liner complies with the requirements of 30 TAC Chapter 352 and 40 CFR Part 257, Subpart D, where required.

Is the CCR surface impoundment unlined? ☒ Yes ☐ No

FGD Pond A, FGD Pond B, and FGD Pond C are lined per 40 CFR § 257.71.

If "Yes", the CCR unit is subject to the closure requirements under 30 TAC Chapter 352 and 40 CFR §257.101(a) to retrofit or close. A notification must be prepared stating that an assessment of corrective measures has been initiated.

1. Complete Table V.B. - Surface Impoundment Liner System for each surface impoundment to be registered.
2. Describe the design, installation and operation of liner and leak detection components. The description must demonstrate that the liner and leak detection system will prevent discharge to the land and surface water. Submit a QAPP report to ensure that each analysis is performed appropriately.

   See "History of Construction" and "History of Construction-Addendum No.1"reports for all ponds. Also see "Construction Completion and Quality Assurance Report" for FGD-A and "Liner Evaluation Reports" for FGD-B and FGD-C in APPENDIX E.
3. For new or laterally expansions of existing surface impoundments, provide a subsurface soil investigation report that must include:
   a. A description of all borings drilled, at the unit location, to test soils and characterize groundwater;
   b. A unit map drawn to scale showing the surveyed locations and elevations of the borings, including location of permanent identification markers ((30 TAC §352.731) and (40 CFR §257.73(a)(1));
   c. Cross-sections prepared from the borings depicting the generalized strata at the unit;

d. Boring logs, including a description of materials encountered, and any discontinuities such as fractures, fissures, slickensides, lenses or seams;

e. A description of the geotechnical data and the geotechnical properties of the subsurface soil materials, including the suitability of the soils and strata for the intended uses; and

f. A demonstration that all geotechnical tests were performed in accordance with industry practices and recognized procedures.

N/A

C. Hazard Potential Classification

Provide the current hazard potential classification assessment and associated documentation, as required by 30 TAC §352.731 or §352.741 and 40 CFR §257.73(a)(2) or §257.74(a)(2). The qualified Texas P.E. must certify that the initial hazard potential classification and any subsequent periodic classification was conducted in accordance with the requirements of 30 TAC Chapter 352, where required.

Hazard Potential Classification: **LOW**

See "Hazard Potential Classification Assessment" located in APPENDIX E.

D. Emergency Action Plan for High or Significantly High Hazard Potential

Provide the current Emergency Action Plan that has been certified by a qualified Texas P.E. and includes the following requirements from 30 TAC 352, Subchapter F and 40 CFR §257.73(a)(3)(i)(A) - (E) or 40 CFR §257.74 (a)(3)(i)(A) - (E). The qualified Texas P.E. must certify that the written Emergency Action Plan and any subsequent amendment of the plan complies with the requirements of 30 TAC 352, Subchapter F, where required.

N/A

Complete Table V.J. - Inspection of Surface Impoundments

E. Inflow Design Flood Control System Plan

Describe how the surface impoundment(s) system will manage stormwater run-on away from the surface impoundment(s) (30 TAC §352.821 and 40 CFR §257.82(a) and (c)). Stormwater run-on must be diverted away from a surface impoundment, based on the hazard potential. Where dikes are used to divert run-on, they must be protected from erosion. Include all analyses used to calculate run-on volumes. Provide the inflow design flood control system plan. Provide qualified Texas P.E. certification that the initial and periodic inflow design flood control system plans meet the requirements of 30 TAC §352.821, where required.

See "Inflow Design Flood Control System Plan" located in APPENDIX E.

F. History of Construction for Existing CCR Surface Impoundment(s), or the Design and Construction Plans for New and Lateral Expansions

Provide information on the history of construction for each existing CCR surface impoundment (30 TAC §352.731 and 40 CFR §257.73(c)) or the design and construction plans for new and lateral expansions of each CCR surface impoundment (30 TAC §352.741) and (40 CFR §257.74(c)).

See "History of Construction" and "History of Construction-Addendum No. 1" in APPENDIX E.

G. Structural Stability Assessment

Provide the most recent structural stability assessment of the surface impoundments. Include the combined capacity of all surface impoundment spillways with calculations; the peak discharge the unit must meet for all combined spillways; probable maximum flood-high hazard, 1,000-yr-significant high hazard, 100-yr-low hazard; identify if there were any structural stability deficiencies in last assessment; identify how these deficiencies were managed and corrected; and qualified Texas P.E. certification. The structural stability assessment must include all information required in 30 TAC §352.731 for existing surface impoundments or 30 TAC §352.741 for new or laterally expanding surface impoundments.

See "Structural Stability Assessment" located in APPENDIX E.

H. Safety Factor Assessment

The current safety factor assessment must be submitted with the application. It must include documentation that demonstrates whether the calculated factors of safety for each CCR surface impoundment achieve the minimum safety factors specified in 30 TAC 352, Subchapter F and 40 CFR §257.73(e)(1)(i) - (iv) and 40 CFR §257.74(e)(1)(i) - (iv) for the critical cross-section of the embankment. The critical cross-section is the cross-section anticipated to be the most susceptible to structural failure based on appropriate engineering considerations, including loading conditions. The safety factor assessments must be supported by appropriate engineering calculations and certified by a qualified Texas P.E.

See "Safety Factor Assessment" located in APPENDIX E.

VI. Groundwater Monitoring and Corrective Action (30 TAC 352, Subchapter H)

See Instructions and Technical Guidance – No. 32 Coal Combustion Residuals Groundwater Monitoring and Corrective Action

27. Groundwater Monitoring System

A. Complete Table VI.A. - Unit Groundwater Detection Monitoring System.

B. Provide a map showing location of wells, groundwater elevations, and groundwater flow direction.

See Groundwater Potentiometric Surface Maps in Appendix C of the "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

C. Provide attachments describing how the facility will comply with the requirements in 30 TAC §352.911 and provide a certification by a qualified Texas P.E or qualified Texas P.G. that the groundwater monitoring system design and construction meet the requirements of 30 TAC Chapter 352.

See "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

D. Provide a figure showing the geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

See Figures 3,4,5 in the "Groundwater Monitoring System Certification" report for Ash Landfill 1 located in APPENDIX F.

See Figures 3, 4,5,6 in the "Groundwater Monitoring System Certification" report for FGD Ponds located in APPENDIX F.

E. For a multiunit groundwater monitoring system, demonstrate that the groundwater monitoring system will be equally as capable of detecting monitored constituents at the waste boundary of the CCR unit as the individual groundwater monitoring system for each CCR unit by providing at minimum the following information:

1. Number, spacing, and orientation of each CCR unit;
2. Hydrogeologic setting; and
3. Site history.

See "Groundwater Monitoring System Certification" report for FGD Ponds located in APPENDIX F.

F. Has there been any sampling concentrations of one or more constituents listed in Appendix IV detected at statistically significant levels above the groundwater protection standard (GWPS)? ☒ Yes ☐ No

FGD Ponds

G. Provide information on how monitoring wells have been constructed and cased in a manner that maintains the integrity of the monitoring well borehole and to prevent contamination of samples and the groundwater.

See Appendix A in the "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

28. Groundwater Monitoring Sampling and Analysis Program

Provide a sampling and analysis plan that includes procedures and techniques; sampling and analytical methods that are appropriate for groundwater sampling; and that address the requirements of 30 TAC §352.931 and 40 CFR §257.93. Provide a P.E or P.G. certification that describes the statistical method selected to evaluate the groundwater monitoring data and certifies that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area. Refer to TG-32 for information and guidance.

See "Groundwater Monitoring Plan-Revision 2" and "Statistical Analysis Plan-Revision 1" for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

29. CCR Unit(s) in a Detection Monitoring Program

Does the facility have CCR unit(s) in a Detection Monitoring Program?

☒ Yes ☐ No

Ash Landfill 1

If "Yes", Submit the following information:

A. Submit Table VI.C. – Facility CCR Units Under Detection Monitoring.

B. Provide a Background Evaluation Report.

See "Background Groundwater Monitoring and Statistical Analysis Summary Report" for Ash Landfill 1 and the FGD Ponds located in APPENDIX F.

C. Provide a report with the results of semiannual monitoring events.

The "2020 Annual Groundwater Monitoring and Corrective Action Report" and the "2021 Annual Groundwater Monitoring and Corrective Action Report-Revision 1" for Ash Landfill 1 is in APPENDIX F.

1. Has a statistically significant increase (SSI) been detected for one or more of the constituents listed in Appendix III at any monitoring well?

   ☒ Yes ☐ No

2. Has a notification to the executive director been sent within 14 days?

   ☒ Yes ☐ No

3. Date assessment monitoring program will start: N/A Due to successful ASDs

4. Do you plan to provide an alternative source demonstration (ASD)?

   ☒ Yes ☐ No

30. CCR Unit(s) in an Assessment Monitoring Program

Does the facility have CCR unit(s) in an Assessment Monitoring Program?

☒ Yes ☐ No

FGD Ponds

If "Yes", Submit information related for units.

A. Complete Table VI.D. – CCR Units Under Assessment Monitoring.

B. Provide, for each well in assessment monitoring status, the recorded concentrations lab sheets and results in a tabulated form.

See summary tables 3 and 4 for all results in tabulated form in the "2020 Annual Groundwater Monitoring and Corrective Action Report" for the FGD Ponds in APPENDIX F. The "2021 Annual Groundwater Monitoring and Corrective Action Report-Revision 1" for the FGD Ponds is also in APPENDIX F.

C. Have the concentrations of all constituents listed in Appendices III and IV been at or below background values, using the statistical procedures in 30 TAC §352.931 and 40 CFR §257.93(g), for two consecutive sampling events for the CCR unit(s)? ☐ Yes ☒ No

If answer to above is yes, detection monitoring may resume. The owner or operator must prepare a notification stating that detection monitoring is resuming for the CCR unit and obtain written approval from the executive director.

D. Are there any concentrations of any constituent in Appendices III and IV above background values? ☒ Yes ☐ No

1. Has a notification to the executive director been sent within 14 days?

   ☒ Yes ☐ No

E. Date assessment of corrective measures will be initiated (must be within **90 days** of finding a statistically significant level above the GWPS) for the CCR unit(s):
April 8, 2019

F. Will you provide an ASD (see TG-32 for an acceptable submittal)? ☐ Yes ☒ No

G. Date assessment of corrective measures will be initiated if ASD is not accepted?
N/A

H. Complete Table VI.D-2. - Groundwater Detection Monitoring Parameters

Note: Refer to TG-32 regarding establishing a GWPS for each constituent in Appendix IV detected in the groundwater and attach as table.

I. Have you completed the assessment of corrective measures? ☒ Yes ☐ No
If "Yes", date assessment of corrective measures was completed: September 5, 2019
If "No", date assessment of corrective measures will be completed:
Expected date of submittal of amendment (see note below):
Provide completed assessment of corrected measures materials.

"CCR Assessment of Corrective Measures-Revision 1" dated May 2021 can be found in APPENDIX F.

Note: Within **30 days** of completing the assessment of corrective measures, and before remedy implementation, the owner or operator shall submit an application for amendment to the registration. In some circumstance"s, the assessment of corrective measures and selected remedy may be approved as part of the initial application for the CCR unit registration.

J. Have you selected a remedy? ☒ Yes ☐ No

"Remedy Selection Report" located in APPENDIX F.

Provide public meeting documentation under 30 TAC §352.961 and a report under 30 TAC §352.971 and 40 CFR §257.97.

"Assessment of Corrective Measures Public Meeting Documents" located in APPENDIX F.

VII. Closure and Post-Closure Care

See Instructions and Technical Guidance

Submit a full closure plan and post-closure plan and all information describing how the owner or operator will comply with 30 TAC 352, Subchapter J and 40 CFR §§257.100 - 257.104. The owner of property on which an existing disposal facility is located, following the closure of a unit, must also submit documentation that a notation has been placed in the deed to the facility that will in perpetuity notify any potential purchasers of the property that the land has been used to manage CCR wastes and its use is restricted (30 TAC §352.1221 and 40 CFR §257.102(i)). For CCR units, closed after October 19, 2015, that were closed before submission of the application, the applicant should submit documentation to show that notices required under 30 TAC 352, Subchapter K and 40 CFR §257.105 or §257.106 have been filed.

31. Closure Plan

This section applies to the owners and operators of all CCR units required to be registered. The applicant must close the facility in a manner that minimizes need for further maintenance and controls, or eliminates, to the extent necessary to protect human health and the environment, the post-closure release of CCR waste, chemical constituents of concern, leachate, contaminated rainfall, or waste decomposition products to the groundwater, surface waters, or to the atmosphere.

The type of unit to be closed can determine the level of detail sufficient for a closure plan. CCR units which have been certified closed after October 19, 2015, must provide documentation to demonstrate compliance with state and federal regulations.

For each unit to be registered, complete Table VII.A.1. - Unit Closure and list the CCR Unit components to be decontaminated, possible methods of decontamination, and possible methods of disposal of wastes and waste residues generated during unit closure. All ancillary components must be decontaminated, and the generated waste disposed of appropriately.

See "Closure Plan" and "Closure Plan-Addendum No. 1" for Ash Landfill 1 and FGD Ponds in APPENDIX G.

Information about CCR units closed or to be closed under alternative closure requirements must be provided in Table VII.A.2. - CCR Units Under Alternative Closure Notification.

Guidance on design of a closure cap and final cover for non-hazardous industrial solid wastes landfills is provided in EPA publication 530-SW-85-014, TCEQ Technical Guidance No. 3 and TCEQ publication, RG-534, "Guidance for Liner Construction and Testing for a Municipal Solid Waste Landfill".

32. Post-Closure Care Plan

Provide a post-closure care plan that complies with the requirements of 30 TAC §352.1241.

See "Post-Closure Plan" for Ash Landfill 1 and FGD Ponds in APPENDIX G.

Post-closure care of each CCR unit must continue for at least 30 years after the date of completing closure of the unit and must consist of monitoring and reporting of the groundwater monitoring systems, in addition to the maintenance and monitoring of CCR unit. Continuation of certain security requirements may be necessary after the date of closure. Post-closure use of property on or in which waste remains after closure must never be allowed to disrupt the integrity of the containment system. In addition, submit the following information:

- The name, address, and phone number of the person or office to contact about the CCR unit during the post-closure period; and

  Luminant-Environmental Services
  Renee Collins-Senior Environmental Director
  6555 Sierra Drive
  Irving, TX 75039
  214-875-8338
  CCRPostClosurePlan@Luminant.com

- A discussion of the future use of the land associated with each unit.

  See section 5.0 of the "Post-Closure Plans" for Ash Landfill 1 and FGD Ponds in APPENDIX G.

Landfills and surface impoundments which have been certified closed after October 19, 2015, must be included in post-closure care plans, unless they have been determined to have been closed by waste removal equivalent to the closure standards in 30 TAC §352.1221 and 40 CFR §257.102 or 30 TAC §352.1231 and 40 CFR §257.103. If such a demonstration has been made pursuant to 40 CFR §257.102 or §257.103, but an equivalency determination has not been made, please submit a copy of the demonstration documentation. If an equivalency determination has been made, applicant should submit a copy of this determination.

VIII. Financial Assurance

33. Post-Closure Care Cost Estimate

Financial assurance for post-closure care (30 TAC §352.1101) applies to owners or operators of all CCR units, except CCR units from which the owner or operator intends to remove wastes and perform clean closure. Provide a written cost estimate in current dollars of the total cost of the 30-year (or longer, if applicable under 30 TAC §352.1101(d)) post-closure care period to perform post-closure care requirements as prescribed in 30 TAC §352.1241. The cost estimate must be based on the costs of hiring a third party to conduct post-closure care maintenance.

Complete Table VIII.A.1 – Post-Closure Cost Summary for Existing Registered Units

See Post-Closure Care Cost Estimates in APPENDIX H. Cost estimates for the FGD Pond Area are summarized in Table 1. Cost estimates for Ash Landfill 1 are summarized in Table 2.

Complete Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units

34. Financial Assurance Mechanism

The financial assurance for post-closure care is required in accordance with 30 TAC §352.1101. The applicant shall demonstrate the financial assurance within 90 days after approval of the registration with a financial mechanism acceptable to TCEQ in compliance with 30 TAC §352.1101(c) and 30 TAC §37, Subchapters A through D, except as indicated in 30 TAC §352.1111, in an amount no less than the amount specified in the approved Post-Closure Care Cost Summary. Provide a description of the proposed financial assurance mechanism.

Oak Grove Management Company LLC will provide an acceptable financial assurance mechanism per 30 TAC 352.1101 no more than 90 days after the executive director's approval of the registration.

Complete Table VIII.B. - Post-Closure Period, for the authorized post-closure period, to meet the requirements of 30 TAC §352.1241(a) through (c).

Signature Page

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Signature: _____ Date: _____

Name and Official Title (type or print): _____

Owner or Operator Signature: _____ Date: _____

Name and Official Title (type or print): _____

To be completed by the owner or operator if the application is signed by an authorized representative for the operator

I, _____ hereby designate _____
(operator) (authorized representative)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a CCR waste management registration. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any registration which might be issued based upon this application.

_____
Printed or Typed Name of Applicant or Principal Executive Officer

_____
Signature

(Note: Application Must Bear Signature & Seal of Notary Public)

Subscribed and sworn to before me by the said _____ on this

_____ day of _____, _____.

My commission expires on the _____ day of _____, _____

(Seal) Notary Public in and for _____ County, Texas

Registration Application for Coal Combustion Residuals Waste Management

Attachments and Tables	Attachment No.
General Information	Appendix A
Property/Legal Description	
Property Owner Affidavit	
Legal Authority	
Delegation of Signature Authority	
TCEQ Core Data Form	
Attachments	
Response to TCEQ CCR Unit Registration Comments (Item 21) – Ash Landfill 1	
Response to TCEQ CCR Unit Registration Comments (Item 21) – FGD Ponds	
Location Restrictions & Geology	Appendix B
Location Restriction Demonstration-Ash Landfill 1	
Location Restriction Evaluation-Ash Landfill 1	
Location Restriction Demonstration-FGD Ponds	
Location Restriction Evaluation-FGD Ponds	
Fugitive Dust Control Plan	Appendix C
CCR Fugitive Dust Control Plan	
2021 Annual CCR Fugitive Dust Control Report	
Landfill Criteria	Appendix D
Soil Liner Evaluation Reports	
Run-on and Run-off Control System Plan	
2021 Annual CCR Unit Inspection Report-Ash Landfill 1	
Registration Update – Proposed Vertical Expansion of Ash Landfill 1	
Surface Impoundment Design and Operating Criteria	Appendix E
Construction Completion and Quality Assurance Report-FGD A	
Liner Evaluation Report-FGD B	
Liner Evaluation Report-FGD C	
Retrofit Plan – FGD A	
Intent to Retrofit Notification – FGD A	
FGD Pond A Retrofit Construction Plans	
Hazard Potential Classification Assessment	
Inflow Design Flood Control System Plan	
History of Construction	
History of Construction-Addendum No.1	
Structural Stability Assessment	
Safety Factor Assessment	
Groundwater Monitoring and Corrective Action	Appendix F
Groundwater Monitoring System Certification-Ash Landfill 1	
Groundwater Monitoring System Certification-Addendum No. 1-Ash Landfill 1	
Groundwater Monitoring System Certification-FGD Ponds	
Groundwater Monitoring Plan-Revision 2 – Ash Landfill 1	
Groundwater Monitoring Plan-Revision 2 – FGD Ponds	
Statistical Analysis Plan-Revision 1-Ash Landfill 1	
Statistical Analysis Plan-Revision 1-FGD Ponds	
Background Groundwater Monitoring and Statistical Analysis Summary Report–Ash Landfill 1	
Background Groundwater Monitoring and Statistical Analysis Summary Report–FGD Ponds	
2017 Annual Groundwater Monitoring Report-Ash Landfill 1	
2020 Groundwater Monitoring and Corrective Action Report-Ash Landfill 1	
2020 Groundwater Monitoring and Corrective Action Report-FGD Ponds	

2021 Groundwater Monitoring and Corrective Action Report-Revision 1-Ash Landfill 1
2021 Groundwater Monitoring and Corrective Action Report-Revision 1-FGD Ponds
CCR Assessment of Corrective Measures-Revision 1-FGD Ponds
Assessment of Corrective Measures Public Meeting Documents
Remedy Selection Report – FGD Ponds

Closure and Post-Closure Care — Appendix G

Closure Plan-Ash Landfill 1
Closure Plan-Addendum No. 1-Ash Landfill 1
Closure Plan-FGD Ponds
Closure Plan-Addendum No. 1-FGD Ponds
Post-Closure Plan-Ash Landfill 1
Post-Closure Plan-FGD Ponds

Financial Assurance — Appendix H

Post-Closure Care Cost Estimates Tables

Tables	Submitted	Not Applicable
Table I.6. - CCR Waste Management Units	☒	☐
Table I.6.A. - Waste Management Information	☒	☐
Table I.6.B. - Wastes Managed in Registered Units	☒	☐
Table I.6.C. - Sampling and Analytical Methods	☒	☐
Table IV.A. - Landfill Characteristics	☒	☐
Table IV.B. - Landfill Liner System	☒	☐
Table IV.C. - Landfill Leachate Collection System	☐	☒
Table IV.D. - Inspection Schedule of Landfills	☒	☐
Table V.A. - Surface Impoundments Characteristics	☒	☐
Table V.B. - Surface Impoundment Liner System	☒	☐
Table V.J. - Inspection of Surface Impoundments	☒	☐
Table VI.A. - Unit Groundwater Detection Monitoring System	☒	☐
Table VI.C. - CCR Units Under Detection Monitoring	☒	☐
Table VI.C-1. - Groundwater Detection Monitoring Parameters	☒	☐
Table VI.D. - CCR Units Under Assessment Monitoring	☒	☐
Table VI.D-2. - Groundwater Assessment Monitoring Parameters	☒	☐
Table VII.A.1. - Unit Closure	☒	☐
Table VII.A.2. - CCR Units Under Alternative Closure Notification	☐	☒
Table VIII.A.1. - Post-Closure Cost Summary for Existing Registered Units	☒	☐
Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units	☐	☒
Table VIII.B. - Post-Closure Period	☐	☒
Engineering Certification(s) - Dike Construction	☐	☒

Additional Attachments as Applicable - Select all those apply and add as necessary

☒ TCEQ Core Data Form(s) Appendix A
☒ Signatory Authority Delegation Appendix A
☐ Fee Payment Receipt
☐ Confidential Documents
☒ Certificate of Fact (Certificate of Incorporation) Appendix A
☐ Assumed Name Certificate

Table I.6. – CCR Waste Management Units

CCR Unit No.[1]	Unit Name	N.O.R. No.[1]	Unit Description[3]	Capacity	Unit Status[2]
010	Ash Landfill 1	010	Landfill	22.16 million cubic yards	Active
011	FGD-A Pond	011	Surface Impoundment	172 ac-ft	Active
012	FGD-B Pond	012	Surface Impoundment	104 ac-ft	Active
013	FGD-C Pond	013	Surface Impoundment	218 ac-ft	Active

1 Registered Unit No. and N.O.R. No. cannot be reassigned to new units or used more than once.
2 Unit Status options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post-Closure.
3 If a unit has been transferred, the applicant should indicate which facility/permit it has been transferred to in the Unit Description column.

Table I.6.A. – Waste Management Information

Waste No.[1]	Waste Type(s)	Source	Volume (tons/year)[2]
1	FGD Gypsum	Coal Combustion Byproduct	837,000 tons
2	Fly Ash	Coal Combustion Byproduct	49,000 tons
3	Bottom Ash	Coal Combustion Byproduct	332,000 tons
4	Class 2 Non-Hazardous Sandblast Grit	Misc. Maintenance Activities	< 10 tons
5	Construction Debris	Misc. Maintenance Activities	< 100 tons
6	Filters	Misc. Maintenance Activities	< 50 tons
7	Metal Scrap	Misc. Maintenance Activities	0
8	Activated Carbon Waste	Unused material for Flue Gas Treatment	0
9	Spent Desiccant	Misc. Maintenance Activities	0
10	Spent Ion Exchange Resins	Boiler Water Treatment	< 20 tons
11	Waste Catalyst	SCR Unit	150 tons
12	Supplemental Plant Production Refuse	Plant Laboratory Operations	0
13	Plant Trash	Misc. Plant Operations	0

1 Assign waste number sequentially. Do not remove waste number wastes which are no longer generated

2 Reflects 2020 records

Table I.6.B. – Wastes Managed in Registered Units

Waste No.[1]	Waste	TCEQ Waste Form Codes and Classification Codes
1	FGD Gypsum	TWC-30013922, TX Form Code-392, Class 2
2	Fly Ash	TWC-30023042, TX Form Code-304, Class 2
3	Bottom Ash	TWC-30053042, TX Form Code-304, Class 2
4	Class 2 Non- Hazardous Sandblast Grit	TWC-37013902, TX Form Code-389, Class 2
5	Construction Debris	TWC-37043902, TX Form Code-390, Class 2
6	Filters	TWC-37063102, TX Form Code-310, Class 2
7	Metal Scrap	TWC-37133072, TX Form Code-307, Class 2
8	Activated Carbon Waste	TWC-37184042, TX Form Code-404, Class 2
9	Spent Desiccant	TWC-37203192, TX Form Code-319, Class 2
10	Spent Ion Exchange Resins	TWC-37264032, TX Form Code-403, Class 2
11	Waste Catalyst	TWC-37503932, TX Form Code-393, Class 2
12	Supplemental Plant Production Refuse	TWC-39019022, TX Form Code-902, Class 2
13	Plant Trash	TWC-39109992, TX Form Code-999, Class 2

1 from Table I.6.A., first column

Table I.6.C – Sampling and Analytical Methods

Waste No.[1]	Sampling Location	Sampling Method	Frequency	Parameter	Test Method	Desired Accuracy Level
1	Gypsum dewatering belt	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
2	Fly ash loading silo	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
3	Bottom ash bunker	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
4	Varies by project	Composite	Each project	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
5	Varies by project	Composite	As needed	TCLP metals, TPH	SW1311/7470A SW1311/6020B TX1005	See below [2]
6	None-process knowledge	NA	NA	SDS and flyash analysis (Waste no. 2)	NA	NA
7	None-process knowledge	NA	NA	None	NA	NA
8	None-process knowledge	NA	NA	SDS and process knowledge	NA	NA
9	None-process knowledge	NA	NA	SDS	NA	NA
10	Spent resin drum	Composite	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
11	None-process knowledge	NA	NA	SDS and flyash analysis (Waste no. 2)	NA	NA
12	None-process knowledge	NA	NA	None	NA	NA
13	None-process knowledge	NA	NA	None	NA	NA

1 from Table I.6.A., first column

2 Analytical protocol will meet EPA quality control and accuracy specifications as published in the SW-846 Methods. The laboratory will be TCEQ accredited.

Table IV.A. – Landfills Characteristics

Registered Unit No.	Landfill	N.O.R. No.	Waste Nos.[1]	Rated Capacity	Dimensions[2]	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
010	Ash Landfill 1	010	1 thru 13	22.16 million cubic yards	3200 ft L x 2100 ft W x 190 ft H (height @ max design) 155 acres	N/A	N/A	Waste numbers 1-13 as described in Table I.6.A.

1 From Table I.6.A., first column
2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table IV.B. – Landfill Liner System

Registered Unit No.*	Landfill	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
010	Ash Landfill 1	N/A	N/A	N/A	Compacted clay	$<1x10^{-7}$ cm/sec	Minimum 3 ft

* This number should match the Registration Unit No. given on Table IV.A.

Table IV.C. – Landfill Leachate Collection System

Registered Unit No.	Landfill Name	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material
N/A						

Table IV.D. – Inspection Schedule of Landfills

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
010-Ash Landfill 1	Inspect for any appearances of actual or potential structural weakness and other conditions which are disrupting of have the potential to disrupt the operation and safety of the CCR unit	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Embankments	Surface cracking, animal burrows, misalignments, slides, vegetative cover, rutting, erosion, seepage, slope protection/chutes	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Capped Areas	Animal burrows, vegetative cover, rutting, surface cracking	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Active Work Area	Contact water, dusting	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Groundwater Monitoring Wells	Deterioration of pads, bollards, missing locks, compromise of casing integrity	Semi-Annual Inspection
010-Ash Landfill 1		Annually per 40 CFR 257.84(b)
	Inspect for any changed in geometry of the structure since the previous annual inspection.	Annual Inspection
	Estimate the approximate volume of CCR contained in the unit at the time of the inspection.	Annual Inspection
	Inspect for any appearance of actual or potential structural weakness of the CCR unit, and any conditions that are disrupting or have the potential to disrupt the operation and safety of the unit.	Annual Inspection
	Inspect for any other change(s) which have affected the stability or operation of the CCR unit since the previous inspection	Annual Inspection

Table V.A. – Surface Impoundment Characteristics

Registered Unit No.	Surface Impoundment Name	N.O.R. No.	Waste Nos.[1]	Rated Capacity	Dimensions[2]	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
011	FGD Pond A	011	1	172 acre-feet	875 ft x 500 ft x 28 ft 9.4 acres	>5 feet	N/A	FGD gypsum
012	FGD Pond B	012	1	104 acre-feet	640 ft x 700 ft x 15 ft 11.3 acres	<5', see location restriction report, Section 2.0, last paragraph	N/A	FGD gypsum
013	FGD Pond C	013	1	218 acre-feet	1200 ft x 550 ft x 22 ft 17 acres	>5 feet	N/A	FGD gypsum

1 From Table I.6.A., first column
2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table V.B. – Surface Impoundment Liner System

Registered Unit No.*	Surface Impoundment Name	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
011	FGD Pond A	60 mil HDPE	$< 1.00x10^{-7}$ cm/sec**	60-mil HDPE	clay	$< 1x10^{-7}$ cm/sec	2’
012	FGD Pond B	60 mil HDPE	$< 1.00x10^{-7}$ cm/sec	60-mil HDPE	clay	$< 1x10^{-7}$ cm/sec	2’
013	FGD Pond C	60 mil HDPE	$< 1.00x10^{-7}$ cm/sec	60-mil HDPE	clay	$< 1x10^{-7}$ cm/sec	2’

* This number should match the Registration Unit No. given on Table V.A.
**FGD Pond A currently being retrofitted.

Table V.J. – Inspection Schedule of Surface Impoundments

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
011-FGD Pond A, 012-FGD Pond B, and 013-FGD Pond C		Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a).
Above-grade piping	Deteriorating of piping/connections	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a).
Truck Access Ramp	Spills, Deterioration	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a)., spills inspected and reported within 24-hrs
Containment Dike	Spills, excessive water levels, surface cracking, animal burrows, misalignments, slides, vegetative cover, rutting, erosion, seepage, slope protection/chutes	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a)., spills inspected and reported within 24-hrs
Instrumentation	Monitor water level	Unit instrumentation (water level gauge) is inspected and monitored at intervals not exceeding 30 days per 40 CFR 257.83(a)(1)(iii).
Groundwater	Deterioration of pads, bollards, missing locks, compromise of casing integrity	Semi-Annual Inspection
011-FGD Pond A, 012-FGD Pond B, and 013-FGD Pond C		Annually per 40 CFR 257.83(b)
	Inspect for any changes in geometry of the structure since the previous annual inspection.	Annual Inspection
	Evaluate the approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since previous annual inspection.	Annual Inspection
	Evaluate the storage capacity at the time of the inspection.	Annual Inspection
	Estimate the approximate volume of the impounded water and CCR contained in the unit at the time of the inspection.	Annual Inspection
	Inspect for any other change(s) which have affected the stability or operation of the CCR unit since the previous inspection	Annual Inspection

Table VI.A.1. - Unit Groundwater Detection Monitoring Systems

Waste Management Unit/Area Name[1]	**WMU 010 - Ash Landfill 1**					
Well Number(s):	MW-02	MW-05	MW-07	MW-08R	MW-09	AL-10
Hydrogeologic Unit Monitored	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	POC	POC	POC
Up or Down Gradient	Up	Down	Down	Down	Down	Up
Casing Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Slot Size (in.)	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"
Top of Casing Elevation (Ft, Mean Sea Level *[MSL]*)	463.14	436.98	438.84	443.84	461.46	460.81
Grade or Surface Elevation (Ft, MSL)	459.9	434.73	436.93	441.22	459.24	457.54
Well Depth (Ft, Below Grade Surface *[BGS]*)	66	50	50	52.5	67	60.3
Well Depth (Ft, Below Top of Casing *[BTOC]*)	69.24	52.25	51.91	55.12	69.22	63.57
Screen Interval						
From (Ft, BGS)	45	29	29	32.5	46	50.3
To (Ft, BGS)	65	49	49	52.5	66	60.3
Screen Interval						
From (Ft, BTOC)	48.24	31.25	30.91	35.12	48.22	53.57
To (Ft, BTOC)	68.24	51.25	50.91	55.12	68.22	63.57

1 From Tables in Section I.; *MSL* : Mean Sea Level; *BGS* : Below Grade Surface; *BTOC* : Below Top of Casing

Table VI.A.2. - Unit Groundwater Detection Monitoring Systems

Waste Management Unit/Area Name[1]	**WMUs 011, 012, 013 - FGD Ponds**											
Well Number(s):	FGD-8	FGD-11	FGD-1	FGD-2	FGD-3	FGD-4	FGD-5	FGD-6	FGD-12	FGD-14*	FGD-15*	FGD-16*
Hydrogeologic Unit Monitored	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	POC	POC	POC	POC	POC	POC	POC	POC	POC
Up or Down Gradient	Up	Up	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
Casing Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Slot Size (in.)	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"
Top of Casing Elevation (Ft, Mean Sea Level *[MSL]*)	440.15	452.22	424.44	439.36	434.9	432.03	433.01	428.62	443.16	428.91	437.17	444.3
Grade or Surface Elevation (Ft, MSL)	436.8	448.8	421.71	436.58	432.2	429.34	430.2	425.42	439.46	426.21	434.17	441.3
Well Depth (Ft, Below Grade Surface *[BGS]*)	40	50.8	34	52	48	44	50	28	40.7	30	35	40
Well Depth (Ft, Below Top of Casing *[BTOC]*)	43.35	54.22	36.73	54.78	50.7	46.69	52.81	31.2	44.4	32.7	38	43
Screen Interval												
From (Ft, BGS)	30	40.8	13	31	27	22.5	40	18	30.7	20	25	30
To (Ft, BGS)	40	49.8	33	51	47	42.5	50	28	39.7	30	35	40
Screen Interval												
From (Ft, BTOC)	33.35	44.22	15.73	33.78	29.7	25.19	42.81	21.2	34.4	22.7	28	33
To (Ft, BTOC)	43.35	53.22	35.73	53.78	49.7	45.19	52.81	31.2	43.4	32.7	38	43

1 From Tables in Section I.; *MSL* : Mean Sea Level; *BGS* : Below Grade Surface; *BTOC* : Below Top of Casing

*Wells FGD-14, FGD-15, FGD-16 added to network as part of ACM completed September 2019

Table VI.C. – CCR Units Under Detection Monitoring

N.O.R. Unit No.	Unit Description[1,2]	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification[3]
010	Ash Landfill 1	MW-02, MW-07	B (MW-02, MW-07)	2/13/19	N/A - ASD Successful (4/10/19)
010	Ash Landfill 1	MW-05, MW-07	B (MW-07) F (MW-05)	11/28/19	N/A - ASD Successful (2/24/20)
010	Ash Landfill 1	MW-05, MW-07, MW-09	B (MW-05, MW-07) SO4 (MW-07, MW-09)	12/7/20	N/A - ASD Successful (3/5/21)

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
3 Enter month, day, and year.

Table VI.C-1. – Groundwater Detection Monitoring Parameters

Parameter	Sampling Frequency	Analytical Method	Practical Quantification Limit (units)	Concentration Limit[1]
Ash Landfill 1				
Boron	Semi-Annual	SW6020B	0.0100 mg/L	0.16 mg/L
Calcium	Semi-Annual	SW6020B	0.10 mg/L	81 mg/L
Chloride	Semi-Annual	E300	0.30 mg/L	440 mg/L
Fluoride	Semi-Annual	E300	0.100 mg/L	0.59 mg/L
Sulfate	Semi-Annual	E300	1.00 mg/L	190 mg/L
Total Dissolved Solids	Semi-Annual	M2540C	10.0 mg/L	900 mg/L
pH	Semi-Annual	Field Measured	s.u.	6.3 su 7.0 su
FGD PONDS				
Boron	Semi-Annual	SW6020B	0.0100 mg/L	0.14 mg/L
Calcium	Semi-Annual	SW6020B	0.10 mg/L	470 mg/L
Chloride	Semi-Annual	E300	0.30 mg/L	6300 mg/L
Fluoride	Semi-Annual	E300	0.100 mg/L	0.78 mg/L
Sulfate	Semi-Annual	E300	1.00 mg/L	410 mg/L
Total Dissolved Solids	Semi-Annual	M2540C	10.0 mg/L	13000 mg/L
pH	Semi-Annual	Field Measured	s.u.	6.1 su 7.2 su

1 The concentration limit is the basis for determining whether a release has occurred from the CCR unit/area.

Table VI.D. – CCR Units Under Assessment Monitoring

N.O.R. Unit No.	Unit Description[1,2]	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification[3]
011, 012, 013	FGD Ponds	FGD-2, FGD-3, FGD-4, FGD-5	B	1/16/2018	7/16/2018

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
3 Enter month, day, and year

Table VI.D-2. – Groundwater Assessment Monitoring Parameters

Parameter	Sampling Frequency	Analytical Method	Practical Quantification Limit (units)	Concentration Limit[1]
FGD PONDS				
Antimony	Semi-Annual	SW6020B	0.000800 mg/L	0.0060 mg/L
Arsenic	Semi-Annual	SW6020B	0.00200 mg/L	0.015 mg/L
Barium	Semi-Annual	SW6020B	0.00300 mg/L	2.0 mg/L
Beryllium	Semi-Annual	SW6020B	0.000300 mg/L	0.0040 mg/L
Cadmium	Semi-Annual	SW6020B	0.000300 mg/L	0.0050 mg/L
Chromium	Semi-Annual	SW6020B	0.00200 mg/L	0.10 mg/L
Cobalt	Semi-Annual	SW6020B	0.00300 mg/L	0.016 mg/L
Flouride	Semi-Annual	SW6020B	0.100 mg/L	4.0 mg/L
Lead	Semi-Annual	SW6020B	0.000300 mg/L	0.015 mg/L
Lithium	Semi-Annual	SW6020B	0.00500 mg/L	0.15 mg/L
Mercury	Semi-Annual	SW7470A	0.0000800 mg/L	0.0020 mg/L
Molybdenum	Semi-Annual	SW6020B	0.00200 mg/L	0.10 mg/L
Selenium	Semi-Annual	SW6020B	0.00200 mg/L	0.050 mg/L
Thallium	Semi-Annual	SW6020B	0.000500 mg/L	0.0020 mg/L
Radium 226+228	Semi-Annual	904 + SM7500Ra B M	varies	11 pCi/L

[1] The concentration limit is the basis for determining whether a release has occurred from the CCR unit/area.

Table VII.A.1. – Unit Closure

For each unit to be registered, list the unit components to be decontaminated, the possible methods of decontamination, and the possible methods of disposal of wastes and waste residues generated during unit closure.

Equipment or CCR Unit	Possible Methods of Decontamination[1]	Possible Methods of Disposal[1]
010-Ash Landfill 1	Close in Place	No disposal
011-FGD A Pond Piping	Removal	Landfill
011-FGD A Pond	Close in Place	No disposal
012-FGD B Pond Piping	Removal	Landfill
012-FGD B Pond	Close in Place	No disposal
013-FGD C Pond Piping	Removal	Landfill
013-FGD Pond	Close in Place	No disposal

1 Applicants may list more than one appropriate method.

Table VII.A.2. – CCR Units Under Alternative Closure Notification

Registered Unit No.	N.O.R. Unit No.	Unit Description[1,2]	Date of Receipt of Last Waste[3]	Date of Closure Notification[3]
N/A				

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
3 Enter month, day, and year.

Table VIII.A.1. – Post-Closure Cost Summary for Existing Registered Units

Unit	Cost
010-Ash Landfill 1	$2,326,837
011, 012, 013-FGD Pond Area	$2,168,817
Total Existing Unit Post-Closure Cost Estimate	$4,495,654 (in 2021 Dollars)[1]

Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units

Unit	Cost
N/A	

1 As units are added or deleted from these tables through future registration amendments, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

Table VIII.B. – Post-Closure Period

Unit Name	Date Certified Closed	Authorized Post-Closure Period (Yrs.)	Earliest Date Post-Closure Ends (See Note 1)
[Unit Example 1]	**[1/1/1995]**	30 years	**[1/1/2025]**
[Unit Example 2]	**[1/1/1990]**	30 years	**[1/1/2020]**
[Unit Example 3]	**[1/1/1984]**	30 years	**[1/1/2014]**

Note 1 – Post-Closure Care shall continue beyond the specified date until the Executive Director has approved the applicant's request to reduce or terminate the post-closure period, consistent with 30 TAC §352.1241 – Post-Closure Care Requirements.

N/A

Texas Commission on Environmental Quality

Registration Application for Coal Combustion Residuals (CCR) Waste Management

I. General Information

1. Reason for Submittal

Type of Registration Application

☐ New ☐ Major Amendment ☐ Minor Amendment

☒ Notice of Deficiency (NOD) Response ☐ Transfer ☐ Name Change

☐ Other

2. Application Fees

☒ $150 Application Fee

Payment Method

☐ Check ☒ Online through ePay portal <www3.tceq.texas.gov/epay/>

If paid online, enter ePay Trace Number: 582EA000467512

3. Facility Information

Facility information must match regulated entity information on the Core Data Form.

Applicant: ☐ Owner ☐ Operator ☒ Owner/Operator

Facility TCEQ Solid Waste Registration No: 32043

Facility EPA ID: TXD000728956

Regulated Entity Reference No. (if issued): RN100216191

Facility Name: OAK GROVE STEAM ELECTRIC STATION

Facility (Area Code) Telephone Number: 214-875-8338

Facility physical street address (city, state, zip code, county): 8127 OAK GROVE ROAD, FRANKLIN, TX, 77856, ROBERTSON

Facility mailing address (city, state, zip code, county): 6555 SIERRA DR, DALLAS, TX 75039, DALLAS

Latitude (Degrees, Minutes Seconds): 31° 11′ 06″

Longitude (Degrees, Minutes Seconds): 96° 29′ 07″

4. Publicly Accessible Website

Provide the URL address of a publicly accessible website where the owner or operator of a CCR unit will post information.
https://www.luminant.com/ccr/

5. Facility Landowner(s) Information

Facility landowner(s) name: OAK GROVE MANAGEMENT COMPANY LLC

Facility landowner mailing address: 6555 SIERRA DR

City: Irving State: TX Zip Code: 75039

(Area Code) Telephone Number: 214-875-8338

Email Address (optional):

6. CCR Waste Management Unit(s)

☒ Landfill Unit(s) ☒ Surface Impoundment(s)

For each existing landfill, new landfill and lateral expansion, existing surface impoundment, and new surface impoundment and lateral expansion(s) provide information on type of waste, the registered unit(s) in which they are managed, and sampling and analytical methods.

Submit the following tables:

Table I.6. – CCR Waste Management Units

Table I.6.A. – Waste Management Information

Table I.6.B. – Waste Managed in Registered Units

Table I.6.C. – Sampling and Analytical Methods

7. Description of Proposed Activities or Changes to Existing Facility

Provide a brief description of the proposed activities if application is for a new facility, or the proposed changes to an existing facility or registration conditions, if the application is for an amendment.

Oak Grove Management Company, LLC (Oak Grove) operates the Oak Grove Steam Electric Station (OGSES), which is located approximately 10 miles north of the town of Franklin in Robertson County, Texas. The OGSES consists of two coal/lignite-fired units with a combined operating capacity of approximately 1600 megawatts. Coal combustion residuals (CCR) including fly ash, bottom ash, and flue gas desulfurization (FGD) gypsum are generated as part of OGSES unit operation. The Texas Commission on Environmental Quality (TCEQ) Solid Waste Registration Number (SWR No.) for the OGSES is 32043. CCR is managed in one onsite landfill, Ash Landfill 1, and three surface impoundments, FGD-A, FGD-B, and FGD-C.

Ash Landfill 1 is the primary disposal facility for CCR generated at the OGSES and is located approximately 1200 feet southwest of the OGSES. Ash Landfill 1 is listed on the Notice of Registration (NOR) for the OGSES as Unit No. 010 and is regulated as a Class 2 non-hazardous industrial solid waste landfill under 30 TAC §335.

Gyspum/scrubber sludge that cannot be recycled and selected process wastewaters are managed in FGD-A, FGD-B, and FGD-C ponds. These ponds are collectively referred to as the FGD Ponds. Solids from the FGD Ponds are routinely removed as part of on-going operations and maintenance activities. These solids are placed in Ash Landfill 1 (WMU 010). The FGD Ponds are located approximately 1500 feet northwest of the OGSES. The FGD Ponds are list on the NOR for the OGSES as waste management units 011 (FGD-A), 012 (FGD-B), and 013 (FGD-C). The FGD Ponds are regulated as Class 2 non-hazardous surface impoundments under 30 TAC §335.

8. Primary Contact Information

Contact Name: Renee Collins Title: Sr. Director, Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: Texas Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

Email Address (optional): renee.collins@luminant.com

9. Notice Publishing

Party responsible for publishing notice:
☒ Applicant ☐ Consultant ☐ Agent in Service

Contact Name: Renee Collins Title: Sr. Director, Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: Texas Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

10. Alternative Language Notice

Is an alternative language notice required for this application? For determination, refer to Alternative Language Checklist on the Public Notice Verification Form (TCEQ-20244-Waste-NORI).

☐ Yes ☒ No

11. Public Place Location of Application

Name of the Public Place: Robertson County Carnegie Library
Physical Address: 315 East Dechard Street
City: Franklin County: Robertson State: TX Zip Code: 77856
(Area code) Telephone Number: 979-828-4331

12. Ownership Status of the Facility

☐ Corporation ☐ Limited Partnership
☐ Sole Proprietorship ☐ General Partnership ☒ Other (specify): Limited Liability Company

Does the Site Owner (Permittee/Registrant) own all the CCR units and all the facility property?

☒ Yes ☐ No

13. Property / Legal Description Information

Provide a legal description and supporting documents of the property where the management of CCR waste will occur; including a survey plat and a boundary metes and bounds description (30 TAC §352.231(g)).

Submit the following documents:

a. Property Legal Description
b. Property Metes and Bounds Description
c. Metes and Bounds Drawings
d. On-Site Easements Drawings

See APPENDIX A for Property/Legal Description Information for the following CCR units:
Ash Landfill 1
FGD Pond A
FGD Pond B
FGD Pond C

Property Owner Affidavit also located in APPENDIX A.

14. Operator Information

Identify the entity who will conduct facility operations, if the owner and operator are not the same.

Operator Name: Same as Owner

Operator mailing address:

City: State: Zip Code:

(Area Code) Telephone Number:

Email Address (optional):

15. Confidential Documents

Does the application contain confidential documents?

☐ Yes ☒ No

If "Yes", cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked "CONFIDENTIAL."

16. Permits and Construction Approvals

Permit or Approval	Received	Pending	Not Applicable
Hazardous Waste Management Program under the Texas Solid Waste Disposal Act	☒	☐	☐
Underground Injection Control Program under the Texas Injection Well Act	☐	☐	☒
National Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under Texas Water Code, Chapter 26	☒	☐	☐
Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA).	☒	☐	☐
National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA	☐	☐	☒
Other (describe):	☐	☐	☐
Other (describe):	☐	☐	☐
Other (describe)	☐	☐	☐

17. Legal Authority

The owner and operator of the facility shall submit verification of their legal status with the application. This shall be a one-page certificate of incorporation issued by the secretary of state. The owner or operator shall list all persons having over a 20% ownership in the facility.

See APPENDIX A for Certificate of Authority.

18. TCEQ Core Data Form

The TCEQ requires that a Core Data Form (TCEQ-10400) be submitted on all incoming applications, unless a Regulated Entity and Customer Reference Number has been issued by the TCEQ and no core data information has changed. For more information regarding the Core Data Form, call (512) 239-5175 or visit the TCEQ Website.

See APPENDIX A for TCEQ Core Data Form.

19. Other Governmental Entities Information

Coastal Management Program

Is the facility within the Coastal Management Program boundary?

☐ Yes ☒ No

Local Government Jurisdiction (If Applicable)
Within City Limits of: N/A
Within Extraterritorial Jurisdiction of: N/A

Is the facility located in an area in which the governing body of the municipality or county has prohibited the storage, processing or disposal of municipal or industrial solid waste?

☐ Yes ☒ No If "Yes", provide a copy of the ordinance or order as an attachment.

20. Attachments

Does the application include the following?

General Maps	☒ Yes	☐ No
General Topographic Map	☒ Yes	☐ No
Facility Layout Map	☒ Yes	☐ No
Surrounding Features Map	☒ Yes	☐ No
Process Flow Diagram	☒ Yes	☐ No
Land Ownership Map	☒ Yes	☐ No
Land Ownership List	☒ Yes	☐ No
Pre-printed Mailing Labels	☒ Yes	☐ No

Maps and drawings shall be legible and easily readable by eye without magnification. Scales and paper size shall be chosen based on the type of map submitted, the land area covered, and the amount of detail to be shown. See instructions for details regarding maps and drawings to be submitted in application.

See APPENDIX A for Attachments detailed in Item 20.

Per TCEQ request, a Process Flow Narrative has been included at the end of the Attachments found in APPENDIX A.

21. Verification of Compliance

Does the owner and operator verify that the design, construction, and operation of CCR landfill(s) and surface impoundment(s) meets the requirements of 30 TAC §352.231(f) (30 TAC §352.2; 40 CFR §257.52, and 40 CFR §§257.3-1 – 257.3-3).

☒ Yes ☐ No

As requested by TCEQ, please see the "Response to TCEQ CCR Unit Registration Comments" memorandums for Ash Landfill 1 and FGD Ponds provided by Golder in APPENDIX A.

II. Location Restrictions and Geology

See Instructions and Technical Guidance

22. Location Restrictions

Submit certifications and technical reports demonstrating compliance of CCR unit(s) with applicable location restrictions (30 TAC 352, Subchapter E) and comply with 30 TAC §352.231(d) and 30 TAC §352.4 for submission of engineering and geoscientific information.

A. **Placement above the uppermost aquifer** (30 TAC §352.601) (40 CFR §257.60). For those CCR units whose base is less than five feet above the upper limit of the uppermost aquifer, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.60(a) – (c).

B. **Wetlands** (30 TAC §352.611) (40 CFR §257.61). For CCR units located in wetlands, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.61(a) – (c).

C. **Fault areas** (30 TAC §352.621) (40 CFR §257.62). For CCR units located within 200 feet of the outermost damage zone of a fault, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.62(a) – (c).

D. **Seismic impact zones** (30 TAC §352.631) (40 CFR §257.63). For CCR units located in a seismic impact zone, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.63(a) – (c).

E. **Unstable areas** (30 TAC §352.641) (40 CFR §257.64). For CCR units located in unstable areas, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.64(a) – (d).

Location Restriction Demonstration reports for Ash Landfill 1 and FGD Ponds located in APPENDIX B. Location Restriction Evaluation memorandums also located in APPENDIX B.

23. Geology Summary Report

Submit a summary of the geologic conditions at the facility, including the relation of the geologic condition to each CCR unit. The summary must include enough information and data and include sources and references for the information. Include all groundwater monitoring data required by 40 CFR Part 257, Subpart D, (30 TAC §352.241, §352.601, §352.621, §352.631, and §352.641) and submitted in accordance of 30 TAC §352.4.

Note: Previously prepared documents may be submitted but must be supplemented or updated as necessary to provide the requested information (30 TAC §352.241(b)).

For Geology Summary, please refer to "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F. The Local Geology and Hydrogeology summary is located in Section 2.2 of each report.

All groundwater monitoring data summarized in "2020 Annual Groundwater Monitoring and Corrective Action Report" for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

III. Fugitive Dust Control Plan

24. Fugitive Dust Control Plan

A. **Submit a copy of the CCR Fugitive Dust Control Plan** (30 TAC §352.801) (40 CFR §257.80(b)), or the most recently amended plan. The initial plan or subsequent amended plan must be certified by a qualified Texas licensed professional engineer (Texas P.E.) that the plan meets the requirements of 30 TAC Chapter 352.

B. **Submit the most recent Annual CCR Fugitive Dust Control Report** (30 TAC §352.801) (40 CFR §257.80(c)) and include the report information.

CCR Fugitive Dust Control Plan and the 2021Annual CCR Fugitive Dust Control Report located in APPENDIX C.

IV. Landfill Criteria

See Instructions and Technical Guidance – No. 30 Coal Combustion Residuals Landfill

25. Landfill(s) for CCR Waste

Provide the following information below if there is a landfill; if there is more than one landfill, separate information is required for each landfill.

A. Landfill Characteristics

Describe the design, installation, construction, and operation of the landfill and submit a completed Table IV.A. – Landfill Characteristics.

Ash Landfill 1 consists of four landfill cells (Cells 1 through 4), each constructed with a 3-foot thick compacted clay liner (hydraulic conductivity ≤ 1×10-7 cm/sec). The landfill is constructed above-grade and is surrounded by an earthen perimeter berm that are also provided with a 3-foot-thick compacted clay liner. CCR placement extends above the top of the perimeter berms and the sides of the CCR placed above the berms are graded to slopes of approximately 3H:1V.
Ash Landfill 1 has been in operation since 2008. The current status of Cells 1 through 4 is as follows:

- Cell 1 has received CCR and is inactive. A final cover consisting of a 3-ft thick clay soil (hydraulic conductivity ≤ 1×10-7 cm/sec) overlain with 1.5-ft thick vegetative cover was placed over Cell 1 in 2015.
- Cell 2 has received CCR and is inactive. A final cover consisting of a 40-mil linear low-density polyethylene (LLDPE) geomembrane overlain with a geosynthetic drainage layer and 18 inches of soil was placed over Cell 2 in 2019.
- Cell 3 is active and used for CCR (primarily bottom ash) disposal.
- Cell 4 is active and used for CCR (primarily FGD gypsum) disposal. The eastern portion of Cell 4 is currently used to manage contact water.

Oak Grove is proposing a registration revision to allow for the vertical expansion of Ash Landfill 1. A registration revision package has been added to APPENDIX D for review. The revision package includes an updated final cover grading plan including stormwater management components, a Closure Plan Addendum, a Run-on and Run-off Control Plan revision, and an Unstable Areas Compliance Demonstration,

B. Liner Design

1. For existing landfills, provide attachments describing how the facility will comply with 30 TAC 352, Subchapter F (Design Criteria).

   Ash Landfill 1 is an Existing CCR Landfill as defined by the CCR rule. There are no design criteria for Existing CCR Landfills in either the state or federal CCR rule. 30 TAC 352, Subchapter F or 40 CFR 257.70

2. For new landfills or lateral expansions of existing landfills, submit pages describing how the facility will comply with 30 TAC §352.261 and 30 TAC §352.701. N/A

3. Complete Table IV.B. - Landfill Liner System and specify the type of liner used for the landfill.

4. Provide attachments describing the design, installation, and operation of the liner and leak detection system. The description must demonstrate that the liner and leak detection system will prevent discharge to the land, groundwater, and surface water. Submit a quality assurance project plan (QAPP) to ensure that each analysis is performed appropriately.

   The following Soil Liner Evaluation Reports (SLERs) are located in APPENDIX D for the construction of cells 1-4 of Ash Landfill 1:
   SLER-Phase 1 Ash Landfill
   SLER-Cell 1 West Dike Clay Liner Construction
   SLER-Cell 2 Ash Landfill
   SLER-Cell 3 Ash Landfill
   SLER-Cell 4 Ash Landfill

C. Leachate Collection and Removal

Submit design information and description of leachate collection and removal system in accordance with 30 TAC §352.701. N/A

Complete Table IV.C. - Landfill Leachate Collection System. N/A

D. Design of Liner and Leachate Collection and Removal System.

For a new landfill or lateral expansion of a CCR landfill, provide a qualified Texas P.E. certification and technical report that the design of the liner and the leachate collection and removal system meets the requirements of 30 TAC §352.711. N/A

E. Run-on and Run-off Controls

At time of application, attach pages describing how the facility will comply with the run-on and run-off system plan for an existing, new, or lateral expansion of a CCR landfill information. Provide a qualified Texas P.E. certification and technical report that the run-on and run-off control system plans meet the requirements of 30 TAC §352.811.

"Run-on and Run-off Control System Plan" for Ash Landfill 1 is located in APPENDIX D.

F. Inspection for Landfills

At time of application, attach pages describing how the facility will comply 30 TAC §352.841 and complete Table IV.D. – Inspection Schedule for Landfills. For existing CCR landfills, provide the most recent inspection report. All CCR landfills and any lateral expansions of a CCR landfill must be inspected for any structural weakness, malfunction, deterioration conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit, or any other conditions which may cause harm to human health and environment at a frequency specified in 40 CFR §257.84(a) and (b).

The 2021 Annual CCR Landfill inspection report is located in APPENDIX D.

V. Surface Impoundment Criteria

See Instructions and Technical Guidance – No. 31 Coal Combustion Residuals Surface Impoundment

26. Surface Impoundment(s) for CCR Waste

Provide the following information below if there is a surface impoundment; if there is more than one surface impoundment, separate information is required for each surface impoundment.

A. General Surface Impoundment(s) Characteristics

Provide information about the characteristics of the surface impoundment(s): incised, surface area (acres), storage volume (acres-feet), and depth (feet).

For all surface impoundment(s), include the following information:

1. Complete Table V.A. - Surface Impoundments Characteristics. List the surface impoundment(s) to be registered as a CCR unit(s), the wastes managed in each unit, and the rated capacity or size of each unit.

2. Describe the surface impoundment(s) and provide a plan view drawing with cross-sections, if available.

   See "History of Construction" report in APPENDIX E. A summary description of the impoundments is located in Section 3.5 and drawings are included in Attachment 1. "History of Construction-Addendum No. 1" in APPENDIX E provides updates on the completed retrofit of FGD Pond A.

3. Specify the minimum freeboard to be maintained and the basis of the design to prevent overtopping resulting from normal or abnormal operation; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error. Show that adequate freeboard will be available to prevent overtopping from a 100-year, 24-hour storm.

   Minimum freeboard of 2 feet in FGD-A and FGD-B and minimum freeboard 3 feet in FGD-C. See "Inflow Design Flood Control System Plan", Section 2.4 for FGD Ponds in APPENDIX E.

4. Waste Flow
   Describe the means that will be used to immediately shut off the flow of waste to the impoundment in the event of liner failure or to prevent overtopping.

   All inflows are controlled via pumps under controlled conditions, see "Inflow Design Flood Control System Plan", Section 2.0 for FGD Ponds in APPENDIX E.

5. Dike Construction ☒ Yes ☐ No

   If Yes, submit the dike certification (located at the end of the application).

   In October 2016, the initial certified Periodic Hazard Potential Classification Assessments, Periodic Structural Stability Assessments, and Periodic Safety Factor Assessments were completed for each FGD Pond (FGD-A, FGD-B, FGD-C) as required by 40 CFR 257.73(a), 257.73(d), and 257.73(e). In October 2021, the certified 5-Year Updates to these assessments were completed as required by 40 CFR 257.73 and 30 TAC 352.731, which identified no structural deficiencies. The most recent 2021 5-Year Assessment Updates are located in APPENDIX E. Based on the conclusion in the certified 5-year updates that no structural deficiencies exist, the facility is submitting these documents in lieu of the Dike Certification.

   The structural integrity of the dike system must be certified by a qualified Texas P.E. before the registration is issued. If the impoundment is not being used, the dike system must be certified before it can be put into use. The certification must be sealed by a qualified Texas P.E., along with the engineering firm's name and registration number (30 TAC §352.4).

A report shall accompany the dike certification which summarizes the activities, calculations, and laboratory and field analyses performed in support of the dike certification. Describe the design basis used in construction of the dikes. A QAPP should be included in the report to ensure that each analysis is performed appropriately and include:

(1) Slope Stability Analysis

(2) Hydrostatic and Hydrodynamic Analysis

(3) Storm Loading

(4) Rapid Drawdown

Earthen dikes should have a protective cover to minimize wind and water erosion and to preserve the structural integrity of the dike. Describe the protective cover used and describe its installation and maintenance procedures.

B. Liner Design

For surface impoundment(s), provide information about how the facility will comply with 30 TAC §352.711 for existing CCR surface impoundments. For new and lateral expansion of CCR surface impoundments provide information on how the facility will comply with 30 TAC §352.261, and 30 TAC §352.721, see Instructions and Technical Guidance No. 31 Coal Combustion Residuals Surface Impoundment. The qualified Texas P.E. must certify that the design of the liner complies with the requirements of 30 TAC Chapter 352 and 40 CFR Part 257, Subpart D, where required.

Is the CCR surface impoundment unlined? ☒ Yes ☐ No

FGD Pond A, FGD Pond B, and FGD Pond C are lined per 40 CFR § 257.71.

If "Yes", the CCR unit is subject to the closure requirements under 30 TAC Chapter 352 and 40 CFR §257.101(a) to retrofit or close. A notification must be prepared stating that an assessment of corrective measures has been initiated.

1. Complete Table V.B. - Surface Impoundment Liner System for each surface impoundment to be registered.
2. Describe the design, installation and operation of liner and leak detection components. The description must demonstrate that the liner and leak detection system will prevent discharge to the land and surface water. Submit a QAPP report to ensure that each analysis is performed appropriately.

   See "History of Construction" and "History of Construction-Addendum No.1"reports for all ponds. Also see "Construction Completion and Quality Assurance Report" for FGD-A and "Liner Evaluation Reports" for FGD-B and FGD-C in APPENDIX E.
3. For new or laterally expansions of existing surface impoundments, provide a subsurface soil investigation report that must include:
   a. A description of all borings drilled, at the unit location, to test soils and characterize groundwater;
   b. A unit map drawn to scale showing the surveyed locations and elevations of the borings, including location of permanent identification markers ((30 TAC §352.731) and (40 CFR §257.73(a)(1));
   c. Cross-sections prepared from the borings depicting the generalized strata at the unit;

d. Boring logs, including a description of materials encountered, and any discontinuities such as fractures, fissures, slickensides, lenses or seams;

e. A description of the geotechnical data and the geotechnical properties of the subsurface soil materials, including the suitability of the soils and strata for the intended uses; and

f. A demonstration that all geotechnical tests were performed in accordance with industry practices and recognized procedures.

N/A

C. Hazard Potential Classification

Provide the current hazard potential classification assessment and associated documentation, as required by 30 TAC §352.731 or §352.741 and 40 CFR §257.73(a)(2) or §257.74(a)(2). The qualified Texas P.E. must certify that the initial hazard potential classification and any subsequent periodic classification was conducted in accordance with the requirements of 30 TAC Chapter 352, where required.

Hazard Potential Classification: **LOW**

See "Hazard Potential Classification Assessment" located in APPENDIX E.

D. Emergency Action Plan for High or Significantly High Hazard Potential

Provide the current Emergency Action Plan that has been certified by a qualified Texas P.E. and includes the following requirements from 30 TAC 352, Subchapter F and 40 CFR §257.73(a)(3)(i)(A) - (E) or 40 CFR §257.74 (a)(3)(i)(A) - (E). The qualified Texas P.E. must certify that the written Emergency Action Plan and any subsequent amendment of the plan complies with the requirements of 30 TAC 352, Subchapter F, where required.

N/A

Complete Table V.J. - Inspection of Surface Impoundments

E. Inflow Design Flood Control System Plan

Describe how the surface impoundment(s) system will manage stormwater run-on away from the surface impoundment(s) (30 TAC §352.821 and 40 CFR §257.82(a) and (c)). Stormwater run-on must be diverted away from a surface impoundment, based on the hazard potential. Where dikes are used to divert run-on, they must be protected from erosion. Include all analyses used to calculate run-on volumes. Provide the inflow design flood control system plan. Provide qualified Texas P.E. certification that the initial and periodic inflow design flood control system plans meet the requirements of 30 TAC §352.821, where required.

See "Inflow Design Flood Control System Plan" located in APPENDIX E.

F. History of Construction for Existing CCR Surface Impoundment(s), or the Design and Construction Plans for New and Lateral Expansions

Provide information on the history of construction for each existing CCR surface impoundment (30 TAC §352.731 and 40 CFR §257.73(c)) or the design and construction plans for new and lateral expansions of each CCR surface impoundment (30 TAC §352.741) and (40 CFR §257.74(c)).

See "History of Construction" and "History of Construction-Addendum No. 1" in APPENDIX E.

G. Structural Stability Assessment

Provide the most recent structural stability assessment of the surface impoundments. Include the combined capacity of all surface impoundment spillways with calculations; the peak discharge the unit must meet for all combined spillways; probable maximum flood-high hazard, 1,000-yr-significant high hazard, 100-yr-low hazard; identify if there were any structural stability deficiencies in last assessment; identify how these deficiencies were managed and corrected; and qualified Texas P.E. certification. The structural stability assessment must include all information required in 30 TAC §352.731 for existing surface impoundments or 30 TAC §352.741 for new or laterally expanding surface impoundments.

See "Structural Stability Assessment" located in APPENDIX E.

H. Safety Factor Assessment

The current safety factor assessment must be submitted with the application. It must include documentation that demonstrates whether the calculated factors of safety for each CCR surface impoundment achieve the minimum safety factors specified in 30 TAC 352, Subchapter F and 40 CFR §257.73(e)(1)(i) - (iv) and 40 CFR §257.74(e)(1)(i) - (iv) for the critical cross-section of the embankment. The critical cross-section is the cross-section anticipated to be the most susceptible to structural failure based on appropriate engineering considerations, including loading conditions. The safety factor assessments must be supported by appropriate engineering calculations and certified by a qualified Texas P.E.

See "Safety Factor Assessment" located in APPENDIX E.

VI. Groundwater Monitoring and Corrective Action (30 TAC 352, Subchapter H)

See Instructions and Technical Guidance – No. 32 Coal Combustion Residuals Groundwater Monitoring and Corrective Action

27. Groundwater Monitoring System

A. Complete Table VI.A. - Unit Groundwater Detection Monitoring System.

B. Provide a map showing location of wells, groundwater elevations, and groundwater flow direction.

See Groundwater Potentiometric Surface Maps in Appendix C of the "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

C. Provide attachments describing how the facility will comply with the requirements in 30 TAC §352.911 and provide a certification by a qualified Texas P.E or qualified Texas P.G. that the groundwater monitoring system design and construction meet the requirements of 30 TAC Chapter 352.

See "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

D. Provide a figure showing the geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

See Figures 3,4,5 in the "Groundwater Monitoring System Certification" report for Ash Landfill 1 located in APPENDIX F.

See Figures 3, 4,5,6 in the "Groundwater Monitoring System Certification" report for FGD Ponds located in APPENDIX F.

E. For a multiunit groundwater monitoring system, demonstrate that the groundwater monitoring system will be equally as capable of detecting monitored constituents at the waste boundary of the CCR unit as the individual groundwater monitoring system for each CCR unit by providing at minimum the following information:

1. Number, spacing, and orientation of each CCR unit;
2. Hydrogeologic setting; and
3. Site history.

See "Groundwater Monitoring System Certification" report for FGD Ponds located in APPENDIX F.

F. Has there been any sampling concentrations of one or more constituents listed in Appendix IV detected at statistically significant levels above the groundwater protection standard (GWPS)? ☒ Yes ☐ No

FGD Ponds

G. Provide information on how monitoring wells have been constructed and cased in a manner that maintains the integrity of the monitoring well borehole and to prevent contamination of samples and the groundwater.

See Appendix A in the "Groundwater Monitoring System Certification" reports for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

28. Groundwater Monitoring Sampling and Analysis Program

Provide a sampling and analysis plan that includes procedures and techniques; sampling and analytical methods that are appropriate for groundwater sampling; and that address the requirements of 30 TAC §352.931 and 40 CFR §257.93. Provide a P.E or P.G. certification that describes the statistical method selected to evaluate the groundwater monitoring data and certifies that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area. Refer to TG-32 for information and guidance.

See "Groundwater Monitoring Plan-Revision 2" and "Statistical Analysis Plan-Revision 1" for Ash Landfill 1 and FGD Ponds located in APPENDIX F.

29. CCR Unit(s) in a Detection Monitoring Program

Does the facility have CCR unit(s) in a Detection Monitoring Program?

☒ Yes ☐ No

Ash Landfill 1

If "Yes", Submit the following information:

A. Submit Table VI.C. – Facility CCR Units Under Detection Monitoring.

B. Provide a Background Evaluation Report.

~~Background data was derived from the eight independent sampling events required under 40 CFR 257.94(b). A summary of the background monitoring program can be found in Section 3.0 of the "2017 Annual Groundwater Monitoring Report". Background water quality data is summarized in Tables 3 and 4 and laboratory analytical reports are located in Appendix A of the 2017 report.~~

~~The "2017 Annual Groundwater Monitoring Report" for Ash Landfill 1 is in APPENDIX F.~~See "Background Groundwater Monitoring and Statistical Analysis Summary Report" for Ash Landfill 1 and the FGD Ponds located in APPENDIX F.

C. Provide a report with the results of semiannual monitoring events.

The "2020 Annual Groundwater Monitoring and Corrective Action Report" and the "2021 Annual Groundwater Monitoring and Corrective Action Report-Revision 1" for Ash Landfill 1 is in APPENDIX F.

1. Has a statistically significant increase (SSI) been detected for one or more of the constituents listed in Appendix III at any monitoring well?

   ☒ Yes ☐ No

2. Has a notification to the executive director been sent within 14 days?

   ☒ Yes ☐ No

3. Date assessment monitoring program will start: N/A Due to successful ASDs

4. Do you plan to provide an alternative source demonstration (ASD)?

   ☒ Yes ☐ No

30. CCR Unit(s) in an Assessment Monitoring Program

Does the facility have CCR unit(s) in an Assessment Monitoring Program?

☒ Yes ☐ No

FGD Ponds

If "Yes", Submit information related for units.

A. Complete Table VI.D. – CCR Units Under Assessment Monitoring.

B. Provide, for each well in assessment monitoring status, the recorded concentrations lab sheets and results in a tabulated form.

See summary tables 3 and 4 for all results in tabulated form in the "2020 Annual Groundwater Monitoring and Corrective Action Report" for the FGD Ponds in APPENDIX F. The "2021 Annual Groundwater Monitoring and Corrective Action Report-Revision 1" for the FGD Ponds is also in APPENDIX F.

C. Have the concentrations of all constituents listed in Appendices III and IV been at or below background values, using the statistical procedures in 30 TAC §352.931 and 40 CFR §257.93(g), for two consecutive sampling events for the CCR unit(s)? ☐ Yes ☒ No

If answer to above is yes, detection monitoring may resume. The owner or operator must prepare a notification stating that detection monitoring is resuming for the CCR unit and obtain written approval from the executive director.

D. Are there any concentrations of any constituent in Appendices III and IV above background values? ☒ Yes ☐ No

1. Has a notification to the executive director been sent within 14 days?

   ☒ Yes ☐ No

E. Date assessment of corrective measures will be initiated (must be within **90 days** of finding a statistically significant level above the GWPS) for the CCR unit(s):
April 8, 2019

F. Will you provide an ASD (see TG-32 for an acceptable submittal)? ☐ Yes ☒ No

G. Date assessment of corrective measures will be initiated if ASD is not accepted?
N/A

H. Complete Table VI.D-2. - Groundwater Detection Monitoring Parameters

Note: Refer to TG-32 regarding establishing a GWPS for each constituent in Appendix IV detected in the groundwater and attach as table.

I. Have you completed the assessment of corrective measures? ☒ Yes ☐ No
If "Yes", date assessment of corrective measures was completed: September 5, 2019
If "No", date assessment of corrective measures will be completed:
Expected date of submittal of amendment (see note below):
Provide completed assessment of corrected measures materials.

"CCR Assessment of Corrective Measures-Revision 1" dated May 2021 can be found in APPENDIX F.

Note: Within **30 days** of completing the assessment of corrective measures, and before remedy implementation, the owner or operator shall submit an application for amendment to the registration. In some circumstance"s, the assessment of corrective measures and selected remedy may be approved as part of the initial application for the CCR unit registration.

J. Have you selected a remedy? ☒ Yes ☐ No

"Remedy Selection Report" located in APPENDIX F.

Provide public meeting documentation under 30 TAC §352.961 and a report under 30 TAC §352.971 and 40 CFR §257.97.

"Assessment of Corrective Measures Public Meeting Documents" located in APPENDIX F.

VII. Closure and Post-Closure Care

See Instructions and Technical Guidance

Submit a full closure plan and post-closure plan and all information describing how the owner or operator will comply with 30 TAC 352, Subchapter J and 40 CFR §§257.100 - 257.104. The owner of property on which an existing disposal facility is located, following the closure of a unit, must also submit documentation that a notation has

been placed in the deed to the facility that will in perpetuity notify any potential purchasers of the property that the land has been used to manage CCR wastes and its use is restricted (30 TAC §352.1221 and 40 CFR §257.102(i)). For CCR units, closed after October 19, 2015, that were closed before submission of the application, the applicant should submit documentation to show that notices required under 30 TAC 352, Subchapter K and 40 CFR §257.105 or §257.106 have been filed.

31. Closure Plan

This section applies to the owners and operators of all CCR units required to be registered. The applicant must close the facility in a manner that minimizes need for further maintenance and controls, or eliminates, to the extent necessary to protect human health and the environment, the post-closure release of CCR waste, chemical constituents of concern, leachate, contaminated rainfall, or waste decomposition products to the groundwater, surface waters, or to the atmosphere.

The type of unit to be closed can determine the level of detail sufficient for a closure plan. CCR units which have been certified closed after October 19, 2015, must provide documentation to demonstrate compliance with state and federal regulations.

For each unit to be registered, complete Table VII.A.1. - Unit Closure and list the CCR Unit components to be decontaminated, possible methods of decontamination, and possible methods of disposal of wastes and waste residues generated during unit closure. All ancillary components must be decontaminated, and the generated waste disposed of appropriately.

See “Closure Plan” and “Closure Plan-Addendum No. 1” for Ash Landfill 1 and FGD Ponds in APPENDIX G.

Information about CCR units closed or to be closed under alternative closure requirements must be provided in Table VII.A.2. - CCR Units Under Alternative Closure Notification.

Guidance on design of a closure cap and final cover for non-hazardous industrial solid wastes landfills is provided in EPA publication 530-SW-85-014, TCEQ Technical Guidance No. 3 and TCEQ publication, RG-534, “Guidance for Liner Construction and Testing for a Municipal Solid Waste Landfill”.

32. Post-Closure Care Plan

Provide a post-closure care plan that complies with the requirements of 30 TAC §352.1241.

See “Post-Closure Plan” for Ash Landfill 1 and FGD Ponds in APPENDIX G.

Post-closure care of each CCR unit must continue for at least 30 years after the date of completing closure of the unit and must consist of monitoring and reporting of the groundwater monitoring systems, in addition to the maintenance and monitoring of CCR unit. Continuation of certain security requirements may be necessary after the date of closure. Post-closure use of property on or in which waste remains after closure must never be allowed to disrupt the integrity of the containment system. In addition, submit the following information:

- The name, address, and phone number of the person or office to contact about the CCR unit during the post-closure period; and

  Luminant-Environmental Services
  Renee Collins-Senior Environmental Director
  6555 Sierra Drive
  Irving, TX 75039
  214-875-8338

CCRPostClosurePlan@Luminant.com

- A discussion of the future use of the land associated with each unit.

  See section 5.0 of the "Post-Closure Plans" for Ash Landfill 1 and FGD Ponds in APPENDIX G.

Landfills and surface impoundments which have been certified closed after October 19, 2015, must be included in post-closure care plans, unless they have been determined to have been closed by waste removal equivalent to the closure standards in 30 TAC §352.1221 and 40 CFR §257.102 or 30 TAC §352.1231 and 40 CFR §257.103. If such a demonstration has been made pursuant to 40 CFR §257.102 or §257.103, but an equivalency determination has not been made, please submit a copy of the demonstration documentation. If an equivalency determination has been made, applicant should submit a copy of this determination.

VIII. Financial Assurance

33. Post-Closure Care Cost Estimate

Financial assurance for post-closure care (30 TAC §352.1101) applies to owners or operators of all CCR units, except CCR units from which the owner or operator intends to remove wastes and perform clean closure. Provide a written cost estimate in current dollars of the total cost of the 30-year (or longer, if applicable under 30 TAC §352.1101(d)) post-closure care period to perform post-closure care requirements as prescribed in 30 TAC §352.1241. The cost estimate must be based on the costs of hiring a third party to conduct post-closure care maintenance.

Complete Table VIII.A.1 – Post-Closure Cost Summary for Existing Registered Units

See Post-Closure Care Cost Estimates in APPENDIX H. Cost estimates for the FGD Pond Area are summarized in Table 1. Cost estimates for Ash Landfill 1 are summarized in Table 2.

Complete Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units

34. Financial Assurance Mechanism

The financial assurance for post-closure care is required in accordance with 30 TAC §352.1101. The applicant shall demonstrate the financial assurance within 90 days after approval of the registration with a financial mechanism acceptable to TCEQ in compliance with 30 TAC §352.1101(c) and 30 TAC §37, Subchapters A through D, except as indicated in 30 TAC §352.1111, in an amount no less than the amount specified in the approved Post-Closure Care Cost Summary. Provide a description of the proposed financial assurance mechanism.

Oak Grove Management Company LLC will provide an acceptable financial assurance mechanism per 30 TAC 352.1101 no more than 90 days after the executive director's approval of the registration.

Complete Table VIII.B. - Post-Closure Period, for the authorized post-closure period, to meet the requirements of 30 TAC §352.1241(a) through (c).

Signature Page

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Signature: _____ Date: _____

Name and Official Title (type or print): _____

Owner or Operator Signature: _____ Date: _____

Name and Official Title (type or print): _____

To be completed by the owner or operator if the application is signed by an authorized representative for the operator

I, _____ hereby designate _____
(operator) (authorized representative)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a CCR waste management registration. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any registration which might be issued based upon this application.

_____
Printed or Typed Name of Applicant or Principal Executive Officer

_____
Signature

(Note: Application Must Bear Signature & Seal of Notary Public)

Subscribed and sworn to before me by the said _____ on this

_____ day of _____, _____.

My commission expires on the _____ day of _____, _____

(Seal) Notary Public in and for _____ County, Texas

Registration Application for Coal Combustion Residuals Waste Management

Attachments and Tables	**Attachment No.**
General Information	Appendix A
Property/Legal Description	
Property Owner Affidavit	
Legal Authority	
Delegation of Signature Authority	
TCEQ Core Data Form	
Attachments	
Response to TCEQ CCR Unit Registration Comments (Item 21) – Ash Landfill 1	
Response to TCEQ CCR Unit Registration Comments (Item 21) – FGD Ponds	
Location Restrictions & Geology	Appendix B
Location Restriction Demonstration-Ash Landfill 1	
Location Restriction Evaluation-Ash Landfill 1	
Location Restriction Demonstration-FGD Ponds	
Location Restriction Evaluation-FGD Ponds	
Fugitive Dust Control Plan	Appendix C
CCR Fugitive Dust Control Plan	
2021 Annual CCR Fugitive Dust Control Report	
Landfill Criteria	Appendix D
Soil Liner Evaluation Reports	
Run-on and Run-off Control System Plan	
2021 Annual CCR Unit Inspection Report-Ash Landfill 1	
Registration Update – Proposed Vertical Expansion of Ash Landfill 1	
Surface Impoundment Design and Operating Criteria	Appendix E
Construction Completion and Quality Assurance Report-FGD A	
Liner Evaluation Report-FGD B	
Liner Evaluation Report-FGD C	
Retrofit Plan – FGD A	
Intent to Retrofit Notification – FGD A	
FGD Pond A Retrofit Construction Plans	
Hazard Potential Classification Assessment	
Inflow Design Flood Control System Plan	
History of Construction	
History of Construction-Addendum No.1	
Structural Stability Assessment	
Safety Factor Assessment	
Groundwater Monitoring and Corrective Action	Appendix F
Groundwater Monitoring System Certification-Ash Landfill 1	
Groundwater Monitoring System Certification-Addendum No. 1-Ash Landfill 1	
Groundwater Monitoring System Certification-FGD Ponds	
Groundwater Monitoring Plan-Revision 2 – Ash Landfill 1	
Groundwater Monitoring Plan-Revision 2 – FGD Ponds	
Statistical Analysis Plan-Revision 1-Ash Landfill 1	
Statistical Analysis Plan-Revision 1-FGD Ponds	
Background Groundwater Monitoring and Statistical Analysis Summary Report–Ash Landfill 1	
Background Groundwater Monitoring and Statistical Analysis Summary Report–FGD Ponds	
2017 Annual Groundwater Monitoring Report-Ash Landfill 1	
2020 Groundwater Monitoring and Corrective Action Report-Ash Landfill 1	
2020 Groundwater Monitoring and Corrective Action Report-FGD Ponds	

2021 Groundwater Monitoring and Corrective Action Report-Revision 1-Ash Landfill 1
2021 Groundwater Monitoring and Corrective Action Report-Revision 1-FGD Ponds
CCR Assessment of Corrective Measures-Revision 1-FGD Ponds
Assessment of Corrective Measures Public Meeting Documents
Remedy Selection Report – FGD Ponds

Closure and Post-Closure Care — Appendix G

Closure Plan-Ash Landfill 1
Closure Plan-Addendum No. 1-Ash Landfill 1
Closure Plan-FGD Ponds
Closure Plan-Addendum No. 1-FGD Ponds
Post-Closure Plan-Ash Landfill 1
Post-Closure Plan-FGD Ponds

Financial Assurance — Appendix H

Post-Closure Care Cost Estimates Tables

Tables	Submitted	Not Applicable
Table I.6. - CCR Waste Management Units	☒	☐
Table I.6.A. - Waste Management Information	☒	☐
Table I.6.B. - Wastes Managed in Registered Units	☒	☐
Table I.6.C. - Sampling and Analytical Methods	☒	☐
Table IV.A. - Landfill Characteristics	☒	☐
Table IV.B. - Landfill Liner System	☒	☐
Table IV.C. - Landfill Leachate Collection System	☐	☒
Table IV.D. - Inspection Schedule of Landfills	☒	☐
Table V.A. - Surface Impoundments Characteristics	☒	☐
Table V.B. - Surface Impoundment Liner System	☒	☐
Table V.J. - Inspection of Surface Impoundments	☒	☐
Table VI.A. - Unit Groundwater Detection Monitoring System	☒	☐
Table VI.C. - CCR Units Under Detection Monitoring	☒	☐
Table VI.C-1. - Groundwater Detection Monitoring Parameters	☒	☐
Table VI.D. - CCR Units Under Assessment Monitoring	☒	☐
Table VI.D-2. - Groundwater Assessment Monitoring Parameters	☒	☐
Table VII.A.1. - Unit Closure	☒	☐
Table VII.A.2. - CCR Units Under Alternative Closure Notification	☐	☒
Table VIII.A.1. - Post-Closure Cost Summary for Existing Registered Units	☒	☐
Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units	☐	☒
Table VIII.B. - Post-Closure Period	☐	☒
Engineering Certification(s) - Dike Construction	☐	☒

Additional Attachments as Applicable - Select all those apply and add as necessary

☒ TCEQ Core Data Form(s) Appendix A
☒ Signatory Authority Delegation Appendix A
☐ Fee Payment Receipt
☐ Confidential Documents
☒ Certificate of Fact (Certificate of Incorporation) Appendix A
☐ Assumed Name Certificate

Table I.6. – CCR Waste Management Units

CCR Unit No.[1]	Unit Name	N.O.R. No.[1]	Unit Description[3]	Capacity	Unit Status[2]
010	Ash Landfill 1	010	Landfill	22.16 million cubic yards	Active
011	FGD-A Pond	011	Surface Impoundment	172 ac-ft	Active
012	FGD-B Pond	012	Surface Impoundment	104 ac-ft	Active
013	FGD-C Pond	013	Surface Impoundment	218 ac-ft	Active

1 Registered Unit No. and N.O.R. No. cannot be reassigned to new units or used more than once.
2 Unit Status options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post-Closure.
3 If a unit has been transferred, the applicant should indicate which facility/permit it has been transferred to in the Unit Description column.

Table I.6.A. – Waste Management Information

Waste No.[1]	Waste Type(s)	Source	Volume (tons/year)[2]
1	FGD Gypsum	Coal Combustion Byproduct	837,000 tons
2	Fly Ash	Coal Combustion Byproduct	49,000 tons
3	Bottom Ash	Coal Combustion Byproduct	332,000 tons
4	Class 2 Non-Hazardous Sandblast Grit	Misc. Maintenance Activities	< 10 tons
5	Construction Debris	Misc. Maintenance Activities	< 100 tons
6	Filters	Misc. Maintenance Activities	< 50 tons
7	Metal Scrap	Misc. Maintenance Activities	0
8	Activated Carbon Waste	Unused material for Flue Gas Treatment	0
9	Spent Desiccant	Misc. Maintenance Activities	0
10	Spent Ion Exchange Resins	Boiler Water Treatment	< 20 tons
11	Waste Catalyst	SCR Unit	150 tons
12	Supplemental Plant Production Refuse	Plant Laboratory Operations	0
13	Plant Trash	Misc. Plant Operations	0

1 Assign waste number sequentially. Do not remove waste number wastes which are no longer generated

2 Reflects 2020 records

Table I.6.B. – Wastes Managed in Registered Units

Waste No.[1]	Waste	TCEQ Waste Form Codes and Classification Codes
1	FGD Gypsum	TWC-30013922, TX Form Code-392, Class 2
2	Fly Ash	TWC-30023042, TX Form Code-304, Class 2
3	Bottom Ash	TWC-30053042, TX Form Code-304, Class 2
4	Class 2 Non- Hazardous Sandblast Grit	TWC-37013902, TX Form Code-389, Class 2
5	Construction Debris	TWC-37043902, TX Form Code-390, Class 2
6	Filters	TWC-37063102, TX Form Code-310, Class 2
7	Metal Scrap	TWC-37133072, TX Form Code-307, Class 2
8	Activated Carbon Waste	TWC-37184042, TX Form Code-404, Class 2
9	Spent Desiccant	TWC-37203192, TX Form Code-319, Class 2
10	Spent Ion Exchange Resins	TWC-37264032, TX Form Code-403, Class 2
11	Waste Catalyst	TWC-37503932, TX Form Code-393, Class 2
12	Supplemental Plant Production Refuse	TWC-39019022, TX Form Code-902, Class 2
13	Plant Trash	TWC-39109992, TX Form Code-999, Class 2

1 from Table I.6.A., first column

Table I.6.C – Sampling and Analytical Methods

Waste No.[1]	Sampling Location	Sampling Method	Frequency	Parameter	Test Method	Desired Accuracy Level
1	Gypsum dewatering belt	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
2	Fly ash loading silo	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
3	Bottom ash bunker	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
4	Varies by project	Composite	Each project	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
5	Varies by project	Composite	As needed	TCLP metals, TPH	SW1311/7470A SW1311/6020B TX1005	See below [2]
6	None-process knowledge	NA	NA	SDS and flyash analysis (Waste no. 2)	NA	NA
7	None-process knowledge	NA	NA	None	NA	NA
8	None-process knowledge	NA	NA	SDS and process knowledge	NA	NA
9	None-process knowledge	NA	NA	SDS	NA	NA
10	Spent resin drum	Composite	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below [2]
11	None-process knowledge	NA	NA	SDS and flyash analysis (Waste no. 2)	NA	NA
12	None-process knowledge	NA	NA	None	NA	NA
13	None-process knowledge	NA	NA	None	NA	NA

1 from Table I.6.A., first column

2 Analytical protocol will meet EPA quality control and accuracy specifications as published in the SW-846 Methods. The laboratory will be TCEQ accredited.

Table IV.A. – Landfills Characteristics

Registered Unit No.	Landfill	N.O.R. No.	Waste Nos.[1]	Rated Capacity	Dimensions[2]	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
010	Ash Landfill 1	010	1 thru 13	22.16 million cubic yards	3200 ft L x 2100 ft W x 190 ft H (height @ max design) 155 acres	N/A	N/A	Waste numbers 1-13 as described in Table I.6.A.

1 From Table I.6.A., first column
2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table IV.B. – Landfill Liner System

Registered Unit No.*	Landfill	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
010	Ash Landfill 1	N/A	N/A	N/A	Compacted clay	$<1x10^{-7}$ cm/sec	Minimum 3 ft

* This number should match the Registration Unit No. given on Table IV.A.

Table IV.C. – Landfill Leachate Collection System

Registered Unit No.	Landfill Name	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material
N/A						

Table IV.D. – Inspection Schedule of Landfills

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
010-Ash Landfill 1	Inspect for any appearances of actual or potential structural weakness and other conditions which are disrupting of have the potential to disrupt the operation and safety of the CCR unit	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Embankments	Surface cracking, animal burrows, misalignments, slides, vegetative cover, rutting, erosion, seepage, slope protection/chutes	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Capped Areas	Animal burrows, vegetative cover, rutting, surface cracking	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Active Work Area	Contact water, dusting	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.84(a).
Groundwater Monitoring Wells	Deterioration of pads, bollards, missing locks, compromise of casing integrity	Semi-Annual Inspection
010-Ash Landfill 1		Annually per 40 CFR 257.84(b)
	Inspect for any changed in geometry of the structure since the previous annual inspection.	Annual Inspection
	Estimate the approximate volume of CCR contained in the unit at the time of the inspection.	Annual Inspection
	Inspect for any appearance of actual or potential structural weakness of the CCR unit, and any conditions that are disrupting or have the potential to disrupt the operation and safety of the unit.	Annual Inspection
	Inspect for any other change(s) which have affected the stability or operation of the CCR unit since the previous inspection	Annual Inspection

Table V.A. – Surface Impoundment Characteristics

Registered Unit No.	Surface Impoundment Name	N.O.R. No.	Waste Nos.[1]	Rated Capacity	Dimensions[2]	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
011	FGD Pond A	011	1	172 acre-feet	875 ft x 500 ft x 28 ft 9.4 acres	>5 feet	N/A	FGD gypsum
012	FGD Pond B	012	1	104 acre-feet	640 ft x 700 ft x 15 ft 11.3 acres	<5', see location restriction report, Section 2.0, last paragraph	N/A	FGD gypsum
013	FGD Pond C	013	1	218 acre-feet	1200 ft x 550 ft x 22 ft 17 acres	>5 feet	N/A	FGD gypsum

1 From Table I.6.A., first column
2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table V.B. – Surface Impoundment Liner System

Registered Unit No.*	Surface Impoundment Name	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
011	FGD Pond A	60 mil HDPE	$< 1.00x10^{-7}$ cm/sec**	60-mil HDPE	clay	$< 1x10^{-7}$ cm/sec	2’
012	FGD Pond B	60 mil HDPE	$< 1.00x10^{-7}$ cm/sec	60-mil HDPE	clay	$< 1x10^{-7}$ cm/sec	2’
013	FGD Pond C	60 mil HDPE	$< 1.00x10^{-7}$ cm/sec	60-mil HDPE	clay	$< 1x10^{-7}$ cm/sec	2’

* This number should match the Registration Unit No. given on Table V.A.
**FGD Pond A currently being retrofitted.

Table V.J. – Inspection Schedule of Surface Impoundments

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
011-FGD Pond A, 012-FGD Pond B, and 013-FGD Pond C		Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a).
Above-grade piping	Deteriorating of piping/connections	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a).
Truck Access Ramp	Spills, Deterioration	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a)., spills inspected and reported within 24-hrs
Containment Dike	Spills, excessive water levels, surface cracking, animal burrows, misalignments, slides, vegetative cover, rutting, erosion, seepage, slope protection/chutes	Weekly inspections are performed at intervals not exceeding seven days per 40 CFR 257.83(a)., spills inspected and reported within 24-hrs
Instrumentation	Monitor water level	Unit instrumentation (water level gauge) is inspected and monitored at intervals not exceeding 30 days per 40 CFR 257.83(a)(1)(iii).
Groundwater	Deterioration of pads, bollards, missing locks, compromise of casing integrity	Semi-Annual Inspection
011-FGD Pond A, 012-FGD Pond B, and 013-FGD Pond C		Annually per 40 CFR 257.83(b)
	Inspect for any changes in geometry of the structure since the previous annual inspection.	Annual Inspection
	Evaluate the approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since previous annual inspection.	Annual Inspection
	Evaluate the storage capacity at the time of the inspection.	Annual Inspection
	Estimate the approximate volume of the impounded water and CCR contained in the unit at the time of the inspection.	Annual Inspection
	Inspect for any other change(s) which have affected the stability or operation of the CCR unit since the previous inspection	Annual Inspection

Table VI.A.1. - Unit Groundwater Detection Monitoring Systems

Waste Management Unit/Area Name[1]	**WMU 010 - Ash Landfill 1**					
Well Number(s):	MW-02	MW-05	MW-07	MW-08R	MW-09	AL-10
Hydrogeologic Unit Monitored	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	POC	POC	POC
Up or Down Gradient	Up	Down	Down	Down	Down	Up
Casing Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Slot Size (in.)	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"
Top of Casing Elevation (Ft, Mean Sea Level *[MSL]*)	463.14	436.98	438.84	443.84	461.46	460.81
Grade or Surface Elevation (Ft, MSL)	459.9	434.73	436.93	441.22	459.24	457.54
Well Depth (Ft, Below Grade Surface *[BGS]*)	66	50	50	52.5	67	60.3
Well Depth (Ft, Below Top of Casing *[BTOC]*)	69.24	52.25	51.91	55.12	69.22	63.57
Screen Interval						
From (Ft, BGS)	45	29	29	32.5	46	50.3
To (Ft, BGS)	65	49	49	52.5	66	60.3
Screen Interval						
From (Ft, BTOC)	48.24	31.25	30.91	35.12	48.22	53.57
To (Ft, BTOC)	68.24	51.25	50.91	55.12	68.22	63.57

1 From Tables in Section I.; *MSL* : Mean Sea Level; *BGS* : Below Grade Surface; *BTOC* : Below Top of Casing

Table VI.A.2. - Unit Groundwater Detection Monitoring Systems

Waste Management Unit/Area Name[1]	**WMUs 011, 012, 013 - FGD Ponds**											
Well Number(s):	FGD-8	FGD-11	FGD-1	FGD-2	FGD-3	FGD-4	FGD-5	FGD-6	FGD-12	FGD-14*	FGD-15*	FGD-16*
Hydrogeologic Unit Monitored	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group	Wilcox Group
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	POC	POC	POC	POC	POC	POC	POC	POC	POC
Up or Down Gradient	Up	Up	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
Casing Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Diameter and Material	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Screen Slot Size (in.)	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"	0.010"
Top of Casing Elevation (Ft, Mean Sea Level *[MSL]*)	440.15	452.22	424.44	439.36	434.9	432.03	433.01	428.62	443.16	428.91	437.17	444.3
Grade or Surface Elevation (Ft, MSL)	436.8	448.8	421.71	436.58	432.2	429.34	430.2	425.42	439.46	426.21	434.17	441.3
Well Depth (Ft, Below Grade Surface *[BGS]*)	40	50.8	34	52	48	44	50	28	40.7	30	35	40
Well Depth (Ft, Below Top of Casing *[BTOC]*)	43.35	54.22	36.73	54.78	50.7	46.69	52.81	31.2	44.4	32.7	38	43
Screen Interval												
From (Ft, BGS)	30	40.8	13	31	27	22.5	40	18	30.7	20	25	30
To (Ft, BGS)	40	49.8	33	51	47	42.5	50	28	39.7	30	35	40
Screen Interval												
From (Ft, BTOC)	33.35	44.22	15.73	33.78	29.7	25.19	42.81	21.2	34.4	22.7	28	33
To (Ft, BTOC)	43.35	53.22	35.73	53.78	49.7	45.19	52.81	31.2	43.4	32.7	38	43

1 From Tables in Section I.; *MSL* : Mean Sea Level; *BGS* : Below Grade Surface; *BTOC* : Below Top of Casing

*Wells FGD-14, FGD-15, FGD-16 added to network as part of ACM completed September 2019

Table VI.C. – CCR Units Under Detection Monitoring

N.O.R. Unit No.	Unit Description[1,2]	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification[3]
010	Ash Landfill 1	MW-02, MW-07	B (MW-02, MW-07)	2/13/19	N/A - ASD Successful (4/10/19)
010	Ash Landfill 1	MW-05, MW-07	B (MW-07) F (MW-05)	11/28/19	N/A - ASD Successful (2/24/20)
010	Ash Landfill 1	MW-05, MW-07, MW-09	B (MW-05, MW-07) SO4 (MW-07, MW-09)	12/7/20	N/A - ASD Successful (3/5/21)

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
3 Enter month, day, and year.

Table VI.C-1. – Groundwater Detection Monitoring Parameters

Parameter	Sampling Frequency	Analytical Method	Practical Quantification Limit (units)	Concentration Limit[1]
Ash Landfill 1				
Boron	Semi-Annual	SW6020B	0.0100 mg/L	0.~~124~~ 16 mg/L
Calcium	Semi-Annual	SW6020B	0.10 mg/L	~~74.9~~81 mg/L
Chloride	Semi-Annual	E300	0.30 mg/L	~~353~~ 440 mg/L
Fluoride	Semi-Annual	E300	0.100 mg/L	0.~~4~~ 59 mg/L
Sulfate	Semi-Annual	E300	1.00 mg/L	~~97.4~~190 mg/L
Total Dissolved Solids	Semi-Annual	M2540C	10.0 mg/L	~~948~~ 900 mg/L
pH	Semi-Annual	Field Measured	s.u.	6.3~~1~~ su 7.0~~9~~ su
FGD PONDS				
Boron	Semi-Annual	SW6020B	0.0100 mg/L	0.14~~1~~ mg/L
Calcium	Semi-Annual	SW6020B	0.10 mg/L	~~471~~ 470 mg/L
Chloride	Semi-Annual	E300	0.30 mg/L	~~6340~~ 6300 mg/L
Fluoride	Semi-Annual	E300	0.100 mg/L	0.78~~1~~ mg/L
Sulfate	Semi-Annual	E300	1.00 mg/L	~~409~~ 410 mg/L
Total Dissolved Solids	Semi-Annual	M2540C	10.0 mg/L	13000 mg/L
pH	Semi-Annual	Field Measured	s.u.	6.1~~0~~ su 7.2~~3~~ su

1 The concentration limit is the basis for determining whether a release has occurred from the CCR unit/area.

Table VI.D. – CCR Units Under Assessment Monitoring

N.O.R. Unit No.	Unit Description[1,2]	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification[3]
011, 012, 013	FGD Ponds	FGD-2, FGD-3, FGD-4, FGD-5	B	1/16/2018	7/16/2018

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
3 Enter month, day, and year

Table VI.D-2. – Groundwater Assessment Monitoring Parameters

Parameter	Sampling Frequency	Analytical Method	Practical Quantification Limit (units)	Concentration Limit[1]
FGD PONDS				
Antimony	Semi-Annual	SW6020B	0.000800 mg/L	0.0060 mg/L
Arsenic	Semi-Annual	SW6020B	0.00200 mg/L	0.~~0146~~ 015 mg/L
Barium	Semi-Annual	SW6020B	0.00300 mg/L	2.0 mg/L
Beryllium	Semi-Annual	SW6020B	0.000300 mg/L	0.0040 mg/L
Cadmium	Semi-Annual	SW6020B	0.000300 mg/L	0.0050 mg/L
Chromium	Semi-Annual	SW6020B	0.00200 mg/L	0.10 mg/L
Cobalt	Semi-Annual	SW6020B	0.00300 mg/L	0.~~0158~~ 016 mg/L
Flouride	Semi-Annual	SW6020B	0.100 mg/L	4.0 mg/L
Lead	Semi-Annual	SW6020B	0.000300 mg/L	0.015 mg/L
Lithium	Semi-Annual	SW6020B	0.00500 mg/L	0.~~149~~ 15 mg/L
Mercury	Semi-Annual	SW7470A	0.0000800 mg/L	0.0020 mg/L
Molybdenum	Semi-Annual	SW6020B	0.00200 mg/L	0.10 mg/L
Selenium	Semi-Annual	SW6020B	0.00200 mg/L	0.050 mg/L
Thallium	Semi-Annual	SW6020B	0.000500 mg/L	0.0020 mg/L
Radium 226+228	Semi-Annual	904 + SM7500Ra B M	varies	11.~~2~~ pCi/L

[1] The concentration limit is the basis for determining whether a release has occurred from the CCR unit/area.

Table VII.A.1. – Unit Closure

For each unit to be registered, list the unit components to be decontaminated, the possible methods of decontamination, and the possible methods of disposal of wastes and waste residues generated during unit closure.

Equipment or CCR Unit	Possible Methods of Decontamination[1]	Possible Methods of Disposal[1]
010-Ash Landfill 1	Close in Place	No disposal
011-FGD A Pond Piping	Removal	Landfill
011-FGD A Pond	Close in Place	No disposal
012-FGD B Pond Piping	Removal	Landfill
012-FGD B Pond	Close in Place	No disposal
013-FGD C Pond Piping	Removal	Landfill
013-FGD Pond	Close in Place	No disposal

1 Applicants may list more than one appropriate method.

Table VII.A.2. – CCR Units Under Alternative Closure Notification

Registered Unit No.	N.O.R. Unit No.	Unit Description[1,2]	Date of Receipt of Last Waste[3]	Date of Closure Notification[3]
N/A				

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
3 Enter month, day, and year.

Table VIII.A.1. – Post-Closure Cost Summary for Existing Registered Units

Unit	Cost
010-Ash Landfill 1	$2,326,837
011, 012, 013-FGD Pond Area	$2,168,817
Total Existing Unit Post-Closure Cost Estimate	$4,495,654 (in 2021 Dollars)[1]

Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units

Unit	Cost
N/A	

1 As units are added or deleted from these tables through future registration amendments, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

Table VIII.B. – Post-Closure Period

Unit Name	Date Certified Closed	Authorized Post-Closure Period (Yrs.)	Earliest Date Post-Closure Ends (See Note 1)
[Unit Example 1]	**[1/1/1995]**	30 years	**[1/1/2025]**
[Unit Example 2]	**[1/1/1990]**	30 years	**[1/1/2020]**
[Unit Example 3]	**[1/1/1984]**	30 years	**[1/1/2014]**

Note 1 – Post-Closure Care shall continue beyond the specified date until the Executive Director has approved the applicant's request to reduce or terminate the post-closure period, consistent with 30 TAC §352.1241 – Post-Closure Care Requirements.

N/A