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Project Manager Bobbi Coleman

Name of Contractor CH2M

UST Certification Number

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4th Qtr 2017 Monitoring Report

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February 26, 2018

Delivered via FedEx Overnight Delivery

Ms. Bobbi Coleman
South Carolina Department of Health and Environmental Control
Assessment Section, UST Management Division
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201

Subject: Fourth Quarter 2017 Monitoring Report
Plantation Pipe Line Company
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693, "Kinder Morgan Belton Pipeline Release"

Dear Ms. Coleman,

On behalf of Plantation Pipe Line Company (Plantation), CH2M HILL Engineers, Inc. (CH2M) is submitting this Fourth Quarter 2017 Monitoring Report for the Lewis Drive Remediation Site in Belton, South Carolina. This report summarizes the work performed at the site between October 1, 2017, and December 31, 2017.

1.0 Work Activities

The following activities were performed during the fourth quarter 2017 in accordance with the Corrective Action Plan (CAP) (CH2M, 2016) and the CAP Addendum, Revision 1 (CH2M, 2017a):

- Conducted three groundwater events and one surface water sampling event.
- Operated vertical sparging wells in the areas of Brown's Creek and Cupboard Creek (Figure 1), as well as the stream aerators.
- Operated horizontal sparging wells in the Hayfield Zone (Figure 1).
- Performed routine operation and maintenance (O&M) events on the sparging system.
- Recorded changes in water levels and barometric pressures using In Situ Rugged Troll 100 water level data loggers.
- Performed weekly free product recovery in wells with measurable product thickness in the Brown's Creek Protection Zone (BCPZ) and Cupboard Creek Protection Zone (CCPZ).
- Installed residuum monitoring well MW-43 and bedrock monitoring wells MW-06B, MW-09B, MW-43B, MW-48B, and MW-50B.
- Rehabilitated existing monitoring well MW-02B.
- Transported and disposed of liquid waste generated during the completion of work onsite.
- Performed weekly inspections of surface water features at Brown's Creek and Cupboard Creek.

2.0 Work Procedures

2.1 Gauging Events

Monitoring wells, surface water locations, and temporary wells (piezometers) were gauged monthly. Product recovery features (recovery sumps, trenches, and wells) were gauged once per week.

2.2 Product Recovery

As agreed upon with the South Carolina Department of Health and Environmental Control (SCDHEC, 2018), free product recovery was focused on the BCPZ and CCPZ during this reporting period. Product recovery was performed once weekly in these two zones in recovery wells, sumps, and trenches that had measurable product thickness. Product recovery outside of these zones was performed as time permitted. Vacuum trucks were used to recover and transfer the recovered product and petroleum-contact water into two onsite poly tanks for temporary storage and separation. During product recovery, color changes of the extracted fluids were monitored, and extraction ceased when recovered liquids from the recovery features were observed to be clear and emulsification was minimal. During each recovery event, the operator recorded the duration of product recovery from each recovery feature or well. The quantity of recovered product and petroleum-contact water was tracked by measuring these fluid levels in the onsite poly tanks prior to and after the recovery event. When the fluid levels of both poly tanks were full (poly tank neck), the fluids were decanted and transported to the A&D Environmental facility in Archdale, North Carolina, for disposal.

2.3 Surface Water

Weekly inspections of surface water features were performed at the site. The inspection route used is illustrated on Figures 2A and 2B. Observations made during this reporting period are summarized in Table 1. No new signs of distressed vegetation, hydrocarbon sheens, or odors were observed during the inspections for this reporting period.

Surface water samples were collected on a quarterly basis during this reporting period as stated in the CAP Addendum, Revision 2 (CH2M, 2017c). However, in accordance with SCDHEC's request, monthly surface water sampling resumed in December 2017.

Samples were collected on December 5 and 14, 2017. Fifteen surface water samples were collected on December 5, 2017, at locations SW-01, SW-02, SW-03, SW-04, SW-07, SW-08, SW-09, SW-10, SW-11, SW-12, SW-13, SW-14, FP-01, FP-02, and FP-03 (locations SW-05 and SW-06 in Cupboard Creek were dry). As a result of an anomalous detection of hydrocarbons at SW-02 from December 5, 2017, an additional sampling event was performed on December 14, 2017. Fourteen surface water samples were collected on December 14, 2017, at the same locations listed above except SW-14, which is in a different watershed from SW-02.

Samples were collected in accordance with the project *Quality Assurance Project Plan* (QAPP)*, Revision 3* (CH2M, 2017e) and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and naphthalene using U.S. Environmental Protection Agency (EPA) Method 8260B (see Table 2). Sample containers were 40-milliliter (mL) volatile organic analysis (VOA) vials containing a hydrochloric acid (HCl) preservative. Surface water samples were collected by dipping the sample vials into the creek at each sampling location to fill the vials. The vials were labeled, packed in wet ice, and transported by FedEx under standard chain-of-custody (COC) procedures to ESC Lab Sciences in Mount Juliet, Tennessee. Laboratory reports for surface water samples and COC records are included in Attachment A. Laboratory results are summarized in Table 2.

2.4 Groundwater Sampling Events

Three groundwater sampling events were performed during the reporting period, on October 3 and 4, 2017 (Event 1), November 7 and 8, 2017 (Event 2), and December 4 through 7, 2017 (Event 3). Prior to each sampling event, a comprehensive round of groundwater gauging was performed using an oil-water interface probe to measure the depth to water and test for the presence and thickness (if present) of product. The oil-water interface probe was decontaminated before each measurement. Decontamination was accomplished by wiping the interface probe with a clean paper towel that contained Alconox and deionized water, and a second clean paper towel that only contained deionized water, or by spraying down the probe using a spray bottle containing Alconox and deionized water followed by a final deionized water rinse. If the paper towel method was used, two new clean paper towels were used at each location and were properly disposed. Groundwater elevation and product thickness data are summarized in Table 3. Figures 2A and 2B show groundwater elevations in the residuum and bedrock aquifers, respectively, while Figure 3 shows the product thickness data.

Groundwater wells without free product were sampled using either HydraSleeves or a peristaltic pump employing low-flow purge methods. The height of the water column determined whether a well was sampled using a HydraSleeve or peristaltic pump according to the following criteria:

- Water column greater than 3 feet — A HydraSleeve was used to sample the well, and dissolved oxygen (DO) concentrations were measured using a YSI ProODO meter. Stabilized DO concentrations were recorded in the field logbook and are summarized in Table 4.
- Water column less than 3 feet but greater than 0.5 foot — A peristaltic pump was used to purge the well, and field parameters were measured using a YSI 6920 V2-2 Multi-Parameter Water Quality Sonde meter to confirm stabilization of the well, in accordance with the SCDHEC *Programmatic Quality Assurance Program Plan, Revision 3.1* (Programmatic QAPP) (South Carolina Underground Storage Tank [UST] Management Division, 2016). Once the parameters stabilized, a sample was collected from the well using the straw method. DO concentrations were measured using a YSI ProODO meter. Upon stabilization, the field parameters were recorded in the field logbook. DO measurements are summarized in Table 4.
- Water column less than 0.5 foot — The well was considered dry, was documented in the field logbook as dry, was not sampled, and DO measurements were not collected.

Water samples were collected by filling 40-mL VOA vials containing HCl preservative. The vials were labeled, packed on wet ice, and transported by FedEx under standard COC procedures to ESC Lab Sciences in Mount Juliet, Tennessee. Samples were analyzed for BTEX, 1,2-dichloroethane (1,2-DCA), methyl tertiary butyl ether (MTBE), and naphthalene using EPA Method 8260B. Laboratory data sheets for groundwater samples and COC records are included in Attachment B. Laboratory results are summarized in Table 5.

2.5 Sparging System O&M

Sparging was initiated on March 6, 2017, according to the Startup Plan (CH2M, 2017a), with routine O&M activities performed during this reporting period (Attachment C contains the O&M logs). Sparging activities are summarized by remediation area below. When sparging rates were increased in any of the wells, air monitoring was performed with a photoionization detector and visual observations were made near the sparging wells.

- **BCPZ:** Sparging in the BCPZ was performed using a curtain of 27 vertical sparging wells. The flow rates in these wells were increased from 4 to 10 standard cubic feet per minute (scfm) by the end of the reporting period. Additionally, air was injected into two submersible diffusion aerators installed in Brown's Creek. The flow rates in these aerators were increased from 4 to 12.5 scfm during this reporting period.
- **CCPZ:** Sparging in the CCPZ was performed using a curtain of 19 vertical sparging wells. The flow rates in these wells were increased from 4 to 10 scfm during this reporting period.
- **Shallow Bedrock Zone:** No sparging has been performed in the Shallow Bedrock Zone to date. A pilot plan for sparging in the Shallow Bedrock Zone was submitted to SCDHEC on May 8, 2017, and approved on December 14, 2017.
- **Hayfield Zone:** Sparging in the Hayfield Zone was performed in three horizontal wells. The horizontal wells were briefly turned off between September 26, 2017, and October 9, 2016 to allow for well installation and repair activities in the Hayfield Zone. Subsequently, flow rates in these wells were increased weekly by approximately 0.04 scfm per foot of screen (scfm/ft) to 0.58 scfm/ft by the end of this reporting period. Wells HAS-1, HAS-2, and HAS-3 have screen lengths of approximately 752 feet, 715 feet, and 377 feet, respectively. Therefore, the total injection rate in the Hayfield Zone was increased to 1,070 scfm during this reporting period.

Water levels were measured in the BCPZ, CCPZ, and Hayfield Zone to document the influence of the sparging system on the residuum aquifer. In October 2017, water levels were measured continuously from five locations with water level data loggers (In Situ Rugged Troll 100) in MW-02, MW-12, MW-15, MW-20, and MW-40, and with barometric pressure loggers in MW-01 and MW-10. In November 2017, the water level data logger in MW-08 was removed and installed in MW-25 (bringing the total locations monitored to six) so additional data could be collected within the BCPZ.

2.6 Additional Activities

The following additional activities were performed during this reporting period:

- In October 2017:
  - Six monitoring wells (MW-06B, MW-09B, MW-43, MW-43B, MW-48B, and MW-50B) were installed using a Geoprobe 8040 DT or B-59 Mobile Drill Rig. MW-06B, MW-09B, and MW-50B were installed on October 17, 2017; MW-48B was installed on October 18, 2017; and MW-43 and MW-43B were installed on October 20, 2017. The residuum monitoring well screen was 5 feet in length and total depth was 8 feet. The bedrock wells were installed as open hole wells with total depths ranging from 51 to 151 feet. The wells were installed in accordance with SCDHEC *Well Standards* R. 61-71 (SCDHEC, 2016) and as discussed in the letter to SCDHEC, *Request for Well Permit to Install Additional Monitoring Wells*, dated May 8, 2017 (CH2M, 2017d). The boring logs, well construction details, and Form 1903s for these wells and the wells installed in September 2017 (MW-46, MW-47, and MW-49) are provided in Attachment D.
  - Monitoring well MW-02B was rehabilitated on October 5, 2017, due to silt buildup. The well was redeveloped to remove silt from the bottom of the well and then was converted from an open hole well to a traditional well with 2-inch-diameter, polyvinyl chloride (PVC) casing connected to 13 feet of PVC 0.010 slotted screen, to a total depth of 81 feet. The well was installed in accordance with SCDHEC *Well Standards* R. 61-71 (SCDHEC, 2016) and as discussed in the letter to SCDHEC, *Request for Well Permit to Install Additional Monitoring Wells*, dated May 8, 2017 (CH2M, 2017d). The boring log, well construction detail, and Form 1903s for this well are provided in Attachment D.

- In November 2017:
  - Recovered fluids were transported to the A&D Environmental facility in Archdale, North Carolina, for disposal. See Attachment E for the Bills of Lading and Table 6 for a summary of the total product transported and disposed of offsite.

3.0 Discussion of Results

3.1 Product Recovery

During the current quarter (October 1 through December 31, 2017), the amount of product recovered at the site was too low to be measured. The product recovered from the site was aggregated into two, large 1,500-gallon poly tanks and gauged weekly for product thickness, but the amount of product gauged in the poly tanks did not measurably change from the beginning of the reporting period to the end.

Table 3 summarizes the dates, times, and recovery features used for product recovery. Table 6 shows the dates and quantities of product that were shipped offsite for disposal. Attachment E contains the Bills of Lading for transportation of fluids offsite for disposal. Since the beginning of free product recovery through this reporting period (December 9, 2014, through December 31, 2017), approximately 222,974 gallons (5,309 barrels) of product have been recovered.

3.2 Surface Water

During this reporting period, BTEX concentrations were detected in surface water at SW-01, SW-02, SW-04 and SW-12 (Table 2). Benzene was the only constituent that exceeded the surface water standard for protection of human health for consumption of water and organisms (SCDHEC, 2014) of 2.2 micrograms per liter (µg/L). These exceedances were located at SW-01, SW02, and SW-12. Benzene concentrations above the surface water standard were detected as follows:

- On December 5, 2017:
  - 26.6 µg/L benzene at SW-02
  - 16.6 µg/L benzene at SW-12
- On December 14, 2017:
  - 4.52 µg/L benzene at SW-01
  - 21.1 µg/L benzene at SW-02
  - 9.19 µg/L benzene at SW-12

SW-12 is located near a known seep where groundwater impacts (including potential free product) entered Brown's Creek. Concentrations at SW-12 have decreased by three orders of magnitude since September 2016.

The detections at SW-01 and SW-02 are anomalous and will continue to be monitored. Plantation contracted a forensic review of the detection at SW-02 which concluded that the chemical profiles of the samples collected at SW-02 differed significantly from SW-12 and therefore the impacts at SW-02 cannot be attributed to migration and degradation.

Construction details for the stream gauges are presented in Table 7. Sample results are summarized in Table 2. Trends for surface water sampling locations SW-01, SW-02, and SW-12 are presented in Attachment F. Analytical data sheets and COC records are included in Attachment A.

3.3 Groundwater Flow and Product Distribution

Water levels from the December 2017 gauging event were used to prepare potentiometric surface maps for the site (Figures 2A and 2B). Groundwater in both the residuum (Figure 2A) and bedrock (Figure 2B) aquifers mimics the topography of the site and flows from topographic highs to topographic lows. Cupboard Creek flows intermittently, indicating the primary direction of groundwater flow is northeast toward Brown's Creek. The December 2017 water table configurations and direction of groundwater flow are consistent with previous findings.

Product thicknesses sitewide decreased significantly during this reporting period, and are presented alongside well gauging data in Table 3. Results are summarized as follows:

- On October 20 and 21, 2017, seven locations had product thicknesses greater than 0.5 foot: three piezometers, one recovery sump, and three recovery wells. RS-05, RW-07, TW-42, and TW-45 are under the influence of the sparging system, while RW-05, RW-15, and TW-28 are not under the influence.
- On November 12 and 17, 2017, three locations had product thicknesses greater than 0.5 foot: one piezometer, one recovery sump, and one recovery well. RS-05 and TW-42 are under the influence of the sparging system, while RW-05 is not under the influence.
- On December 21 and 27, 2017, six locations had product thicknesses greater than 0.5 foot: one piezometer, one recovery sump, and four recovery wells. RS-05 is under the influence of the sparging system while RW-02, RW-04, RW-05, RW-15, and TW-28 are not under the influence.

The product extent in June 2016 is compared to that in December 2017 on Figure 3, demonstrating the decrease of product thickness and extent over the last 18 months. This time period represents the largest decrease in product thickness and extent for the site. For example, the product thickness in MW-18 decreased from 3.16 feet in June 2016 to no recordable product in December 2017; and in MW-20, product thickness decreased from 2.29 feet in June 2016 to 0.35 foot in December 2017. Additionally, the extent of product has decreased since product is no longer measurable in MW-09, MW-12, MW-16, MW-18, RS-06, RS-07, RS-09, RS-11, RS-12, RS-13, RW-10, RW-11, RW-14, TW-84, and TW-94. Hydrographs for product recovery wells and select monitoring wells representative of general product thickness trends are presented in Attachment G.

Stream elevations are tabulated in Table 3 and are presented with groundwater elevations on Figure 2A. Construction details for recovery and nonrecovery features are presented in Table 8.

3.4 Dissolved Oxygen Distribution

DO measurements in groundwater in October, November, and December 2017 are provided in Table 4. The average DO concentration since the previous reporting period remained stable in residuum wells and increased in bedrock wells. In residuum wells, the average DO concentration remained relatively stable from 6.04 milligrams per liter (mg/L) in September 2017 to 5.73 mg/L in December 2017. In bedrock wells, the average DO concentration increased from 1.23 mg/L in September 2017 to 2.89 mg/L in December 2017.

3.4.1 Brown's Creek Protection Zone

DO concentrations in the BCPZ decreased from 2.97 mg/L in September 2017 to 1.64 mg/L in December 2017.

3.4.2 Cupboard Creek Protection Zone

DO concentrations in the CCPZ decreased from 3.68 mg/L in September 2017 to 2.48 mg/L in December 2017.

3.4.3 Hayfield Zone

The average DO concentration in the Hayfield Zone increased from 6.73 mg/L in September 2017 to 7.90 mg/L in December 2017.

3.4.4 Shallow Bedrock Zone

Sparging wells in the Shallow Bedrock Zone were not in operation during this reporting period. DO levels in this zone were relatively stable.

3.5 Groundwater Monitoring Results

Groundwater monitoring results this quarter indicate that there are significant decreases in dissolved concentrations of hydrocarbons in the BCPZ, CCPZ, and Hayfield Zone, and stable trends in the Shallow Bedrock Zone, in bedrock wells, and in other locations outside the influence of the sparging system. Monitoring results for samples collected in October, November, and December 2017 are presented in Table 5. Table 5 presents all the results that have been collected at the site since July 2015. The laboratory analytical reports for this quarter are provided in Attachment B. Groundwater analytical results are screened against the risk-based screening levels listed in the South Carolina Programmatic QAPP, Table D1 (South Carolina UST Management Division, 2016), which are provided at the bottom of Table 5. The December 2017 results are shown on Figures 4A and 4B, and summarized in the sections that follow.

3.5.1 Brown's Creek Protection Zone

Dissolved concentrations are on an overall decreasing trend in the residuum aquifer of the BCPZ. For example, in monitoring wells MW-15, MW-39, and MW-41, benzene concentrations have decreased by one to three orders of magnitude. However, concentrations of BTEX constituents in MW-40 remain stable, with benzene detected in December 2017 at 14,300 µg/L. Concentrations are also observed to be increasing at MW-38, from nondetect in September 2017 to 102 µg/L of benzene in December 2017.

Benzene concentrations appear to be stable in bedrock wells: 1,760 µg/L in MW-15B in December 2017, and at or near nondetect in all other bedrock monitoring wells.

Benzene was detected above its screening level in 8 of 15 residuum monitoring wells in the BCPZ, ranging from 9.82 µg/L (MW-42) to 14,300 µg/L (MW-40). Toluene was detected above its screening level in MW-12 and MW-40. Total xylenes were detected above their screening levels in MW-40. MTBE was detected above its screening level in MW-15, MW-34, and MW-39. Naphthalene was detected above its screening level in MW-12. MW-28 could not be sampled due to an insufficient volume of water in the well. Constituents in cross-gradient monitoring wells MW-37 (to the north) and MW-35 (to the south) have been below screening levels since system startup. Constituent concentrations in monitoring well MW-24 was below screening levels for the third and fourth quarter and MW-43 and MW-49 were below screening levels for the fourth quarter 2017. These BTEX concentrations reflect generally stable trends in this zone since initiating sparging in this zone on March 6, 2017. Prior to initiating sparging, BTEX concentrations were increasing.

Benzene was detected above its screening level in one of five bedrock monitoring wells in the BCPZ, at the concentration of 1,760 µg/L in MW-15B. Toluene, MTBE, and naphthalene were also detected above their screening levels in MW-15B at 3,630 µg/L, 135 µg/L, and 37.6 µg/L, respectively. Constituents have been nondetect in MW-25B since March 2017, and MW-24B was nondetect since September 2017.

3.5.2 Cupboard Creek Protection Zone

Dissolved concentrations in the CCPZ were increasing, but have stabilized since initiating air sparging. Benzene concentrations remain relatively stable in MW-23 at 693 µg/L.

Benzene and MTBE were detected above their screening levels in one residuum monitoring well in the CCPZ (693 µg/L and 99.5 µg/L, respectively, in MW-23). MTBE was also detected above its screening level in residuum monitoring well MW-46 at a concentration of 85.5 µg/L. MW-19 was not sampled because it was dry and MW-20 was not sampled because it contained free product. Downgradient monitoring wells MW-26 and MW-29 were nondetect for all constituents.

No constituents were detected above screening levels in bedrock monitoring wells in the CCPZ.

3.5.3 Hayfield Zone

Dissolved concentrations are decreasing overall in the Hayfield Zone. For example, in MW-03, MW-02, and MW-09, benzene concentrations have decreased by two to three orders of magnitude. Locations outside the influence of the sparging system remain recalcitrant, notably in the vicinity of bedrock wells MW-13B and MW-17B.

Benzene was detected above its screening level in 3 of 22 residuum monitoring wells in the Hayfield Zone ranging from 17.5 µg/L (MW-36) to 153 µg/L (MW-02). MTBE was also detected above its screening level in MW-02. All other constituents were not detected above their respective screening levels. Constituents in downgradient monitoring wells MW-03, MW-04, MW-05, MW-06, MW-08, MW-10, MW-14, MW-21, MW-31, MW-32, MW-33T, and MW-47 were below screening levels. A decreasing trend in the Hayfield Zone is beginning to develop in the residuum aquifer with the reductions in concentrations in constituents detected and the constituents exceeding the screening criteria. Seven residuum monitoring wells in the Hayfield Zone were not sampled because of lack of water (MW-07, MW-13, MW-17, MW-30, and MW-45) and presence of product (MW-16 and MW-18).

Benzene was detected above its screening level in four of ten bedrock monitoring wells ranging in concentrations from 21.8 µg/L in MW-09B to 10,600 µg/L in MW-17B. Concentrations of ethylbenzene, toluene, MTBE, and naphthalene exceeded their screen levels at MW-17B. MTBE was also exceeded its screening level in MW-13B. Constituents in monitoring wells MW-02B, MW-06B, MW-36B, MW-45B, and MW-48B were below screening levels. All bedrock monitoring wells in the Hayfield Zone were sampled.

3.5.4 Shallow Bedrock Zone

In the residuum of the Shallow Bedrock Zone, one well contained product (MW-11) and two wells were dry (MW-22 and MW-44). Benzene was the only constituent detected above its screening levels in groundwater (MW-27) at a concentration of 6.48 µg/L.

No constituents were detected above screening levels in bedrock monitoring wells in the Shallow Bedrock Zone.

3.6 Sparging System Operating Efficiency and Performance Data

Between September 26, 2017, and December 21, 2017, the sparging system operated a total of approximately 2,208 hours, with an operating efficiency of 100 percent (operational “up” time vs. available time in the reporting period). Since two compressors were operating during this timeframe, system maintenance activities could be conducted without resulting in downtime for the system. The horizontal wells were briefly turned off between September 26, 2017, and October 9, 2016, to allow for well installation and repair activities in the Hayfield Zone. In December 2017, sparging flow rates in the stream aerators, horizontal wells, and vertical wells were at 82 percent, 77 percent, and 66 percent of design flow capacity, respectively.

4.0 Conclusions

The following conclusions are based on the site work performed between October 1, 2017, and December 31, 2017:

- Product thickness values have declined in both recovery and nonrecovery features across the site. The number of locations with product thickness greater than 0.5 foot has stabilized from July 2017 to December 2017, with a maximum of 7 locations, and was markedly fewer than the number observed in April 2017 (21 locations). The locations that have product thickness greater than 0.5 foot are not located near any surface water bodies at the site.
- Although product evacuation events were performed weekly between October and December 2017, the volume of product recovered was too low to be measured. To date (December 9, 2014, through the end of December 2017), approximately 222,974 gallons (5,309 barrels) of product have been recovered and removed from the site.
- Two surface water sampling events were performed during this quarter. Anomalous detections at sampling points SW-01 and SW-02 are under investigation. Concentrations at SW-12, near a known seep, are on a decreasing trend.
- The average DO concentration since the previous reporting period remained stable in residuum wells and increased in bedrock wells. Sparging will continue to be increased to design flow rates during the next quarter to meet the increasing biomass oxygen demand.
- Groundwater monitoring results this quarter indicate that there are significant decreases in dissolved concentrations of hydrocarbons in the BCPZ, CCPZ, and Hayfield Zone, and stable trends in the Shallow Bedrock Zone, in bedrock wells, and in other locations outside the influence of the sparging system.
- During this reporting period, the sparging system had an operating efficiency of 100 percent. Downtime during this period was due to scheduled O&M activities and no flow to HAS-02 due to a stuck valve. Operating flows in the stream aerators, horizontal wells, and vertical wells were at 82 percent, 77 percent, and 66 percent of design flow capacity, respectively.

5.0 Future Activities

This section describes future activities planned for the site.

5.1 Groundwater and Surface Water Monitoring

- Continue monthly gauging and sampling of monitoring wells and surface water sampling locations in accordance with the CAP Addendum, Revision 2 (CH2M, 2017c) submitted to SCDHEC on October 12, 2017.
- Continue routine visual inspection of Brown's Creek and Cupboard Creek as outlined in the CAP Addendum, Revision 2 (CH2M, 2017c).
- Install additional monitoring wells to expand the monitoring network north of MW-30 and upgradient of MW-38.
- Abandon 1-inch-diameter wells (piezometers) because the existing 2-inch monitoring well network is now sufficient for groundwater elevation and product thickness measurements. The piezometers are now redundant and cannot be used for product removal.

5.2 Product Recovery

- Replace vacuum truck operations at Lewis Drive with product-skimming canisters and petroleum-absorbent socks. This will allow more accurate tracking of free product recovered by wells.

5.3 System O&M

- Continue routine system O&M activities for the sparging system as described in the CAP Addendum, Revision 2 (CH2M, 2017c).
- Continue sparging in the BCPZ and CCPZ. Increase flows in each area up to the design flow rate of 15 scfm per vertical well according to the Sparging Operating Limits letter submitted to SCDHEC on July 26, 2017 (CH2M, 2017b).
- Continue sparging in the horizontal wells in the Hayfield Zone. Increase flows in each well up to the maximum design flow rate of 0.75 scfm/ft of screen.
- Continue operating the stream diffusion aerators and increase flows up to the design flow rate of 15 scfm in each, according to the Sparging Operating Limits letter (CH2M, 2017b).
- Implement the bedrock sparging pilot study.

6.0 References

CH2M HILL (CH2M). 2016. *Corrective Action Plan, Lewis Drive Release Site, Belton, South Carolina. Site ID Number 18693 ("Kinder Morgan Belton Pipeline Release").* September 1.

CH2M HILL (CH2M). 2017a. *Corrective Action Plan Addendum, Revision 1, Lewis Drive Remediation Site, Belton, South Carolina. Site ID Number 18693 ("Kinder Morgan Belton Pipeline Release").* May 25.

CH2M HILL (CH2M). 2017b. *Sparging Operating Limits, Lewis Drive Remediation Site, Belton, South Carolina. Site ID Number 18693 ("Kinder Morgan Belton Pipeline Release").* July 26.

CH2M HILL (CH2M). 2017c. *Corrective Action Plan Addendum, Revision 2, Lewis Drive Remediation Site, Belton, South Carolina. Site ID Number 18693 ("Kinder Morgan Belton Pipeline Release").* October 12.

CH2M HILL (CH2M). 2017d. *Request for Well Permit to Install Additional Monitoring Wells, Lewis Drive Remediation Site, Belton, South Carolina. Site ID Number 18693 ("Kinder Morgan Belton Pipeline Release").* May 8.

CH2M HILL (CH2M). 2017e. *Quality Assurance Project Plan, Revision 3*. Addendum to the SCDHEC UST Programmatic *Quality Assurance Program Plan* for Plantation Pipe Line Company/Site ID No. 18693. May 24.

CH2M HILL (CH2M). 2018. *Response to Comments in SCDHEC Letter titled "QAPP Revision, Monitoring Well Installation and Well Log Information, Receptor Survey, Plume Definition Plan, and Bedrock Plan Request" dated December 14, 2017*. February 9.

South Carolina Underground Storage Tank Management Division. 2016. *Programmatic Quality Assurance Program Plan, Revision 3.1.* February.

South Carolina Department of Health and Environmental Control (SCDHEC). 2014. *R. 61-68, Water Classifications & Standards*. June 27.

South Carolina Department of Health and Environmental Control (SCDHEC). 2016. *R. 61-71, Well Standards*. May 27.

If you have any questions or concerns, please call me at 919-760-1777, Mr. Scott Powell/CH2M at 678-530-4457, or Mr. Jerry Aycock/Plantation at 770-751-4165.

Regards,
CH2M HILL Engineers, Inc.

William M. Waldron, P.E.
Program Manager

I affirm that this report was prepared under my direct supervision.

Jonathan Grimes, P.G.
South Carolina Registered Professional Geologist #2235

27 Feb 18
Date

c: Jerry Aycock, Plantation (Digital, Jerry_Aycock@kindermorgan.com)
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Richard Morton, Esq., Womble Carlyle Sandridge & Rice, PLLC (Digital, rmorton@wcsr.com)
File

Attachments:

Table 1 – Field Observation Log
Table 2 – Analytical Results for Surface Water
Table 3 – Groundwater Elevation and Product Thickness Data
Table 4 – Dissolved Oxygen Results for Groundwater
Table 5 – Analytical Results for Groundwater
Table 6 – Cumulative Product Shipped from the Site
Table 7 – Stream Gauge Construction Information
Table 8 – Well Construction Information

Figure 1 – Site Overview
Figure 2A – Residuum Groundwater and Surface Water Elevation Map
Figure 2B – Bedrock Groundwater Elevation Map
Figure 3 – Product Thickness Map
Figure 4A – Groundwater Analytical Results in Residuum Aquifer, December 2017
Figure 4B – Groundwater Analytical Results in Bedrock Aquifer, December 2017

Attachment A – Surface Water Analytical Laboratory Reports
Attachment B – Groundwater Analytical Laboratory Reports
Attachment C – Operation and Maintenance Logs
Attachment D – Soil Boring Logs, Well Completion Diagrams, and Form 1903s
Attachment E – Bills of Lading
Attachment F – Surface Water Analytical Trends
Attachment G – Product Thickness Trends

Tables

Table 1. Field Observation Log

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Date	**Inspect Wetlands South of Calhoun Road** (Any odor, sheen or distressed vegetation? Describe.)	**Inspect Brown's Creek Upstream and Downstream of the Culvert Under Lewis Drive** (Any odor, sheen, or distressed vegetation? Describe.)
10/6/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
10/12/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
10/20-21/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
10/26/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
11/3/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
11/10/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
11/12&17/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
11/22/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
12/1/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
12/7/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
12/21/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
12/27/2017	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, hydrocarbon sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.

Note:

ID = identification

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-RELEASE	SW-RELEASE	1/20/2015	µg/L	**330**	**490**	**2,400**	**2,100**	**940**	**140**	**5.7 J**
SW-01	SW01-121114	12/11/2014	µg/L	0.5 U	1 U	1 U	2 U	1 U	1 U	1 U
	SW01-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-033115	3/31/2015	µg/L	5 U[c]	5 U	**17.6**	10 U	5 U	5 U	NA
	SW01-042215	4/22/2015	µg/L	5 U[c]	5 U	**14.9**	10 U	5 U	5 U	NA
	SW01-050715	5/7/2015	µg/L	5 U[c]	5 U	**7.0**	10 U	5 U	5 U	NA
	SW01-051915	5/19/2015	µg/L	5 U[c]	5 U	**8.8**	**10.6**	**6.4**	5 U	NA
	SW01-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-092415	9/24/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW01-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW01-112415	11/24/2015	µg/L	**7.8**	**1.5**	**13.0**	**9.3**	**4.6**	1 U	NA
	SW01-122215	12/22/2015	µg/L	**4.6**	1 U	**8.8**	**5.5**	**3.1**	1 U	NA
	SW01-012516	1/25/2016	µg/L	**17.6**	**2.3**	**36.0**	**11.3**	**6.3**	1 U	NA
	SW01-021816	2/18/2016	µg/L	**23.4**	**3.0**	**55.6**	**15.0**	**9.1**	1 U	NA
	SW01-031616	3/16/2016	µg/L	**20.1**	**2.4**	**42.3**	**13.3**	**7.6**	1 U	NA
	SW01-042716	4/27/2016	µg/L	**20.8**	1 U	**30.6**	**2.9**	**2.0**	1 U	NA
	SW01-050916	5/9/2016	µg/L	**16.5**	**1.4**	**16.3**	**7.0**	**4.8**	1 U	NA
	SW01-062716	6/27/2016	µg/L	**9**	1 U	**3.3**	2 U	1 U	1 U	NA
	SW01-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW01-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW01-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW01-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW01-112816	11/28/2016	µg/L	**5.0**	1 U	**10.4**	**4.9**	**8.3**	1 U	NA
	SW01-122916	12/29/2016	µg/L	**12.6**	1 U	**22.1**	**11.2**	**13.5**	1 U	NA
	SW01-012017	1/20/2017	µg/L	**1.0**	1 U	**2.3**	2 U	**3.5**	1 U	NA
	SW01-022817	2/28/2017	µg/L	**18.5**	**1.93**	**37.0**	**13.8**	**10.2**	5 U	NA
	SW01-031517	3/15/2017	µg/L	**3.02**	1 U	**5.13**	**2.16**	**1.74**	5 U	NA
	SW01-032117	3/21/2017	µg/L	1 U	1 U	**1.57**	2 U	1 U	5 U	NA
	SW01-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW01-040517	4/5/2017	µg/L	1 U	1 U	**2.25**	2 U	1 U	5 U	NA
	SW01-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW01-061317	6/13/2017	µg/L	1 U	1 U	**1.90**	2 U	1 U	5 U	NA
	SW01-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW01-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW01-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW01-120517	12/5/2017	µg/L	**1.5**	1 U	**1.15**	2 U	**2.14**	5 U	NA
	SW01-121417	12/14/2017	µg/L	**4.52**	1 U	**4.52**	**3.48**	**3.2**	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-02	SW02-121114	12/11/2014	µg/L	0.5 U	1 U	1 U	2 U	1 U	1 U	1 U
	SW02-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-033115	3/31/2015	µg/L	5 U[c]	5 U	**6.0**	10 U	5 U	5 U	NA
	SW02-042215	4/22/2015	µg/L	5 U[c]	5 U	**13.0**	10 U	5 U	5 U	NA
	SW02-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-092415	9/24/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW02-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW02-112415	11/24/2015	µg/L	**6**	**1.3**	**10.0**	**7.8**	**4.0**	1 U	NA
	SW02-122215	12/22/2015	µg/L	**4.1**	1 U	**7.6**	**5.1**	**3.1**	1 U	NA
	SW02-012516	1/25/2016	µg/L	**12**	**1.5**	**25.0**	**8.4**	**4.6**	1 U	NA
	SW02-021816	2/18/2016	µg/L	**15.5**	**1.8**	**35.3**	**10.1**	**5.9**	1 U	NA
	SW02-031616	3/16/2016	µg/L	**8**	**1.0**	**17.5**	**5.8**	**3.9**	1 U	NA
	SW02-042716	4/27/2016	µg/L	**5.6**	1 U	**7.1**	2 U	1 U	1 U	NA
	SW02-050916	5/9/2016	µg/L	**7.1**	1 U	**4.5**	**2.2**	**1.6**	1 U	NA
	SW02-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW02-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW02-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW02-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW02-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW02-112816	11/28/2016	µg/L	**5.4**	1 U	**1.6**	**2.6**	**4.8**	1 U	NA
	SW02-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	**1.4**	1 U	NA
	SW02-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW02-022817	2/28/2017	µg/L	**10.7**	1 U	**11.0**	**4.14**	**4.23**	5 U	NA
	SW02-031517	3/15/2017	µg/L	**11.4**	1 U	**8.6**	**4.45**	**3.6**	5 U	NA
	SW02-032117	3/21/2017	µg/L	**8.42**	1 U	**2.45**	**2.48**	**2.68**	5 U	NA
	SW02-033017	3/30/2017	µg/L	**2.18**	1 U	1 U	2 U	1 U	5 U	NA
	SW02-040517	4/5/2017	µg/L	**2.87**	1 U	**1.12**	2 U	**1.14**	5 U	NA
	SW02-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW02-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW02-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW02-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW02-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW02-120517	12/5/2017	µg/L	**26.6**	**1.8**	**8.39**	**10.2**	**7.17**	5 U	NA
	SW02-121417	12/14/2017	µg/L	**21.1**	**1.53**	**9.40**	**9.74**	**7.32**	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-03	SW-UPGRADIENT	1/20/2015	µg/L	0.5 U	1 U	**0.23 J**	2 U	1 U	1 U	1 U
	SW03-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW03-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5	NA
	--	9/24/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW03-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-112415	11/24/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-122215	12/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-012516	1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-021816	2/18/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	--	8/19/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW03-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW03-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW03-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-04	SW-DOWNGRADIENT	1/20/2015	µg/L	**95**	**27**	**310**	**110**	**63**	**94**	**2.7**
	SW04-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-092415	9/24/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW04-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-112415	11/24/2015	µg/L	**1.7**	1 U	**2.7**	**2.9**	**1.6**	1 U	NA
	SW04-122215	12/22/2015	µg/L	**3.3**	1 U	**7.3**	**5.2**	**2.7**	1 U	NA
	SW04-012516	1/25/2016	µg/L	**6.9**	1 U	**14.0**	**4.9**	**2.8**	1 U	NA
	SW04-021816	2/18/2016	µg/L	**10.9**	**1.1**	**25.4**	**7.0**	**4.3**	1 U	NA
	SW04-031616	3/16/2016	µg/L	1 U	1 U	**2.0**	2 U	**1.8**	1 U	NA
	SW04-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-062716	6/27/2016	µg/L	1 U	1 U	**1.1**	2 U	1 U	1 U	NA
	SW04-072816	7/28/2016	µg/L	1 U	1 U	**23.5**	2 U	1 U	1 U	NA
	SW04-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW04-022817	2/28/2017	µg/L	1 U	1 U	**1.13**	2 U	1 U	5 U	NA
	SW04-031517	3/15/2017	µg/L	1 U	1 U	**2.90**	2 U	1 U	5 U	NA
	SW04-032117	3/21/2017	µg/L	1 U	1 U	**3.28**	2 U	1 U	5 U	NA
	SW04-033017	3/30/2017	µg/L	1 U	1 U	**6.15**	2 U	1 U	5 U	NA
	SW04-040517	4/5/2017	µg/L	1 U	1 U	**9.47**	2 U	1 U	5 U	NA
	SW04-050417	5/4/2017	µg/L	1 U	1 U	**13.8**	2 U	1 U	5 U	NA
	SW04-061317	6/13/2017	µg/L	1 U	1 U	**1.37**	2 U	1 U	5 U	NA
	SW04-071817	7/18/2017	µg/L	1 U	1 U	**1.92**	2 U	1 U	5 U	NA
	SW04-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW04-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW04-120517	12/5/2017	µg/L	1 U	1 U	**5.53**	2 U	1 U	5 U	NA
	SW04-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-05	SW05-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW05-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW05-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW05-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW05-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW05-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW05-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	--	5/19/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/3/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/18/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/15/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	8/13/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/24/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/22/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW05-112415	11/24/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW05-122215	12/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW05-012516	1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW05-021816	2/18/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW05-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	--	4/27/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	5/9/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/27/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	8/19/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/29/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/31/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/29/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	1/20/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	2/28/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	3/15/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	3/21/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	3/30/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	4/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	5/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/13/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/18/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	8/2/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/14/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-06	SW06-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW06-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW06-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW06-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	--	3/31/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW06-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	--	5/7/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	5/19/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/3/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/18/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/15/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	8/13/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/24/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/22/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/24/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW06-122215	12/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW06-012516	1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW06-021816	2/18/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	--	3/16/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	4/27/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	5/9/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/27/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	8/19/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/29/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/31/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/29/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	1/20/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	2/28/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	3/15/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	3/21/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	3/30/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	4/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	5/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/13/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/18/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	8/2/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/14/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-07	SW07-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW07-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	--	8/13/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/24/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW07-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW07-112415	11/24/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW07-122215	12/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW07-012516	1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW07-021816	2/18/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW07-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW07-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW07-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	--	6/27/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	8/19/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/29/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/31/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/29/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	1/20/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	2/28/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW07-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	--	8/2/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW07-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-08	SW08-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-092415	9/24/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW08-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-112415	11/24/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-122215	12/22/2015	µg/L	**1.6**	1 U	**3.8**	**2.5**	**1.6**	1 U	NA
	SW08-012516	1/25/2016	µg/L	**2.4**	1 U	**5.6**	**2**	**1.3**	1 U	NA
	SW08-021816	2/18/2016	µg/L	**2.9**	1 U	**7.6**	**2.3**	**1.5**	1 U	NA
	SW08-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW08-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW08-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-09	SW09-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-092415	9/24/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW09-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-112415	11/24/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-122215	12/22/2015	µg/L	**2.1**	1 U	**4.8**	**3.3**	**2.1**	1 U	NA
	SW09-012516	1/25/2016	µg/L	**3.3**	1 U	**7.1**	**2.4**	**1.5**	1 U	NA
	SW09-021816	2/18/2016	µg/L	**2.2**	1 U	**5.9**	2 U	**1.2**	1 U	NA
	SW09-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW09-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

				Analyte						
Location	**Sample ID**	**Date Collected**	**Units**	**Benzene**	**Ethylbenzene**	**Toluene**	**m&p-Xylene**	**o-Xylene**	**Naphthalene**	**MTBE**
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-10	SW10-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-092415	9/24/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW10-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-112415	11/24/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-122215	12/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-012516	1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-021816	2/18/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW10-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW-10-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW-10-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW-10-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-11	SW11-022515	2/25/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-030215	3/2/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-031115	3/11/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-031815	3/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-033115	3/31/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-042215	4/22/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-050715	5/7/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-051915	5/19/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-060315	6/3/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-061815	6/18/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-071515	7/15/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-081315	8/13/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-092415	9/24/2015	µg/L	5 U[c]	5 U	5 U	10 U	5 U	5 U	NA
	SW11-102215	10/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-112415	11/24/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-122215	12/22/2015	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-012516	1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-021816	2/18/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW11-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW-11-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW-11-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW-11-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
SW-12	SW12-081916	8/19/2016	µg/L	**6,430**	**764**	**15,400**	**3,360**	**1,730**	**128**	NA
	SW12-092916	9/29/2016	µg/L	**7,850**	**1,030**	**19,000**	**3,910**	**1,940**	**143**	NA
	SW12-103116	10/31/2016	µg/L	**165**	**17.7**	**302**	**103**	**58.2**	**4.7**	NA
	SW12-112816	11/28/2016	µg/L	**486**	**59.6**	**976**	**351**	**181**	**14.2**	NA
	SW12-122916	12/29/2016	µg/L	**707**	**97.3**	**1,790**	**408**	**213**	**16.8**	NA
	SW12-012017	1/20/2017	µg/L	**212**	**19.8**	**396**	**104**	**58**	**3.8**	NA
	SW12-022817	2/28/2017	µg/L	**26.1**	**4.04**	**62.3**	**18.0**	**9.73**	5 U	NA
	SW12-031517	3/15/2017	µg/L	**125**	**15.3**	**185**	**67.9**	**35.5**	5 U	NA
	SW12-032117	3/21/2017	µg/L	**134**	**12.1**	**45.0**	**60.8**	**33.6**	5 U	NA
	SW12-033017	3/30/2017	µg/L	**48.5**	**5.69**	**86.3**	**27.7**	**15.8**	5 U	NA
	SW12-040517	4/5/2017	µg/L	**67.1**	**9.24**	**127.0**	**43.6**	**23.7**	5 U	NA
	SW12-050417	5/4/2017	µg/L	**52.8**	**7.96**	**91.7**	**42**	**23.2**	5 U	NA
	SW12-061317	6/13/2017	µg/L	**102**	**16.6**	**166**	**85.1**	**46.2**	5 U	NA
	SW12-071817	7/18/2017	µg/L	**65**	**5.8**	**116**	**43.3**	**24.8**	5 U	NA
	SW12-080217	8/2/2017	µg/L	**125**	**14.7**	**204**	**102**	**67**	5 U	NA
	SW12-090517	9/5/2017	µg/L	**46.7**	**4.72**	**72**	**39**	**26.2**	5 U	NA
	SW12-120517	12/5/2017	µg/L	**16.6**	**2.91**	**12.6**	**20.1**	**13.3**	5 U	NA
	SW12-121417	12/14/2017	µg/L	**9.19**	**2.66**	**8.26**	**18**	**12.1**	5 U	NA
SW-13	SW13-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW13-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW13-103116	10/31/2016	µg/L	1 U	1 U	**2.0**	2 U	1 U	1 U	NA
	SW13-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW13-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW13-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	SW13-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-040517	4/5/2017	µg/L	1 U	1 U	**1.21**	2 U	1 U	5 U	NA
	SW13-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
SW-14	SW14-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW14-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW14-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW14-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	--	12/14/2017	--	NS-DW	NS-DW	NS-DW	NS-DW	NS-DW	NS-DW	NS-DW

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

				Analyte						
Location	**Sample ID**	**Date Collected**	**Units**	**Benzene**	**Ethylbenzene**	**Toluene**	**m&p-Xylene**	**o-Xylene**	**Naphthalene**	**MTBE**
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
FP-01	FP01-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP01-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP01-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-01-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
FP-02	FP02-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-081916	8/19/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP02-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP02-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-040517	4/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-02-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Table 2. Analytical Results for Surface Water

Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte						
				Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Naphthalene	MTBE
		Screening Value:	**µg/L**	**2.2** [a]	**530** [a]	**1,000** [a]	**NA** [b]	**NA** [b]	**NA** [b]	**NA** [b]
FP-03	FP03-031616	3/16/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-042716	4/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-050916	5/9/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-062716	6/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-072816	7/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	--	8/19/2016	--	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS
	FP03-092916	9/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-103116	10/31/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-112816	11/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-122916	12/29/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-012017	1/20/2017	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	NA
	FP03-022817	2/28/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP03-031517	3/15/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-032117	3/21/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-033017	3/30/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	--	4/5/2017	--	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS
	FP-03-050417	5/4/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-061317	6/13/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-071817	7/18/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-080217	8/2/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-090517	9/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-120517	12/5/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP-03-121417	12/14/2017	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA

Notes:

[a] South Carolina Department of Health and Environmental Control (SC DHEC) R.61-68, Water Classifications and Standards, Human Health for consumption of water and organism, June 27, 2014.

[b] Screening levels for these compounds are not specified in SC DHEC R. 61-68.

[c] The analyte was analyzed for, but was not detected above the laboratory reporting/quantitation limit. However, the laboratory reporting/quantitation limit is above the screening criteria. The actual absence or presence of this analyte between the screening criteria and the laboratory reporting/quantitation limit can not be determined.

Samples analyzed by EPA Methods SW 8260B.

Bold indicates the analyte was detected above the method detection limit.

Gray shading indicates the analyte exceeded screening value.

J = estimated

U = analyte was not detected above the reported sample quantitation limit

µg/L = microgram(s) per liter

MTBE = methyl tertiary butyl ether

NS-HS = sample not collected due to health and safety concerns

FP = free product

NA = not applicable

NS-IW = sample not collected due to insufficient volume of water in well

ID = identification

NS-DW = sample not collected due to locations being in a different watershed

SW = surface water

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-01					853.07			-	-	-
	12/27/2017	-	8.01	-		845.06	-	-	-	-
	12/4/2017	-	9.85	-		843.22	-	-	-	-
	11/12/2017	-	7.75	-		845.32	-	-	-	-
	11/7/2017	-	6.63	-		846.44	-	-	-	-
	10/21/2017	-	10.60	-		842.47	-	-	-	-
	10/3/2017	-	9.79	-		843.28	-	-	-	-
MW-01B					852.99			-	-	-
	12/27/2017	-	10.45	-		842.54	-	-	-	-
	12/4/2017	-	10.24	-		842.75	-	-	-	-
	11/12/2017	-	9.47	-		843.52	-	-	-	-
	11/7/2017	-	9.55	-		843.44	-	-	-	-
	10/21/2017	-	11.07	-		841.92	-	-	-	-
	10/3/2017	-	10.45	-		842.54	-	-	-	-
MW-02					841.04			-	-	-
	12/27/2017	-	9.50	-		831.54	-	-	-	-
	12/4/2017	-	2.54	-		838.50	-	-	-	-
	11/12/2017	-	3.47	-		837.57	-	-	-	-
	11/7/2017	-	4.20	-		836.84	-	-	-	-
	10/21/2017	-	6.48	-		834.56	-	-	-	-
	10/3/2017	-	16.03	-		825.01	-	-	-	-
MW-02B					841.19			-	-	-
	12/27/2017	-	16.41	-		824.78	-	-	-	-
	12/4/2017	-	24.56	-		816.63	-	-	-	-
	11/12/2017	-	23.45	-		817.74	-	-	-	-
	11/10/2017	-	7.03	-		834.16	-	-	-	-
	11/7/2017	-	13.41	-		827.78	-	-	-	-
	10/21/2017	-	27.50	-		813.69	-	-	-	-
	10/3/2017	-	21.87	-		819.32	-	-	-	-
MW-03					838.36			-	-	-
	12/27/2017	-	14.80	-		823.56	-	-	-	-
	12/4/2017	-	18.00	-		820.36	-	-	-	-
	11/12/2017	-	NM	-		-	-	-	-	-
	11/7/2017	-	1.50	-		836.86	-	-	-	-
	10/21/2017	-	9.00	-		829.36	-	-	-	-
	10/3/2017	-	19.87	-		818.49	-	-	-	-
MW-04					844.42			-	-	-
	12/27/2017	-	10.20	-		834.22	-	-	-	-
	12/4/2017	-	10.07	-		834.35	-	-	-	-
	11/12/2017	-	10.68	-		833.74	-	-	-	-
	11/7/2017	-	11.03	-		833.39	-	-	-	-
	10/21/2017	-	12.45	-		831.97	-	-	-	-
	10/3/2017	-	14.78	-		829.64	-	-	-	-
MW-05					851.11			-	-	-
	12/27/2017	-	16.40	-		834.71	-	-	-	-
	12/4/2017	-	16.55	-		834.56	-	-	-	-
	11/12/2017	-	16.95	-		834.16	-	-	-	-
	11/7/2017	-	17.18	-		833.93	-	-	-	-
	10/21/2017	-	17.55	-		833.56	-	-	-	-
	10/3/2017	-	17.03	-		834.08	-	-	-	-
MW-06					852.92			-	-	-
	12/27/2017	-	15.30	-		837.62	-	-	-	-
	12/4/2017	-	15.45	-		837.47	-	-	-	-
	11/12/2017	-	15.90	-		837.02	-	-	-	-
	10/21/2017	-	16.40	-		836.52	-	-	-	-
MW-06B					852.57			-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-06B (cont'd)	12/27/2017	-	15.13	-		837.44	-	-	-	-
	12/4/2017	-	16.14	-		836.43	-	-	-	-
	11/12/2017	-	15.57	-		837.00	-	-	-	-
	11/10/2017	-	15.59	-		836.98	-	-	-	-
	10/21/2017	-	22.16	-		830.41	-	-	-	-
MW-07					853.02			-	-	-
	12/27/2017	-	13.17	-		839.85	-	-	-	-
	12/4/2017	-	13.21	-		839.81	-	-	-	-
	11/12/2017	-	13.20	-		839.82	-	-	-	-
	11/7/2017	-	13.20	-		839.82	-	-	-	-
	10/21/2017	-	13.20	-		839.82	-	-	-	-
	10/3/2017	-	13.20	-		839.82	-	-	-	-
MW-08					844.72			-	-	-
	12/27/2017	11.60	11.61	0.01		833.11	833.12	-	-	-
	12/4/2017	-	10.47	-		834.25	-	-	-	-
	11/12/2017	-	10.25	-		834.47	-	-	-	-
	11/7/2017	-	10.38	-		834.34	-	-	-	-
	10/21/2017	-	14.35	-		830.37	-	-	-	-
	10/3/2017	-	16.86	-		827.86	-	-	-	-
MW-09					843.63			-	-	-
	12/27/2017	-	6.20	-		837.43	-	-	-	-
	12/4/2017	-	3.05	-		840.58	-	-	-	-
	11/12/2017	-	4.57	-		839.06	-	-	-	-
	11/7/2017	-	5.56	-		838.07	-	-	-	-
	10/21/2017	-	6.82	-		836.81	-	-	-	-
	10/3/2017	-	19.78	-		823.85	-	-	-	-
MW-09B					843.92			-	-	-
	12/27/2017	-	17.40	-		826.52	-	-	-	-
	12/4/2017	-	9.15	-		834.77	-	-	-	-
	11/12/2017	-	32.08	-		811.84	-	-	-	-
	11/10/2017	-	40.58	-		803.34	-	-	-	-
MW-10					845.41			-	-	-
	12/27/2017	-	13.71	-		831.70	-	-	-	-
	12/4/2017	-	10.85	-		834.56	-	-	-	-
	11/12/2017	-	11.95	-		833.46	-	-	-	-
	11/7/2017	-	12.64	-		832.77	-	-	-	-
	10/21/2017	-	15.60	-		829.81	-	-	-	-
	10/3/2017	-	17.33	-		828.08	-	-	-	-
MW-11					855.63			-	-	-
	12/27/2017	30.02	30.45	0.43		825.18	825.49	-	-	-
	12/4/2017	29.72	29.86	0.14		825.77	825.87	-	-	-
	11/12/2017	30.00	30.35	0.35		825.28	825.53	-	-	-
	11/7/2017	30.26	30.52	0.26		825.11	825.30	-	-	-
	10/21/2017	30.87	31.20	0.33		824.43	824.67	-	-	-
	10/3/2017	-	30.37	-		825.26	-	-	-	-
MW-12					834.53			-	-	-
	12/27/2017	-	14.53	-		820.00	-	-	-	-
	12/4/2017	-	15.55	-		818.98	-	-	-	-
	11/12/2017	-	14.45	-		820.08	-	-	-	-
	11/7/2017	-	14.00	-		820.53	-	-	-	-
	10/21/2017	-	15.06	-		819.47	-	-	-	-
	10/3/2017	-	14.61	-		819.92	-	-	-	-
MW-12B					834.98			-	-	-
	12/27/2017	-	15.04	-		819.94	-	-	-	-
	12/4/2017	-	16.12	-		818.86	-	-	-	-
	11/12/2017	-	14.91	-		820.07	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-12B (cont'd)	11/7/2017	-	14.25	-		820.73	-	-	-	-
	10/21/2017	-	15.44	-		819.54	-	-	-	-
	10/3/2017	-	14.93	-		820.05	-	-	-	-
MW-13					848.84			-	-	-
	12/27/2017	-	21.85	-		826.99	-	-	-	-
	12/4/2017	-	21.87	-		826.97	-	-	-	-
	11/12/2017	-	21.85	-		826.99	-	-	-	-
	10/21/2017	-	21.84	-		827.00	-	-	-	-
MW-13B					849.82			-	-	-
	12/27/2017	-	23.41	-		826.41	-	-	-	-
	12/4/2017	-	22.66	-		827.16	-	-	-	-
	11/12/2017	-	22.83	-		826.99	-	-	-	-
	11/7/2017	-	23.08	-		826.74	-	-	-	-
	10/21/2017	-	23.63	-		826.19	-	-	-	-
MW-14					838.70			-	-	-
	12/27/2017	-	17.50	-		821.20	-	-	-	-
	12/4/2017	-	17.62	-		821.08	-	-	-	-
	11/12/2017	-	17.80	-		820.90	-	-	-	-
	10/21/2017	-	18.62	-		820.08	-	-	-	-
MW-14B					840.20			-	-	-
	12/27/2017	-	19.06	-		821.14	-	-	-	-
	12/4/2017	-	19.22	-		820.98	-	-	-	-
	11/12/2017	-	19.36	-		820.84	-	-	-	-
	10/21/2017	-	19.35	-		820.85	-	-	-	-
MW-15					831.03			-	-	-
	12/27/2017	14.01	14.02	0.01		817.01	817.02	-	-	-
	12/4/2017	-	13.66	-		817.37	-	-	-	-
	11/12/2017	-	14.75	-		816.28	-	-	-	-
	11/7/2017	-	13.32	-		817.71	-	-	-	-
	10/21/2017	14.16	14.17	0.01		816.86	816.87	-	-	-
	10/3/2017	-	11.65	-		819.38	-	-	-	-
MW-15B					831.29			-	-	-
	12/27/2017	-	15.90	-		815.39	-	-	-	-
	12/4/2017	-	16.25	-		815.04	-	-	-	-
	11/12/2017	-	15.91	-		815.38	-	-	-	-
	11/7/2017	-	16.08	-		815.21	-	-	-	-
	10/21/2017	-	16.63	-		814.66	-	-	-	-
	10/3/2017	-	16.65	-		814.64	-	-	-	-
MW-16					847.67			-	-	-
	12/27/2017	-	10.60	-		837.07	-	-	-	-
	12/4/2017	-	7.00	-		840.67	-	-	-	-
	11/12/2017	-	10.00	-		837.67	-	-	-	-
	11/7/2017	-	11.00	-		836.67	-	-	-	-
	10/21/2017	-	11.10	-		836.57	-	-	-	-
	10/3/2017	15.00	15.21	0.21		832.46	832.61	-	-	-
MW-17					855.35			-	-	-
	12/27/2017	-	16.85	-		838.50	-	-	-	-
	12/4/2017	-	10.85	-		844.50	-	-	-	-
	11/12/2017	-	10.85	-		844.50	-	-	-	-
	10/21/2017	-	10.83	-		844.52	-	-	-	-
MW-17B					855.37			-	-	-
	12/27/2017	-	16.90	-		838.47	-	-	-	-
	12/4/2017	-	17.05	-		838.32	-	-	-	-
	11/12/2017	-	17.20	-		838.17	-	-	-	-
	10/21/2017	-	17.60	-		837.77	-	-	-	-
MW-18					846.89			-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-18 (cont'd)	12/27/2017	-	12.60	-		834.29	-	-	-	-
	12/4/2017	11.61	11.64	0.03		835.25	835.27	-	-	-
	11/12/2017	-	12.00	-		834.89	-	-	-	-
	11/7/2017	12.35	12.37	0.02		834.52	834.53	-	-	-
	10/21/2017	15.04	15.10	0.06		831.79	831.83	-	-	-
	10/3/2017	18.02	18.47	0.45		828.42	828.74	-	-	-
MW-19					853.94			-	-	-
	12/27/2017	-	11.75	-		842.19	-	-	-	-
	12/4/2017	-	11.77	-		842.17	-	-	-	-
	11/12/2017	-	11.74	-		842.20	-	-	-	-
	11/7/2017	-	11.80	-		842.14	-	-	-	-
	10/21/2017	-	11.76	-		842.18	-	-	-	-
	10/3/2017	-	11.78	-		842.16	-	-	-	-
MW-20					852.89			-	-	-
	12/27/2017	13.15	13.50	0.35		839.39	839.64	-	-	-
	12/4/2017	13.30	14.64	**1.34**		838.25	839.22	-	-	-
	11/12/2017	13.15	13.40	0.25		839.49	839.67	-	-	-
	11/7/2017	13.12	13.61	0.49		839.28	839.63	-	-	-
	10/21/2017	13.60	14.07	0.47		838.82	839.16	-	-	-
	10/3/2017	13.25	13.79	**0.54**		839.10	839.49	-	-	-
MW-21					855.77			-	-	-
	12/27/2017	-	17.17	-		838.60	-	-	-	-
	12/4/2017	-	17.42	-		838.35	-	-	-	-
	11/12/2017	-	17.43	-		838.34	-	-	-	-
	10/21/2017	-	17.95	-		837.82	-	-	-	-
MW-22					854.60			-	-	-
	12/27/2017	-	DRY	-		-	-	-	-	-
	12/4/2017	-	9.99	-		844.61	-	-	-	-
	11/12/2017	-	NM	-		-	-	-	-	-
	11/7/2017	-	9.96	-		844.64	-	-	-	-
	10/21/2017	-	DRY	-		-	-	-	-	-
	10/3/2017	-	9.94	-		844.66	-	-	-	-
MW-23					849.57			-	-	-
	12/27/2017	-	10.81	-		838.76	-	-	-	-
	12/4/2017	-	11.13	-		838.44	-	-	-	-
	11/12/2017	-	11.02	-		838.55	-	-	-	-
	11/7/2017	-	11.10	-		838.47	-	-	-	-
	10/21/2017	-	11.83	-		837.74	-	-	-	-
	10/3/2017	-	11.52	-		838.05	-	-	-	-
MW-23B					849.69			-	-	-
	12/27/2017	-	11.45	-		838.24	-	-	-	-
	12/4/2017	-	11.45	-		838.24	-	-	-	-
	11/12/2017	-	11.42	-		838.27	-	-	-	-
	10/21/2017	-	11.45	-		838.24	-	-	-	-
MW-24					817.92			-	-	-
	12/27/2017	-	4.50	-		813.42	-	-	-	-
	12/4/2017	-	4.51	-		813.41	-	-	-	-
	11/17/2017	-	4.52	-		813.40	-	-	-	-
	10/21/2017	-	4.75	-		813.17	-	-	-	-
MW-24B					818.72			-	-	-
	12/27/2017	-	5.58	-		813.14	-	-	-	-
	12/4/2017	-	5.69	-		813.03	-	-	-	-
	11/17/2017	-	5.56	-		813.16	-	-	-	-
	10/21/2017	-	5.85	-		812.87	-	-	-	-
MW-25					826.18			-	-	-
	12/27/2017	-	8.69	-		817.49	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-25 (cont'd)	12/4/2017	-	7.10	-		819.08	-	-	-	-
	11/12/2017	-	8.47	-		817.71	-	-	-	-
	11/7/2017	-	8.35	-		817.83	-	-	-	-
	10/21/2017	-	8.80	-		817.38	-	-	-	-
	10/3/2017	-	8.52	-		817.66	-	-	-	-
MW-25B					823.81			-	-	-
	12/27/2017	-	5.25	-		818.56	-	-	-	-
	12/4/2017	-	5.30	-		818.51	-	-	-	-
	11/12/2017	-	5.26	-		818.55	-	-	-	-
	11/7/2017	-	5.47	-		818.34	-	-	-	-
	10/21/2017	-	5.75	-		818.06	-	-	-	-
	10/3/2017	-	5.83	-		817.98	-	-	-	-
MW-26					847.56			-	-	-
	12/27/2017	-	6.35	-		841.21	-	-	-	-
	12/4/2017	-	6.83	-		840.73	-	-	-	-
	11/12/2017	-	6.65	-		840.91	-	-	-	-
	11/7/2017	-	6.56	-		841.00	-	-	-	-
	10/21/2017	-	8.01	-		839.55	-	-	-	-
	10/3/2017	-	7.71	-		839.85	-	-	-	-
MW-26B					847.81			-	-	-
	12/27/2017	-	9.34	-		838.47	-	-	-	-
	12/4/2017	-	9.17	-		838.64	-	-	-	-
	11/12/2017	-	8.95	-		838.86	-	-	-	-
	10/21/2017	-	9.71	-		838.10	-	-	-	-
MW-27					854.11			-	-	-
	12/27/2017	-	27.40	-		826.71	-	-	-	-
	12/4/2017	-	27.46	-		826.65	-	-	-	-
	11/12/2017	-	27.66	-		826.45	-	-	-	-
	10/21/2017	-	27.95	-		826.16	-	-	-	-
MW-27B					857.14			-	-	-
	12/27/2017	-	30.71	-		826.43	-	-	-	-
	12/4/2017	-	30.70	-		826.44	-	-	-	-
	11/12/2017	-	30.72	-		826.42	-	-	-	-
	10/21/2017	-	30.63	-		826.51	-	-	-	-
MW-28					844.31			-	-	-
	12/27/2017	-	24.55	-		819.76	-	-	-	-
	12/4/2017	-	23.94	-		820.37	-	-	-	-
	11/12/2017	-	24.74	-		819.57	-	-	-	-
	11/7/2017	-	23.78	-		820.53	-	-	-	-
	10/21/2017	-	23.99	-		820.32	-	-	-	-
	10/3/2017	-	23.80	-		820.51	-	-	-	-
MW-29					852.20			-	-	-
	12/27/2017	-	10.06	-		842.14	-	-	-	-
	12/4/2017	-	10.39	-		841.81	-	-	-	-
	11/12/2017	-	NM	-		-	-	-	-	-
	11/7/2017	-	10.06	-		842.14	-	-	-	-
	10/21/2017	-	11.23	-		840.97	-	-	-	-
	10/3/2017	-	10.85	-		841.35	-	-	-	-
MW-30					841.28			-	-	-
	12/27/2017	-	14.55	-		826.73	-	-	-	-
	12/4/2017	-	14.47	-		826.81	-	-	-	-
	11/12/2017	-	14.52	-		826.76	-	-	-	-
	11/7/2017	-	14.60	-		826.68	-	-	-	-
	10/21/2017	-	14.55	-		826.73	-	-	-	-
	10/3/2017	-	14.58	-		826.70	-	-	-	-
MW-31					845.04			-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-31 (cont'd)	12/27/2017	-	22.35	-		822.69	-	-	-	-
	12/4/2017	-	20.05	-		824.99	-	-	-	-
	11/12/2017	-	20.41	-		824.63	-	-	-	-
	11/7/2017	-	20.81	-		824.23	-	-	-	-
	10/21/2017	-	21.73	-		823.31	-	-	-	-
	10/3/2017	-	22.70	-		822.34	-	-	-	-
MW-31B					844.94			-	-	-
	12/27/2017	-	21.10	-		823.84	-	-	-	-
	11/12/2017	-	21.05	-		823.89	-	-	-	-
	10/21/2017	-	22.21	-		822.73	-	-	-	-
MW-32					842.93			-	-	-
	12/27/2017	-	18.85	-		824.08	-	-	-	-
	12/4/2017	-	10.02	-		832.91	-	-	-	-
	11/12/2017	-	10.45	-		832.48	-	-	-	-
	10/21/2017	-	14.27	-		828.66	-	-	-	-
MW-33					849.20			-	-	-
	12/27/2017	-	26.35	-		822.85	-	-	-	-
	11/12/2017	-	26.15	-		823.05	-	-	-	-
	10/21/2017	-	26.80	-		822.40	-	-	-	-
MW-33T					849.11			-	-	-
	12/27/2017	-	27.60	-		821.51	-	-	-	-
	12/4/2017	-	27.12	-		821.99	-	-	-	-
	11/12/2017	-	27.47	-		821.64	-	-	-	-
	10/21/2017	-	27.89	-		821.22	-	-	-	-
MW-34					816.35			-	-	-
	12/27/2017	-	2.43	-		813.92	-	-	-	-
	12/4/2017	-	2.52	-		813.83	-	-	-	-
	11/7/2017	-	2.48	-		813.87	-	-	-	-
	10/21/2017	-	2.62	-		813.73	-	-	-	-
	10/3/2017	-	2.76	-		813.59	-	-	-	-
MW-35					829.40			-	-	-
	12/27/2017	-	8.62	-		820.78	-	-	-	-
	12/4/2017	-	10.41	-		818.99	-	-	-	-
	11/12/2017	-	7.61	-		821.79	-	-	-	-
	11/7/2017	-	8.94	-		820.46	-	-	-	-
	10/21/2017	-	9.98	-		819.42	-	-	-	-
	10/3/2017	-	10.34	-		819.06	-	-	-	-
MW-36					858.47			-	-	-
	12/27/2017	-	19.98	-		838.49	-	-	-	-
	12/4/2017	-	20.14	-		838.33	-	-	-	-
	11/17/2017	-	20.21	-		838.26	-	-	-	-
	10/21/2017	-	20.55	-		837.92	-	-	-	-
MW-36B					858.15			-	-	-
	12/27/2017	-	19.68	-		838.47	-	-	-	-
	12/4/2017	-	20.90	-		837.25	-	-	-	-
	11/17/2017	-	19.92	-		838.23	-	-	-	-
	10/21/2017	-	20.25	-		837.90	-	-	-	-
MW-37					813.92			-	-	-
	12/27/2017	-	3.41	-		810.51	-	-	-	-
	12/4/2017	-	3.47	-		810.45	-	-	-	-
	11/17/2017	-	3.42	-		810.50	-	-	-	-
	10/21/2017	-	3.64	-		810.28	-	-	-	-
MW-38					813.28			-	-	-
	12/27/2017	-	1.91	-		811.37	-	-	-	-
	12/4/2017	-	2.01	-		811.27	-	-	-	-
	11/17/2017	-	1.87	-		811.41	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-38 (cont'd)	11/7/2017	-	1.88	-		811.40	-	-	-	-
	10/21/2017	-	2.19	-		811.09	-	-	-	-
	10/3/2017	-	2.23	-		811.05	-	-	-	-
MW-39					819.90			-	-	-
	12/27/2017	-	5.39	-		814.51	-	-	-	-
	12/4/2017	-	5.72	-		814.18	-	-	-	-
	11/12/2017	-	6.25	-		813.65	-	-	-	-
	11/7/2017	-	4.89	-		815.01	-	-	-	-
	10/21/2017	-	5.46	-		814.44	-	-	-	-
	10/3/2017	-	3.75	-		816.15	-	-	-	-
MW-40					817.79			-	-	-
	12/27/2017	-	2.72	-		815.07	-	-	-	-
	12/4/2017	-	3.43	-		814.36	-	-	-	-
	11/12/2017	-	3.53	-		814.26	-	-	-	-
	11/7/2017	-	2.11	-		815.68	-	-	-	-
	10/21/2017	-	2.87	-		814.92	-	-	-	-
	10/3/2017	-	1.95	-		815.84	-	-	-	-
MW-41					819.68			-	-	-
	12/27/2017	-	4.47	-		815.21	-	-	-	-
	12/4/2017	-	5.55	-		814.13	-	-	-	-
	11/12/2017	-	4.50	-		815.18	-	-	-	-
	11/7/2017	-	4.39	-		815.29	-	-	-	-
	10/21/2017	-	4.55	-		815.13	-	-	-	-
	10/3/2017	-	4.37	-		815.31	-	-	-	-
MW-42					820.33			-	-	-
	12/27/2017	-	5.14	-		815.19	-	-	-	-
	12/4/2017	-	5.26	-		815.07	-	-	-	-
	11/12/2017	-	5.10	-		815.23	-	-	-	-
	11/7/2017	-	5.10	-		815.23	-	-	-	-
	10/21/2017	-	5.22	-		815.11	-	-	-	-
MW-43					818.12			-	-	-
	12/27/2017	-	4.30	-		813.82	-	-	-	-
	12/4/2017	-	4.50	-		813.62	-	-	-	-
	11/10/2017	-	4.31	-		813.81	-	-	-	-
	11/7/2017	-	4.45	-		813.67	-	-	-	-
	10/21/2017	-	5.20	-		812.92	-	-	-	-
MW-43B					818.80			-	-	-
	12/27/2017	-	2.12	-		816.68	-	-	-	-
	12/4/2017	-	4.08	-		814.72	-	-	-	-
	11/10/2017	-	18.33	-		800.47	-	-	-	-
	10/21/2017	-	47.05	-		771.75	-	-	-	-
MW-44					853.67			-	-	-
	12/27/2017	-	9.38	-		844.29	-	-	-	-
	12/4/2017	-	9.40	-		844.27	-	-	-	-
	10/21/2017	-	9.32	-		844.35	-	-	-	-
MW-44B					853.38			-	-	-
	12/27/2017	-	14.55	-		838.83	-	-	-	-
	12/4/2017	-	14.32	-		839.06	-	-	-	-
	10/21/2017	-	14.70	-		838.68	-	-	-	-
MW-45					852.47			-	-	-
	12/27/2017	-	14.21	-		838.26	-	-	-	-
	12/4/2017	-	14.22	-		838.25	-	-	-	-
	11/7/2017	-	14.24	-		838.23	-	-	-	-
	10/21/2017	-	14.21	-		838.26	-	-	-	-
	10/3/2017	-	14.25	-		838.22	-	-	-	-
MW-45B					852.85			-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
MW-45B (cont'd)	12/27/2017	-	15.88	-		836.97	-	-	-	-
	12/4/2017	-	15.93	-		836.92	-	-	-	-
	10/21/2017	-	16.09	-		836.76	-	-	-	-
MW-46					845.47			-	-	-
	12/27/2017	-	9.11	-		836.36	-	-	-	-
	12/4/2017	-	9.48	-		835.99	-	-	-	-
	11/12/2017	-	9.53	-		835.94	-	-	-	-
	11/10/2017	-	9.57	-		835.90	-	-	-	-
MW-47					842.98			-	-	-
	12/27/2017	-	19.92	-		823.06	-	-	-	-
	12/4/2017	-	17.75	-		825.23	-	-	-	-
	11/17/2017	-	17.85	-		825.13	-	-	-	-
	11/10/2017	-	17.85	-		825.13	-	-	-	-
	10/21/2017	-	19.27	-		823.71	-	-	-	-
MW-48B					832.34			-	-	-
	12/27/2017	-	18.17	-		814.17	-	-	-	-
	12/4/2017	-	18.22	-		814.12	-	-	-	-
	11/12/2017	-	8.51	-		823.83	-	-	-	-
	11/10/2017	-	18.74	-		813.60	-	-	-	-
MW-49					846.78			-	-	-
	12/27/2017	-	20.18	-		826.60	-	-	-	-
	12/4/2017	-	20.29	-		826.49	-	-	-	-
	11/12/2017	-	20.47	-		826.31	-	-	-	-
	11/10/2017	-	20.47	-		826.31	-	-	-	-
MW-50B					850.34			-	-	-
	12/27/2017	-	23.82	-		826.52	-	-	-	-
	12/4/2017	-	21.37	-		828.97	-	-	-	-
	11/12/2017	-	21.66	-		828.68	-	-	-	-
	11/10/2017	-	21.42	-		828.92	-	-	-	-
RS-01					849.13			-	-	-
	12/27/2017	13.58	14.00	0.42		835.13	835.44	1/2/2018	10:23	10:28
	11/12/2017	11.77	12.20	0.43		836.93	837.24	-	-	-
	10/21/2017	14.40	14.72	0.32		834.41	834.64	-	-	-
RS-02					849.52			-	-	-
	12/27/2017	12.11	12.15	0.04		837.37	837.40	-	-	-
	11/12/2017	11.27	11.37	0.10		838.15	838.22	-	-	-
	10/21/2017	14.25	14.32	0.07		835.20	835.25	-	-	-
RS-04					851.47			-	-	-
	12/27/2017	-	9.75	-		841.72	-	-	-	-
	11/12/2017	-	9.70	-		841.77	-	-	-	-
	10/21/2017	-	9.70	-		841.77	-	-	-	-
RS-05					848.31			-	-	-
	12/27/2017	12.50	13.15	**0.65**		835.16	835.63	1/2/2018	10:16	10:21
	11/12/2017	11.20	11.80	**0.60**		836.51	836.95	-	-	-
	10/21/2017	12.75	13.35	**0.60**		834.96	835.40	-	-	-
RS-06					849.47			-	-	-
	12/27/2017	-	12.21	-		837.26	-	-	-	-
	11/12/2017	-	12.20	-		837.27	-	-	-	-
	10/21/2017	13.51	13.54	0.03		835.93	835.95	-	-	-
RS-07					855.08			-	-	-
	12/27/2017	-	14.06	-		841.02	-	-	-	-
	12/21/2017	-	14.17	0.01		840.91	840.92	12/22/2017	10:15	10:20
	12/13/2017	14.07	14.08	0.01		841.00	841.01	12/14/2017	10:05	10:10
	12/7/2017	14.11	14.12	0.01		840.96	840.97	-	-	-
	12/1/2017	-	14.05	-		841.03	-	-	-	-
	11/22/2017	-	13.83	-		841.25	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RS-07 (cont'd)	11/17/2017	-	14.81	-		840.27	-	-	-	-
	11/12/2017	-	13.87	-		841.21	-	-	-	-
	11/10/2017	-	13.76	-		841.32	-	11/9/2017	11:40	11:45
	11/3/2017	-	13.82	-		841.26	-	11/3/2017	9:10	9:15
	10/26/2017	14.03	14.04	0.01		841.04	841.05	10/25/2017	10:15	10:20
	10/21/2017	14.31	14.37	0.06		840.71	840.76	10/21/2017	9:15	9:20
	10/20/2017	14.26	14.32	0.06		840.76	840.81	-	-	-
	10/12/2017	14.19	14.25	0.06		840.83	840.88	10/10/2017	9:15	9:20
	10/6/2017	14.11	14.12	0.01		840.96	840.97	10/7/2017	11:40	11:45
RS-08					854.00			-	-	-
	12/27/2017	14.90	15.00	0.10		839.00	839.07	1/2/2018	13:15	13:20
	12/21/2017	15.03	15.16	0.13		838.84	838.93	12/22/2017	10:25	10:30
	12/13/2017	14.94	15.02	0.08		838.98	839.04	12/14/2017	10:15	10:20
	12/7/2017	15.05	15.20	0.15		838.80	838.91	12/7/2017	9:40	9:45
	12/1/2017	14.83	14.95	0.12		839.05	839.14	-	-	-
	11/22/2017	14.75	14.90	0.15		839.10	839.21	11/22/2017	12:00	12:05
	11/17/2017	14.61	14.89	0.28		839.11	839.31	-	-	-
	11/12/2017	14.42	14.55	0.13		839.45	839.54	-	-	-
	11/10/2017	14.63	14.79	0.16		839.21	839.33	11/9/2017	11:30	11:35
	11/3/2017	14.57	14.71	0.14		839.29	839.39	11/3/2017	9:20	9:25
	10/26/2017	14.80	15.00	0.20		839.00	839.15	10/21/2017	10:25	10:30
	10/21/2017	14.97	15.24	0.27		838.76	838.96	10/21/2017	9:20	9:25
	10/20/2017	14.93	15.20	0.27		838.80	839.00	-	-	-
	10/12/2017	14.74	15.00	0.26		839.00	839.19	10/10/2017	9:20	9:25
	10/6/2017	14.64	14.81	0.17		839.19	839.31	10/7/2017	11:45	11:50
RS-09					847.60			-	-	-
	12/27/2017	-	14.13	-		833.47	-	-	-	-
	11/12/2017	-	10.29	-		837.31	-	-	-	-
	10/21/2017	-	12.51	-		835.09	-	-	-	-
RS-10					847.42			-	-	-
	12/27/2017	10.05	10.15	0.10		837.27	837.34	-	-	-
	11/12/2017	-	9.65	-		837.77	-	-	-	-
	10/21/2017	11.20	11.22	0.02		836.20	836.21	-	-	-
RS-11					847.44			-	-	-
	12/27/2017	-	9.00	-		838.44	-	-	-	-
	11/12/2017	-	9.76	-		837.68	-	-	-	-
	10/21/2017	-	10.73	-		836.71	-	-	-	-
RS-12					847.74			-	-	-
	12/27/2017	-	9.20	-		838.54	-	-	-	-
	11/12/2017	-	10.00	-		837.74	-	-	-	-
	10/21/2017	-	11.20	-		836.54	-	-	-	-
RS-13					845.98			-	-	-
	12/27/2017	-	14.34	-		831.64	-	-	-	-
	11/12/2017	-	6.45	-		839.53	-	-	-	-
	10/21/2017	-	11.55	-		834.43	-	-	-	-
RS-14					845.97			-	-	-
	12/27/2017	7.47	7.49	0.02		838.48	838.49	-	-	-
	11/12/2017	7.31	7.33	0.02		838.64	838.65	-	-	-
	10/21/2017	11.35	11.38	0.03		834.59	834.61	-	-	-
RS-15					846.41			-	-	-
	12/27/2017	-	6.99	-		839.42	-	-	-	-
	11/12/2017	-	8.05	-		838.36	-	-	-	-
	10/21/2017	-	10.65	-		835.76	-	-	-	-
RS-16					845.44			-	-	-
	12/27/2017	-	6.80	-		838.64	-	-	-	-
	11/12/2017	-	6.35	-		839.09	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RS-16 (cont'd)	10/21/2017	-	10.00	-		835.44	-	-	-	-
RS-17					844.22			-	-	-
	12/27/2017	6.38	6.39	0.01		837.83	837.84	-	-	-
	11/12/2017	5.99	6.00	0.01		838.22	838.23	-	-	-
	10/21/2017	-	9.59	-		834.63	-	-	-	-
RS-18					847.89			-	-	-
	12/27/2017	-	15.92	-		831.97	-	-	-	-
	11/12/2017	-	10.69	-		837.20	-	-	-	-
	10/21/2017	-	13.05	-		834.84	-	-	-	-
RS-20					842.69			-	-	-
	12/27/2017	-	6.55	-		836.14	-	-	-	-
	11/12/2017	-	5.82	-		836.87	-	-	-	-
	10/21/2017	-	9.39	-		833.30	-	-	-	-
RT-1A					854.06			-	-	-
	12/27/2017	14.62	14.65	0.03		839.41	839.43	1/2/2018	13:20	13:25
	12/21/2017	14.82	14.87	0.05		839.19	839.23	12/22/2017	9:45	9:50
	12/13/2017	14.77	14.82	0.05		839.24	839.28	12/14/2017	9:35	9:40
	12/7/2017	15.03	15.12	0.09		838.94	839.01	12/7/2017	9:00	9:05
	12/1/2017	14.74	14.84	0.10		839.22	839.29	-	-	-
	11/22/2017	14.65	14.71	0.06		839.35	839.39	11/22/2017	12:07	12:12
	11/17/2017	14.63	14.68	0.05		839.38	839.42	-	-	-
	11/10/2017	14.73	14.82	0.09		839.24	839.31	11/9/2017	11:15	11:20
	11/3/2017	14.67	14.77	0.10		839.29	839.36	11/3/2017	9:25	9:30
	10/26/2017	14.95	15.02	0.07		839.04	839.09	10/25/2017	10:35	10:40
	10/20/2017	15.08	15.18	0.10		838.88	838.95	10/21/2017	9:00	9:05
	10/12/2017	14.95	15.03	0.08		839.03	839.09	10/10/2017	9:00	9:05
	10/6/2017	14.85	15.02	0.17		839.04	839.16	10/7/2017	11:25	11:30
RT-1B					854.15			-	-	-
	12/27/2017	14.59	14.62	0.03		839.53	839.55	1/2/2018	13:25	13:30
	12/21/2017	14.77	14.82	0.05		839.33	839.37	12/22/2017	9:55	10:00
	12/13/2017	14.72	14.77	0.05		839.38	839.42	12/14/2017	9:45	9:50
	12/7/2017	14.99	15.08	0.09		839.07	839.14	12/7/2017	9:10	9:15
	12/1/2017	14.71	14.79	0.08		839.36	839.42	-	-	-
	11/22/2017	14.61	14.67	0.06		839.48	839.52	11/22/2017	12:12	12:17
	11/17/2017	14.60	14.65	0.05		839.50	839.54	-	-	-
	11/10/2017	14.69	14.78	0.09		839.37	839.44	11/9/2017	11:10	11:15
	11/3/2017	14.62	14.71	0.09		839.44	839.51	11/3/2017	9:30	9:35
	10/26/2017	14.91	14.98	0.07		839.17	839.22	10/25/2017	10:45	10:50
	10/20/2017	15.04	15.14	0.10		839.01	839.08	10/21/2017	9:05	9:10
	10/12/2017	14.91	15.00	0.09		839.15	839.22	10/10/2017	9:05	9:10
	10/6/2017	14.82	14.95	0.13		839.20	839.29	10/7/2017	11:30	11:35
RT-1C					854.55			-	-	-
	12/27/2017	15.17	15.20	0.03		839.35	839.37	1/2/2018	13:30	13:35
	12/21/2017	15.36	15.41	0.05		839.14	839.18	12/22/2017	10:00	10:05
	12/13/2017	15.31	15.36	0.05		839.19	839.23	12/14/2017	9:55	10:00
	12/7/2017	15.57	15.66	0.09		838.89	838.96	12/7/2017	9:20	9:25
	12/1/2017	15.30	15.37	0.07		839.18	839.23	-	-	-
	11/22/2017	15.20	15.26	0.06		839.29	839.33	11/22/2017	12:17	12:22
	11/17/2017	15.19	15.24	0.05		839.31	839.35	-	-	-
	11/10/2017	15.29	15.38	0.09		839.17	839.24	11/9/2017	11:05	11:10
	11/3/2017	15.22	15.31	0.09		839.24	839.31	11/3/2017	9:35	9:40
	10/26/2017	15.58	15.65	0.07		838.90	838.95	10/25/2017	10:50	10:55
	10/20/2017	15.47	15.58	0.11		838.97	839.05	10/21/2017	9:10	9:15
	10/12/2017	15.34	15.43	0.09		839.12	839.19	10/10/017	9:10	9:15
	10/6/2017	15.26	15.39	0.13		839.16	839.25	10/7/2017	11:35	11:40
RT-2A					817.48			-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RT-2A (cont'd)	12/27/2017	-	1.05	-		816.43	-	1/2/2018	12:05	12:10
	12/21/2017	-	0.84	-		816.64	-	-	-	-
	12/13/2017	-	1.00	-		816.48	-	-	-	-
	12/7/2017	-	1.23	-		816.25	-	12/7/2017	11:00	11:05
	12/1/2017	-	1.18	-		816.30	-	-	-	-
	11/22/2017	-	1.12	-		816.36	-	11/22/2017	10:10	10:15
	11/17/2017	-	1.04	-		816.44	-	-	-	-
	11/10/2017	-	0.75	-		816.73	-	-	-	-
	11/3/2017	-	0.97	-		816.51	-	-	-	-
	10/26/2017	-	1.01	-		816.47	-	10/25/2017	8:50	8:55
	10/20/2017	-	1.43	-		816.05	-	10/21/2017	10:20	10:25
	10/12/2017	-	1.25	-		816.23	-	10/10/2017	10:20	10:25
	10/6/2017	-	1.34	-		816.14	-	10/7/2017	10:00	10:05
RT-2B					817.61			-	-	-
	12/27/2017	-	1.20	-		816.41	-	1/2/2018	12:10	12:15
	12/21/2017	-	1.00	-		816.61	-	12/22/2017	11:30	11:35
	12/13/2017	1.15	1.16	0.01		816.45	816.46	12/14/2017	11:15	11:20
	12/7/2017	1.35	1.36	0.01		816.25	816.26	12/7/2017	11:10	11:15
	12/1/2017	-	1.77	-		815.84	-	-	-	-
	11/22/2017	-	1.22	-		816.39	-	11/22/2017	10:15	10:20
	11/17/2017	-	1.21	-		816.40	-	-	-	-
	11/10/2017	-	0.95	-		816.66	-	-	-	-
	11/3/2017	-	1.11	-		816.50	-	-	-	-
	10/26/2017	-	1.14	-		816.47	-	10/25/2017	8:55	9:10
	10/20/2017	-	1.55	-		816.06	-	10/21/2017	10:25	10:30
	10/12/2017	1.36	1.37	0.01		816.24	816.25	10/10/2017	10:30	10:35
	10/6/2017	-	1.45	-		816.16	-	10/7/2017	10:05	10:10
RT-2C					818.06			-	-	-
	12/27/2017	-	1.63	-		816.43	-	1/2/2018	12:15	12:20
	12/21/2017	-	1.46	-		816.60	-	-	-	-
	12/13/2017	-	1.60	-		816.46	-	-	-	-
	12/7/2017	-	1.81	-		816.25	-	12/7/2017	11:20	11:25
	12/1/2017	-	1.83	-		816.23	-	-	-	-
	11/22/2017	-	1.71	-		816.35	-	11/22/2017	10:20	10:25
	11/17/2017	-	1.65	-		816.41	-	-	-	-
	11/10/2017	-	1.46	-		816.60	-	-	-	-
	11/3/2017	-	1.59	-		816.47	-	-	-	-
	10/26/2017	-	1.62	-		816.44	-	10/25/2017	9:00	9:05
	10/20/2017	-	2.00	-		816.06	-	10/21/2017	10:30	10:35
	10/12/2017	1.81	1.83	0.02		816.23	816.24	10/10/2017	10:30	10:35
	10/6/2017	-	1.92	-		816.14	-	10/7/2017	10:10	10:15
RT-2D					818.12			-	-	-
	12/27/2017	-	1.71	-		816.41	-	1/2/2018	12:20	12:25
	12/21/2017	-	1.53	-		816.59	-	12/22/2017	11:40	11:45
	12/13/2017	1.67	1.68	0.01		816.44	816.45	12/14/2017	11:25	11:30
	12/7/2017	-	1.88	-		816.24	-	-	-	-
	12/1/2017	-	1.93	-		816.19	-	-	-	-
	11/22/2017	-	1.78	-		816.34	-	11/22/2017	10:25	10:30
	11/17/2017	-	1.72	-		816.40	-	-	-	-
	11/10/2017	-	1.52	-		816.60	-	-	-	-
	11/3/2017	-	1.66	-		816.46	-	-	-	-
	10/26/2017	-	1.68	-		816.44	-	10/25/2017	9:05	9:10
	10/20/2017	-	2.06	-		816.06	-	10/21/2017	10:35	10:40
	10/12/2017	1.98	1.99	0.01		816.13	816.14	10/10/2017	10:35	10:40
	10/6/2017	-	1.98	-		816.14	-	10/7/2017	10:15	10:20
RT-2E					818.25			-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RT-2E (cont'd)	12/27/2017	-	1.82	-		816.43	-	1/2/2018	12:25	12:30
	12/21/2017	-	1.63	-		816.62	-	-	-	-
	12/13/2017	-	NM	-		-	-	-	-	-
	12/7/2017	-	1.99	-		816.26	-	12/7/2017	11:30	11:35
	12/1/2017	-	2.28	-		815.97	-	-	-	-
	11/22/2017	-	1.89	-		816.36	-	11/22/2017	10:30	10:35
	11/17/2017	-	1.83	-		816.42	-	-	-	-
	11/10/2017	-	1.63	-		816.62	-	-	-	-
	11/3/2017	-	1.76	-		816.49	-	-	-	-
	10/26/2017	-	1.80	-		816.45	-	10/25/2017	9:10	9:15
	10/20/2017	-	2.16	-		816.09	-	10/21/2017	10:40	10:45
	10/12/2017	-	2.00	-		816.25	-	10/10/2017	10:40	10:45
	10/6/2017	-	2.08	-		816.17	-	10/7/2017	10:20	10:25
RT-2F					818.57			-	-	-
	12/27/2017	-	2.15	-		816.42	-	1/2/2018	12:30	12:35
	12/21/2017	-	1.97	-		816.60	-	12/22/2017	11:50	11:55
	12/13/2017	2.12	2.13	0.01		816.44	816.45	12/14/2017	11:35	11:40
	12/7/2017	-	2.33	-		816.24	-	12/7/2017	11:35	11:40
	12/1/2017	-	2.43	-		816.14	-	-	-	-
	11/22/2017	-	2.25	-		816.32	-	11/22/2017	10:35	10:40
	11/17/2017	-	2.18	-		816.39	-	-	-	-
	11/10/2017	-	1.97	-		816.60	-	-	-	-
	11/3/2017	-	2.10	-		816.47	-	-	-	-
	10/26/2017	-	2.15	-		816.42	-	10/25/2017	9:15	9:20
	10/20/2017	-	2.51	-		816.06	-	10/21/2017	10:45	10:50
	10/12/2017	2.34	2.35	0.01		816.22	816.23	10/10/2017	10:45	10:50
	10/6/2017	-	2.43	-		816.14	-	10/7/2017	10:25	10:30
RT-2G					820.07			-	-	-
	12/27/2017	-	4.25	-		815.82	-	1/2/2018	12:35	12:40
	12/21/2017	-	3.62	-		816.45	-	-	-	-
	12/13/2017	-	4.43	-		815.64	-	-	-	-
	12/7/2017	-	3.82	-		816.25	-	12/7/2017	11:40	11:45
	12/1/2017	-	0.39	-		819.68	-	-	-	-
	11/22/2017	-	4.27	-		815.80	-	11/22/2017	10:40	10:45
	11/17/2017	-	4.11	-		815.96	-	-	-	-
	11/10/2017	-	0.25	-		819.82	-	-	-	-
	11/3/2017	-	0.25	-		819.82	-	-	-	-
	10/26/2017	-	3.43	-		816.64	-	10/25/2017	9:20	9:25
	10/20/2017	-	1.74	-		818.33	-	10/21/2017	10:50	10:55
	10/12/2017	-	3.65	-		816.42	-	10/10/2017	10:50	10:55
	10/6/2017	-	1.45	-		818.62	-	10/7/2017	10:30	10:35
RT-2I					819.51			-	-	-
	12/27/2017	-	3.12	-		816.39	-	1/2/2018	12:40	12:45
	12/21/2017	-	3.39	-		816.12	-	-	-	-
	12/13/2017	-	2.82	-		816.69	-	-	-	-
	12/7/2017	-	3.60	-		815.91	-	12/7/2017	11:50	11:55
	12/1/2017	-	3.12	-		816.39	-	-	-	-
	11/22/2017	-	2.58	-		816.93	-	11/22/2017	10:45	10:50
	11/17/2017	-	2.30	-		817.21	-	-	-	-
	11/10/2017	-	0.25	-		819.26	-	-	-	-
	11/3/2017	-	1.56	-		817.95	-	-	-	-
	10/26/2017	-	3.33	-		816.18	-	10/25/2017	9:25	9:30
	10/20/2017	-	3.46	-		816.05	-	10/21/2017	10:55	11:00
	10/12/2017	-	3.42	-		816.09	-	10/10/2017	10:55	11:00
	10/6/2017	-	1.34	-		818.17	-	10/7/2017	10:35	10:40
RT-2J					817.63			-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RT-2J (cont'd)	12/27/2017	-	1.41	-		816.22	-	1/2/2018	12:45	12:50
	12/21/2017	2.09	2.10	0.01		815.53	815.54	-	-	-
	12/13/2017	-	1.11	-		816.52	-	-	-	-
	12/7/2017	2.44	2.45	0.01		815.18	815.19	12/7/2017	11:55	12:00
	12/1/2017	-	0.65	-		816.98	-	-	-	-
	11/22/2017	-	0.99	-		816.64	-	11/22/2017	10:50	10:55
	11/17/2017	-	0.80	-		816.83	-	-	-	-
	11/10/2017	-	NM	-		-	-	-	-	-
	11/3/2017	-	-	-		817.63	-	-	-	-
	10/26/2017	-	2.04	-		815.59	-	10/25/2017	9:25	9:30
	10/20/2017	-	1.58	-		816.05	-	10/21/2017	11:00	11:05
	10/12/2017	-	2.20	-		815.43	-	10/10/2017	11:00	11:05
	10/6/2017	-	0.05	-		817.58	-	10/7/2017	10:40	10:45
RT-2K					817.40			-	-	-
	12/27/2017	1.24	1.25	0.01		816.15	816.16	1/2/2018	12:50	12:55
	12/21/2017	-	NM	-		-	-	-	-	-
	12/13/2017	-	NM	-		-	-	-	-	-
	12/7/2017	-	NM	-		-	-	12/7/2017	12:00	12:05
	12/1/2017	-	NM	-		-	-	-	-	-
	11/22/2017	-	NM	-		-	-	-	-	-
	11/17/2017	-	NM	-		-	-	-	-	-
	11/10/2017	-	NM	-		-	-	11/9/2017	9:10	9:15
	11/3/2017	-	NM	-		-	-	11/3/2017	10:40	10:45
	10/26/2017	-	NM	-		-	-	10/25/2017	9:35	9:40
	10/20/2017	1.79	1.92	0.13		815.48	815.57	10/21/2017	11:05	11:10
	10/12/2017	1.43	1.57	0.14		815.83	815.93	10/10/2017	11:05	11:10
	10/6/2017	1.79	1.93	0.14		815.47	815.57	10/7/2017	10:45	10:50
RT-2L					819.54			-	-	-
	12/27/2017	-	2.25	-		817.29	-	1/2/2018	12:55	13:00
	12/21/2017	-	2.34	-		817.20	-	-	-	-
	12/13/2017	-	2.36	-		817.18	-	-	-	-
	12/7/2017	2.66	2.67	0.01		816.87	816.88	12/7/2017	12:05	12:10
	12/1/2017	-	2.60	-		816.94	-	-	-	-
	11/22/2017	-	2.39	-		817.15	-	11/22/2017	10:55	11:00
	11/17/2017	-	2.33	-		817.21	-	-	-	-
	11/10/2017	-	2.31	-		817.23	-	11/9/2017	9:15	9:20
	11/3/2017	-	2.27	-		817.27	-	11/3/2017	10:45	10:50
	10/26/2017	-	2.58	-		816.96	-	10/25/2017	9:40	9:45
	10/20/2017	2.90	2.96	0.06		816.58	816.62	10/21/2017	11:10	11:15
	10/12/2017	2.88	2.92	0.04		816.62	816.65	10/10/2017	11:10	11:15
	10/6/2017	2.76	2.78	0.02		816.76	816.77	10/7/2017	10:50	10:55
RW-01					851.92			-	-	-
	12/27/2017	-	12.54	-		839.38	-	-	-	-
	11/12/2017	-	13.41	-		838.51	-	-	-	-
	10/21/2017	-	16.30	-		835.62	-	-	-	-
RW-02					852.69			-	-	-
	12/27/2017	23.51	24.10	**0.59**		828.59	829.02	1/2/2018	10:58	11:03
	11/12/2017	22.80	23.15	0.35		829.54	829.79	-	-	-
	10/21/2017	24.32	24.66	0.34		828.03	828.28	-	-	-
RW-03					852.34			-	-	-
	12/27/2017	24.20	24.25	0.05		828.09	828.13	-	-	-
	11/12/2017	23.46	23.47	0.01		828.87	828.88	-	-	-
	10/21/2017	24.51	24.53	0.02		827.81	827.82	-	-	-
RW-04					853.93			-	-	-
	12/27/2017	29.77	30.35	**0.58**		823.58	824.01	1/2/2018	11:09	11:14
	12/21/2017	24.34	24.93	**0.59**		829.00	829.43	12/22/2017	10:40	10:45

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RW-04 (cont'd)	12/13/2017	29.44	29.84	0.40		824.09	824.38	12/14/2017	10:35	10:40
	12/7/2017	29.46	29.77	0.31		824.16	824.39	12/7/2017	10:15	10:20
	12/1/2017	29.49	29.67	0.18		824.26	824.39	-	-	-
	11/22/2017	29.59	29.86	0.27		824.07	824.27	11/22/2017	11:53	11:58
	11/17/2017	29.67	29.90	0.23		824.03	824.20	-	-	-
	11/10/2017	29.90	30.17	0.27		823.76	823.96	11/9/2017	10:50	10:55
	11/3/2017	30.17	30.56	0.39		823.37	823.66	11/3/2017	9:50	9:55
	10/26/2017	30.58	30.67	0.09		823.26	823.33	10/25/2017	9:50	9:55
	10/20/2017	30.70	31.05	0.35		822.88	823.14	10/21/2017	9:35	9:40
	10/12/2017	30.71	30.80	0.09		823.13	823.20	10/10/2017	9:35	9:40
	10/6/2017	30.33	30.87	**0.54**		823.06	823.46	10/7/2017	11:05	11:10
RW-05					853.53			-	-	-
	12/27/2017	32.78	33.95	**1.17**		819.58	820.44	1/2/2018	11:23	11:28
	12/21/2017	32.85	34.19	**1.34**		819.34	820.32	12/22/2017	10:55	11:00
	12/13/2017	32.83	33.83	**1.00**		819.70	820.43	12/14/2017	10:45	10:50
	12/7/2017	33.01	33.71	**0.70**		819.82	820.33	12/7/2017	10:25	10:30
	12/1/2017	33.32	33.69	0.37		819.84	820.11	-	-	-
	11/22/2017	32.88	34.03	**1.15**		819.50	820.34	11/22/2017	11:43	11:48
	11/17/2017	33.00	33.99	**0.99**		819.54	820.27	-	-	-
	11/10/2017	33.31	34.13	**0.82**		819.40	820.00	11/9/2017	10:40	10:45
	11/3/2017	33.47	34.04	**0.57**		819.49	819.91	11/3/2017	9:55	10:00
	10/26/2017	33.67	33.88	0.21		819.65	819.81	10/25/2017	9:55	10:00
	10/20/2017	33.84	34.74	**0.90**		818.79	819.45	10/21/2017	9:40	9:45
	10/12/2017	33.84	34.43	**0.59**		819.10	819.53	10/10/2017	9:40	9:45
	10/6/2017	33.21	34.89	**1.68**		818.64	819.87	10/7/2017	11:10	11:15
RW-06					846.21			-	-	-
	12/27/2017	-	26.27	-		819.94	-	-	-	-
	12/21/2017	27.22	27.23	0.01		818.98	818.99	-	-	-
	12/13/2017	-	26.10	-		820.11	-	-	-	-
	12/7/2017	27.27	27.28	0.01		818.93	818.94	-	-	-
	12/1/2017	-	27.18	-		819.03	-	-	-	-
	11/22/2017	-	26.43	-		819.78	-	-	-	-
	11/17/2017	-	26.51	-		819.70	-	-	-	-
	11/10/2017	-	27.21	-		819.00	-	11/9/2017	10:30	10:35
	11/3/2017	-	27.22	-		818.99	-	11/3/2017	10:10	10:15
	10/26/2017	-	27.76	-		818.45	-	10/25/2017	8:40	8:45
	10/20/2017	27.79	27.81	0.02		818.40	818.41	10/21/2017	9:50	9:55
	10/12/2017	28.03	28.05	0.02		818.16	818.17	10/10/2017	9:50	9:55
	10/6/2017	27.26	27.27	0.01		818.94	818.95	-	-	-
RW-07					843.19			-	-	-
	12/27/2017	22.85	22.87	0.02		820.32	820.34	1/2/2018	11:40	11:45
	12/21/2017	24.25	24.27	0.02		818.92	818.94	12/22/2017	11:05	11:10
	12/13/2017	22.87	22.88	0.01		820.31	820.32	12/14/2017	10:50	10:55
	12/7/2017	24.35	24.38	0.03		818.81	818.83	12/7/2017	10:45	10:50
	12/1/2017	23.46	23.47	0.01		819.72	819.73	-	-	-
	11/22/2017	22.70	22.73	0.03		820.46	820.48	11/22/2017	11:19	11:24
	11/17/2017	22.87	22.90	0.03		820.29	820.31	-	-	-
	11/10/2017	23.32	23.35	0.03		819.84	819.86	11/9/2017	9:35	9:40
	11/3/2017	23.39	23.52	0.13		819.67	819.77	11/3/2017	10:15	10:20
	10/26/2017	24.47	24.98	**0.51**		818.21	818.58	10/25/2017	8:35	8:40
	10/20/2017	24.04	24.91	**0.87**		818.28	818.92	10/21/2017	9:55	10:00
	10/12/2017	24.43	25.71	**1.28**		817.48	818.42	10/10/2017	9:55	10:00
	10/6/2017	23.44	24.31	**0.87**		818.88	819.52	10/7/2017	9:50	9:55
RW-08					835.48			-	-	-
	12/27/2017	15.79	15.80	0.01		819.68	819.69	1/2/2018	11:48	11:53
	12/21/2017	17.81	17.83	0.02		817.65	817.66	12/22/2017	11:15	11:20

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RW-08 (cont'd)	12/13/2017	15.89	15.90	0.01		819.58	819.59	12/14/2017	11:00	11:05
	12/7/2017	-	17.94	-		817.54	-	-	-	-
	12/1/2017	-	16.29	-		819.19	-	-	-	-
	11/22/2017	-	15.45	-		820.03	-	-	-	-
	11/17/2017	-	15.70	-		819.78	-	-	-	-
	11/10/2017	-	16.07	-		819.41	-	-	-	-
	11/3/2017	-	16.13	-		819.35	-	-	-	-
	10/26/2017	-	18.38	-		817.10	-	-	-	-
	10/20/2017	-	17.16	-		818.32	-	-	-	-
	10/12/2017	18.32	18.33	0.01		817.15	817.16	-	-	-
	10/6/2017	-	16.04	-		819.44	-	10/7/2017	9:45	9:50
RW-09					835.12			-	-	-
	12/27/2017	-	13.81	-		821.31	-	-	-	-
	12/21/2017	-	14.71	-		820.41	-	-	-	-
	12/13/2017	-	13.85	-		821.27	-	-	-	-
	12/7/2017	-	14.85	-		820.27	-	-	-	-
	12/1/2017	-	13.57	-		821.55	-	-	-	-
	11/22/2017	-	13.64	-		821.48	-	-	-	-
	11/17/2017	-	13.78	-		821.34	-	-	-	-
	11/10/2017	-	13.40	-		821.72	-	11/9/2017	9:30	9:35
	11/3/2017	-	13.28	-		821.84	-	11/3/2017	10:25	10:30
	10/26/2017	14.82	14.92	0.10		820.20	820.28	10/25/2017	8:30	8:35
	10/20/2017	14.04	14.29	0.25		820.83	821.02	10/21/2017	10:05	10:10
	10/12/2017	14.78	16.39	**1.61**		818.73	819.91	10/10/2017	10:05	10:10
	10/6/2017	13.35	13.67	0.32		821.45	821.69	10/7/2017	9:40	9:45
RW-10					848.53			-	-	-
	12/27/2017	-	11.20	-		837.33	-	-	-	-
	11/12/2017	13.00	13.05	0.05		835.48	835.52	-	-	-
	10/21/2017	-	13.56	-		834.97	-	-	-	-
RW-11					852.97			-	-	-
	12/27/2017	-	13.70	-		839.27	-	-	-	-
	12/21/2017	-	14.70	-		838.27	-	-	-	-
	12/13/2017	-	14.90	-		838.07	-	-	-	-
	12/7/2017	-	14.69	-		838.28	-	-	-	-
	12/1/2017	-	14.83	-		838.14	-	-	-	-
	11/22/2017	-	14.54	-		838.43	-	-	-	-
	11/17/2017	-	14.02	-		838.95	-	-	-	-
	11/10/2017	-	14.15	-		838.82	-	-	-	-
	11/3/2017	-	14.35	-		838.62	-	-	-	-
	10/26/2017	-	13.82	-		839.15	-	-	-	-
	10/20/2017	-	13.91	-		839.06	-	-	-	-
	10/12/2017	-	13.75	-		839.22	-	-	-	-
	10/6/2017	-	13.14	-		839.83	-	-	-	-
RW-12					852.75			-	-	-
	12/27/2017	-	16.00	-		838.49	-	-	-	-
	12/21/2017	-	16.00	-		838.49	-	-	-	-
	12/13/2017	-	16.03	-		838.46	-	-	-	-
	12/7/2017	-	15.98	-		838.51	-	-	-	-
	12/1/2017	-	15.99	-		838.50	-	-	-	-
	11/22/2017	-	15.91	-		838.58	-	-	-	-
	11/17/2017	-	15.87	-		838.62	-	-	-	-
	11/10/2017	-	15.74	-		838.75	-	-	-	-
	11/3/2017	-	14.17	-		840.32	-	-	-	-
	10/26/2017	-	15.46	-		839.03	-	-	-	-
	10/20/2017	-	15.47	-		839.02	-	-	-	-
	10/12/2017	-	15.23	-		837.52	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
RW-12 (cont'd)	10/6/2017	-	15.15	-		837.60	-	-	-	-
RW-13					847.97			-	-	-
	12/27/2017	-	NM	-		-	-	-	-	-
	11/12/2017	-	NM	-		-	-	-	-	-
	10/21/2017	-	NM	-		-	-	-	-	-
RW-14					827.54			-	-	-
	12/27/2017	-	14.51	-		813.03	-	-	-	-
	12/21/2017	-	13.27	-		814.27	-	-	-	-
	12/13/2017	-	14.45	-		813.09	-	-	-	-
	12/7/2017	-	13.65	-		813.89	-	-	-	-
	12/1/2017	-	6.91	-		820.63	-	-	-	-
	11/22/2017	-	14.24	-		813.30	-	-	-	-
	11/17/2017	-	14.26	-		813.28	-	-	-	-
	11/10/2017	-	7.00	-		820.54	-	-	-	-
	11/3/2017	-	5.10	-		822.44	-	-	-	-
	10/26/2017	-	13.16	-		814.38	-	-	-	-
	10/20/2017	-	9.17	-		818.37	-	-	-	-
	10/12/2017	13.19	13.20	0.01		814.34	814.35	-	-	-
	10/6/2017	-	7.90	-		819.64	-	-	-	-
RW-15					851.64			-	-	-
	12/27/2017	14.62	15.30	**0.68**		836.34	836.83	1/2/2018	10:36	10:41
	11/12/2017	14.90	15.30	0.40		836.34	836.63	-	-	-
	10/21/2017	15.88	16.60	**0.72**		835.04	835.56	-	-	-
SW-01					812.82			-	-	-
	12/27/2017	-	(0.90)	-		813.72	-	-	-	-
	12/14/2017	-	(0.80)	-		813.62	-	-	-	-
	12/5/2017	-	(1.00)	-		813.82	-	-	-	-
	11/17/2017	-	(0.93)	-		813.75	-	-	-	-
	11/7/2017	-	(0.90)	-		813.72	-	-	-	-
	10/21/2017	-	(0.81)	-		813.63	-	-	-	-
SW-02					808.65			-	-	-
	12/27/2017	-	(1.60)	-		810.25	-	-	-	-
	12/14/2017	-	(1.60)	-		810.25	-	-	-	-
	12/5/2017	-	(1.60)	-		810.25	-	-	-	-
	11/17/2017	-	(1.61)	-		810.26	-	-	-	-
	10/21/2017	-	(1.47)	-		810.12	-	-	-	-
SW-03					815.09			-	-	-
	12/27/2017	-	(1.74)	-		816.83	-	-	-	-
	12/14/2017	-	(1.71)	-		816.80	-	-	-	-
	12/5/2017	-	(1.78)	-		816.87	-	-	-	-
	11/12/2017	-	(1.73)	-		816.82	-	-	-	-
	11/7/2017	-	(1.60)	-		816.69	-	-	-	-
	10/21/2017	-	(1.68)	-		816.77	-	-	-	-
SW-05					838.75			-	-	-
	12/27/2017	-	NM	-		-	-	-	-	-
	12/14/2017	-	NM	-		-	-	-	-	-
	12/5/2017	-	NM	-		-	-	-	-	-
	10/21/2017	-	NM	-		-	-	-	-	-
SW-08					802.04			-	-	-
	12/27/2017	-	(1.08)	-		803.12	-	-	-	-
	12/14/2017	-	(1.15)	-		803.19	-	-	-	-
	12/5/2017	-	(1.15)	-		803.19	-	-	-	-
	11/17/2017	-	(1.15)	-		803.19	-	-	-	-
	10/21/2017	-	(1.01)	-		803.05	-	-	-	-
SW-10					778.09			-	-	-
	12/27/2017	-	(0.45)	-		778.54	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
SW-10 (cont'd)	12/14/2017	-	(0.88)	-		778.97	-	-	-	-
	12/5/2017	-	(0.88)	-		778.97	-	-	-	-
	11/17/2017	-	(0.64)	-		778.73	-	-	-	-
	10/21/2017	-	(0.27)	-		778.36	-	-	-	-
SW-13					-			-	-	-
	11/7/2017	-	(0.90)	-		0.90	-	-	-	-
TW-04R					852.64			-	-	-
	12/27/2017	-	DRY	-		-	-	-	-	-
	11/12/2017	-	4.71	-		847.93	-	-	-	-
	10/21/2017	-	DRY	-		-	-	-	-	-
TW-05R					849.93			-	-	-
	12/27/2017	-	6.52	-		843.41	-	-	-	-
	11/12/2017	-	5.76	-		844.17	-	-	-	-
	10/21/2017	-	8.44	-		841.49	-	-	-	-
TW-14R					853.37			-	-	-
	12/27/2017	-	DRY	-		-	-	-	-	-
	11/12/2017	-	NM	-		-	-	-	-	-
	10/21/2017	-	DRY	-		-	-	-	-	-
TW-15R					850.62			-	-	-
	12/27/2017	-	3.92	-		846.70	-	-	-	-
	11/12/2017	-	5.70	-		844.92	-	-	-	-
	10/21/2017	-	DRY	-		-	-	-	-	-
TW-21					849.70			-	-	-
	12/27/2017	-	4.50	-		845.20	-	-	-	-
	11/12/2017	-	4.25	-		845.45	-	-	-	-
	10/21/2017	-	NM	-		-	-	-	-	-
TW-28					851.42			-	-	-
	12/27/2017	23.10	23.70	**0.60**		827.72	828.16	-	-	-
	11/12/2017	22.97	23.10	0.13		828.32	828.42	-	-	-
	10/21/2017	23.60	24.50	**0.90**		826.92	827.58	-	-	-
TW-30					851.81			-	-	-
	12/27/2017	-	22.15	-		829.66	-	-	-	-
	11/12/2017	-	21.90	-		829.91	-	-	-	-
	10/21/2017	-	22.92	-		828.89	-	-	-	-
TW-34					854.79			-	-	-
	12/27/2017	-	22.21	-		832.58	-	-	-	-
	11/12/2017	-	22.25	-		832.54	-	-	-	-
	10/21/2017	-	22.21	-		832.58	-	-	-	-
TW-35					854.10			-	-	-
	12/27/2017	-	22.70	-		831.40	-	-	-	-
	11/12/2017	-	22.74	-		831.36	-	-	-	-
	10/21/2017	-	22.72	-		831.38	-	-	-	-
TW-40					853.35			-	-	-
	12/27/2017	-	28.95	-		824.40	-	-	-	-
	11/12/2017	-	29.08	-		824.27	-	-	-	-
	10/21/2017	-	29.17	-		824.18	-	-	-	-
TW-41					849.38			-	-	-
	12/27/2017	-	27.65	-		821.73	-	-	-	-
	11/12/2017	-	27.81	-		821.57	-	-	-	-
	10/21/2017	-	28.53	-		820.85	-	-	-	-
TW-42					846.84			-	-	-
	12/27/2017	26.10	26.55	0.45		820.29	820.62	-	-	-
	11/12/2017	26.15	26.97	**0.82**		819.87	820.47	-	-	-
	10/21/2017	26.75	NO WATER	**0.75**		-	-	-	-	-
TW-45					848.31			-	-	-
	12/27/2017	27.65	27.76	0.11		820.55	820.63	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
TW-45 (cont'd)	11/12/2017	27.73	28.10	0.37		820.21	820.48	-	-	-
	10/21/2017	28.38	28.98	**0.60**		819.33	819.77	-	-	-
TW-55					845.93			-	-	-
	12/27/2017	-	14.00	-		831.93	-	-	-	-
	12/4/2017	-	5.48	-		840.45	-	-	-	-
	11/12/2017	-	7.51	-		838.42	-	-	-	-
	11/7/2017	-	8.12	-		837.81	-	-	-	-
	10/21/2017	-	8.35	-		837.58	-	-	-	-
	10/3/2017	-	14.90	-		831.03	-	-	-	-
TW-59					834.78			-	-	-
	12/27/2017	-	12.20	-		822.58	-	-	-	-
	12/4/2017	-	15.81	-		818.97	-	-	-	-
	11/12/2017	-	20.41	-		814.37	-	-	-	-
	11/7/2017	-	20.00	-		814.78	-	-	-	-
	10/21/2017	-	14.30	-		820.48	-	-	-	-
	10/3/2017	-	14.80	-		819.98	-	-	-	-
TW-60					828.03			-	-	-
	12/27/2017	-	10.90	-		817.13	-	-	-	-
	12/4/2017	-	10.27	-		817.76	-	-	-	-
	11/12/2017	-	11.65	-		816.38	-	-	-	-
	11/7/2017	-	10.20	-		817.83	-	-	-	-
	10/21/2017	-	10.37	-		817.66	-	-	-	-
	10/3/2017	-	7.72	-		820.31	-	-	-	-
TW-64					845.88			-	-	-
	12/27/2017	-	19.61	-		826.27	-	-	-	-
	12/4/2017	-	17.45	-		828.43	-	-	-	-
	11/12/2017	-	18.05	-		827.83	-	-	-	-
	11/7/2017	-	18.20	-		827.68	-	-	-	-
	10/21/2017	-	18.94	-		826.94	-	-	-	-
	10/3/2017	-	20.40	-		825.48	-	-	-	-
TW-65					845.62			-	-	-
	12/27/2017	-	22.82	-		822.80	-	-	-	-
	11/12/2017	-	22.25	-		823.37	-	-	-	-
	10/21/2017	-	22.97	-		822.65	-	-	-	-
TW-66					820.31			-	-	-
	12/27/2017	-	3.03	-		817.28	-	-	-	-
	12/4/2017	-	3.32	-		816.99	-	-	-	-
	11/12/2017	-	2.65	-		817.66	-	-	-	-
	11/7/2017	-	2.15	-		818.16	-	-	-	-
	10/21/2017	-	2.68	-		817.63	-	-	-	-
	10/3/2017	-	1.79	-		818.52	-	-	-	-
TW-67					852.71			-	-	-
	12/27/2017	-	9.00	-		843.71	-	-	-	-
	12/4/2017	-	12.48	-		840.23	-	-	-	-
	11/12/2017	-	9.20	-		843.51	-	-	-	-
	11/7/2017	-	13.91	-		838.80	-	-	-	-
	10/21/2017	-	9.00	-		843.71	-	-	-	-
	10/3/2017	-	13.83	-		838.88	-	-	-	-
TW-68					846.45			-	-	-
	12/27/2017	-	23.90	-		822.55	-	-	-	-
	11/12/2017	-	23.85	-		822.60	-	-	-	-
	10/21/2017	-	24.47	-		821.98	-	-	-	-
TW-69					840.27			-	-	-
	12/27/2017	-	17.75	-		822.52	-	-	-	-
	11/12/2017	-	14.95	-		825.32	-	-	-	-
	10/21/2017	-	16.20	-		824.07	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
TW-70					841.95			-	-	-
	12/27/2017	-	19.36	-		822.59	-	-	-	-
	11/12/2017	-	19.58	-		822.37	-	-	-	-
	10/21/2017	-	20.22	-		821.73	-	-	-	-
TW-73					850.53			-	-	-
	12/27/2017	-	6.00	-		844.53	-	-	-	-
	12/4/2017	-	3.30	-		847.23	-	-	-	-
	11/12/2017	-	9.00	-		841.53	-	-	-	-
	11/7/2017	-	8.55	-		841.98	-	-	-	-
	10/21/2017	-	9.85	-		840.68	-	-	-	-
	10/3/2017	-	9.43	-		841.10	-	-	-	-
TW-76					852.44			-	-	-
	12/27/2017	-	14.55	-		837.89	-	-	-	-
	11/12/2017	-	15.10	-		837.34	-	-	-	-
	10/21/2017	-	15.75	-		836.69	-	-	-	-
TW-81					849.43			-	-	-
	12/27/2017	-	4.21	-		845.22	-	-	-	-
	11/12/2017	-	4.05	-		845.38	-	-	-	-
	10/21/2017	-	6.22	-		843.21	-	-	-	-
TW-82					849.64			-	-	-
	12/27/2017	-	4.32	-		845.32	-	-	-	-
	11/12/2017	-	4.05	-		845.59	-	-	-	-
	10/21/2017	-	6.74	-		842.90	-	-	-	-
TW-83					850.44			-	-	-
	12/27/2017	-	5.09	-		845.35	-	-	-	-
	11/12/2017	-	4.80	-		845.64	-	-	-	-
	10/21/2017	-	NM	-		-	-	-	-	-
TW-84					851.22			-	-	-
	12/27/2017	-	5.75	-		845.47	-	-	-	-
	11/12/2017	-	5.25	-		845.97	-	-	-	-
	10/21/2017	-	7.90	-		843.32	-	-	-	-
TW-85					843.49			-	-	-
	12/27/2017	-	16.10	-		827.39	-	-	-	-
	11/12/2017	-	10.10	-		833.39	-	-	-	-
	10/21/2017	-	13.40	-		830.09	-	-	-	-
TW-86					853.10			-	-	-
	12/27/2017	-	5.52	-		847.58	-	-	-	-
	11/12/2017	-	5.61	-		847.49	-	-	-	-
	10/21/2017	-	5.57	-		847.53	-	-	-	-
TW-87					852.25			-	-	-
	12/27/2017	-	6.60	-		845.65	-	-	-	-
	11/12/2017	-	6.21	-		846.04	-	-	-	-
	10/21/2017	-	6.82	-		845.43	-	-	-	-
TW-90					845.43			-	-	-
	12/27/2017	-	7.80	-		837.63	-	-	-	-
	11/12/2017	-	11.00	-		834.43	-	-	-	-
	10/21/2017	-	14.66	-		830.77	-	-	-	-
TW-94					840.58			-	-	-
	12/27/2017	-	-	-		840.58	-	-	-	-
	11/12/2017	-	NM	-		-	-	-	-	-
	10/21/2017	-	2.00	-		838.58	-	-	-	-
TW-96					840.40			-	-	-
	12/27/2017	-	14.96	-		825.44	-	-	-	-
	12/4/2017	-	3.00	-		837.40	-	-	-	-
	11/12/2017	-	6.80	-		833.60	-	-	-	-
	11/7/2017	-	8.58	-		831.82	-	-	-	-

Table 3. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[1,2] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[3] Groundwater Elevation (ft amsl)	Date of Product Evacuation	Start Time	Finish Time
TW-96 (cont'd)	10/21/2017	-	11.98	-		828.42	-	-	-	-
	10/3/2017	-	16.63	-		823.77	-	-	-	-

Notes:

[1.] Elevation of zero mark (ft amsl) for surface water staff gauges.

[2.] "RS-" and "RT-" features were trimmed to less than 12 inches above ground surface on 3/14/2017. Only the resurveyed top of casing elevation after trimming is displayed. Groundwater elevation calculations are based on the true top of casing elevation at the time of gauging.

[3.] Calculated based on an oil:water density ratio of 0.73.

Bold indicates the gauged product thickness was greater than 0.5 foot.

- = not applicable

amsl = above mean sea level

BTOC = below top of casing

DRY = well contained no measurable water or product

ft = feet

ID = identification

NM = not measured

The following features are no longer reliable for calculating groundwater elevation:

- RS-19 was damaged on or about January 20, 2017.
- RT-2H was covered over on or about January 17, 2017, due to construction efforts in the vicinity.
- TW-46 was damaged on or about December 8, 2016.

Table 4. Dissolved Oxygen Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Site Area	Nearest Sparge Well (ft)	Distance to Nearest Sparge Well (ft)	DO (mg/L) 10/3/2017	DO (mg/L) 11/7/2017	DO (mg/L) 12/4/2017
MW-12	Brown's Creek	VAS-37	18	0.35	6.39	0.70
MW-12B	Brown's Creek	VAS-37	9	0.70	1.86	2.58
MW-15	Brown's Creek	VAS-21	14	0.68	7.84	5.40
MW-15B	Brown's Creek	VAS-22	13	0.77	7.70	0.87
MW-25	Brown's Creek	VAS-29	54	1.83	1.70	0.76
MW-25B	Brown's Creek	VAS-29	56	1.06	0.78	0.60
MW-28	Brown's Creek	VAS-46	26	0.57	0.52	0.60
		Average Brown's Creek Protection Zone Values		**0.85**	**3.83**	**1.64**
MW-19	Cupboard Creek	VAS-08	17	7.56	6.30	1.10
MW-20	Cupboard Creek	VAS-03	23	FP	FP	FP
MW-29	Cupboard Creek	VAS-19	111	7.79	6.72	3.85
		Average Cupboard Creek Protection Zone Values		**7.68**	**6.51**	**2.48**
MW-02	Hayfield	HAS-02	33	0.27	8.22	NM
MW-02B	Hayfield	HAS-02	24	2.75	8.45	9.99
MW-03	Hayfield	HAS-02	12	7.30	9.61	10.44
MW-04	Hayfield	HAS-01	82	5.81	7.55	6.54
MW-08	Hayfield	HAS-03	12	7.45	8.30	8.65
MW-09	Hayfield	HAS-01	37	0.44	6.55	0.80
MW-10	Hayfield	HAS-03	27	5.70	7.74	7.25
MW-16	Hayfield	HAS-01	24	FP	8.92	FP
MW-18	Hayfield	HAS-03	2	FP	FP	FP
MW-30	Hayfield	HAS-01	15	NC	8.45	3.62
TW-55	Hayfield	HAS-01	40	2.36	8.84	NM
TW-59[a]	Hayfield	VAS-38	6	NM	9.70	9.70
TW-60	Hayfield	VAS-25	10	8.13	7.43	9.19
TW-64	Hayfield	HAS-03	132	4.43	4.42	8.21
TW-66	Hayfield	VAS-28	49	6.02	5.67	6.30
TW-67	Hayfield	VAS-11	14	8.02	9.60	10.64
TW-73	Hayfield	VAS-19	11	8.41	9.00	9.60
TW-96	Hayfield	HAS-03	78	8.68	9.17	9.72
			Average Hayfield Zone Values	**5.41**	**8.10**	**7.90**

Table 4. Dissolved Oxygen Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Site Area	Nearest Sparge Well (ft)	Distance to Nearest Sparge Well (ft)	DO (mg/L) 10/3/2017	DO (mg/L) 11/7/2017	DO (mg/L) 12/4/2017
MW-01	Shallow Bedrock	VBS-01	147	3.50	7.33	5.94
MW-01B	Shallow Bedrock	VBS-01	152	0.96	0.86	0.43
MW-11	Shallow Bedrock	VBS-01	368	NM	NM	NM
MW-22	Shallow Bedrock	VBS-03	115	0.67	4.74	1.35
			Average Shallow Bedrock Zone Values	**1.71**	**4.31**	**2.57**
			Average Residuum Values	**4.57**	**7.11**	**5.73**
			Average Bedrock Values	**1.25**	**3.93**	**2.89**

Notes:

[a] TW-59 could not be measured because the probe does not fit into the well because the polyvinyl chloride pipe has shifted in the vault.

[b] MW-03 could not be measured in September for health and safety reasons (fire ants).

Brown's and Cupboard Creek Protection Zones startup was March 6, 2017.

Hayfield Zone startup was May 9, 2017.

Shallow Bedrock Zone has not been started as of September 30, 2017. Measurements in September were baseline values.

DO = dissolved oxygen

FP = measurement not collected due to the presence of free product in the well

NC = measurement not collected due to insufficient volume of water in the well

NM = not measured

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-01	MW-01-072715			7/27/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-01-012716			1/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-01-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01-090717			9/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01-120517	12/4/2017	9.85	12/5/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-01B	MW-01B-080415			8/4/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-01B-012716			1/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	MW-01B-120116			12/1/2016	µg/L	1 U	1 U	**1.4**	**5.6**	1 U	1 U	**1.3**	--
	MW-01B-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01B-062817-FD			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01B-090717			9/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01B-120517	12/4/2017	10.24	12/5/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-02	MW-02-072715			7/27/2015	µg/L	**4,320**	625 U	**9,670**	**2,460**	5 U[b]	**171**	**74.7**	0.02 U
	MW-02-012616			1/26/2016	µg/L	**9,500**	**1,160**	**25,000**	**6,310**	50 U[b]	**285**	**139**	0.019 U
	--			11/28/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-02-062917			6/29/2017	µg/L	**8,040**	**833**	**27,100**	**9,890**	250 U[b]	250 U[b]	1,250 U[b]	--
	MW-02-090817			9/8/2017	µg/L	**2,340**	**181**	**7,120**	**8,510**	50 U[b]	50 U[b]	**389**	--
	MW-02-100417	10/3/2017	16.03	10/4/2017	µg/L	**3,510**	**306**	**11,900**	**11,200**	50 U[b]	**53.9**	250 U[b]	--
	MW-02-110817	11/7/2017	4.20	11/8/2017	µg/L	**850**	100 U	**1,370**	**3,520**	100 U[b]	100 U[b]	500 U[b]	--
	MW-02-120717	12/4/2017	2.54	12/7/2017	µg/L	**153**	**15.1**	**313**	**441**	1 U	**70.9**	**12.8**	--
MW-02B	MW-02B-080415			8/4/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-02B-D-080415			8/4/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.019 U
	--			1/19/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-02B-030116			3/1/2016	µg/L	1 U	1 U	**4.8**	**4.6**	1 U	1 U	1 U	0.019 U
	MW-02B-D-030116			3/1/2016	µg/L	1 U	1 U	**4.8**	**5.3**	1 U	1 U	1 U	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-02B-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-02B-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-02B-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-02B-120717	12/4/2017	24.56	12/7/2017	µg/L	1 U	1 U	**1.11**	3 U	1 U	1 U	5 U	--
MW-03	MW-03-072715			7/27/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-03-012516			1/25/2016	µg/L	**108**	**20.1**	**958**	**598**	1 U	1 U	**11.1**	0.02 U
	MW-03-120616			12/6/2016	µg/L	**61.1**	**25.1**	**229**	**330**	2 U	2 U	**3.6**	--
	MW-03-062917			6/29/2017	µg/L	**10.9**	1 U	**24.6**	**6.98**	1 U	**2.34**	5 U	--
	--			9/5/2017	--	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS
	--	10/3/2017	19.87	10/3/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-03-110817	11/7/2017	--*	11/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-03	MW-03-120517	12/4/2017	18.00	12/5/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-04	MW-04-072815			7/28/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.019 U
	MW-04-012516			1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-04-120616			12/6/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-04-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-04-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-04-090817-DUP			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-04-120717	12/4/2017	10.07	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-05	MW-05-072815			7/28/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.019 U
	MW-05-012516			1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-05-050317			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-100417	10/3/2017	17.03	10/4/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-110817	11/7/2017	17.18	11/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-120717	12/4/2017	16.55	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-06	MW-06-072815			7/28/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-06-012116			1/21/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-06-120216			12/2/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-06-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-06-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-06-120717	12/4/2017	15.45	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-06B	MW-06B-120717	12/4/2017	16.14	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-06B-D-120717	12/4/2017	16.14	12/7/2017	µg/L	1 U	1 U	**1.82**	3 U	1 U	1 U	5 U	--
MW-07	--			7/27/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-07-012116			1/21/2016	µg/L	**1,060**	**389**	**5,210**	**2,620**	40 U[b]	40 U[b]	40 U[b]	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-07-062917			6/29/2017	µg/L	**4,290**	**629**	**17,700**	**4,990**	250 U[b]	250 U[b]	1,250 U[b]	--
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/3/2017	13.20	10/3/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/7/2017	13.20	11/7/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	13.21	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-08	MW-08-072815			7/28/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-08-012616			1/26/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-08-120616			12/6/2016	µg/L	1 U	1 U	**14.4**	**7.1**	1 U	1 U	1 U	--
	MW-08-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

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Plantation Pipe Line Company

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Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-06	MW-08-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-08-120717	12/4/2017	10.47	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-09	--			7/27/2015	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			1/19/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			11/28/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-09-062917			6/29/2017	µg/L	**3,860**	**517**	**13,000**	**8,680**	200 U[b]	200 U[b]	1,000 U[b]	--
	--			9/5/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-09-120717	12/4/2017	3.05	12/7/2017	µg/L	**54.3**	**3.44**	**19.6**	**64.8**	1 U	**27.5**	5 U	--
MW-09B	MW-09B-120717	12/4/2017	9.15	12/7/2017	µg/L	**21.8**	**24.7**	**82.1**	**179**	1 U	**4.72**	**11.9**	--
MW-10	MW-10-072815			7/28/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.019 U
	MW-10-012616			1/26/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	MW-10-120616			12/6/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-10-050317			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-050317-FD			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-100417	10/3/2017	17.33	10/4/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-110817	11/7/2017	12.64	11/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-120717	12/4/2017	10.85	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-11	--			7/27/2015	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-11-012616			1/26/2016	µg/L	**10,600**	**948**	**24,400**	**4,700**	10 U[b]	**432**	**123**	0.019 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-11-062817			6/28/2017	µg/L	**10,900**	**2,140**	**29,600**	**11,700**	100 U[b]	**147**	500 U[b]	--
	--			9/5/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	12/4/2017	29.86	12/4/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
MW-12	MW-12-072815			7/28/2015	µg/L	**51.3**	5 U	**22.9**	**39.2**	5 U[b]	5 U	5 U	0.02 U
	--			1/19/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			11/28/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			3/13/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			3/20/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			3/31/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			4/6/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-12-062817			6/28/2017	µg/L	**1,190**	**467**	**7,910**	**5,100**	50 U[b]	50 U[b]	250 U[b]	--
	MW-12-090817			9/8/2017	µg/L	**648**	**436**	**3,470**	**4,440**	100 U[b]	100 U[b]	500 U[b]	--
	MW-12-120617	12/4/2017	15.55	12/6/2017	µg/L	**367**	**137**	**1,540**	**4,660**	10 U[b]	10 U	**54.4**	--
MW-12B	MW-12B-012616			1/26/2016	µg/L	**228**	**31.4**	**193**	**532**	1 U	**5.4**	**14.6**	0.019 U

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Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte:	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-12B	MW-12B-113016			11/30/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-12B-031417			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-12B-031417-FD			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-12B-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-12B-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-12B-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-12B-062817			6/28/2017	µg/L	**30.1**	1 U	**7.28**	**14.3**	1 U	**11.8**	5 U	--
	MW-12B-090817			9/8/2017	µg/L	**126**	**3.81**	**16.8**	**256**	1 U	1 U	**12**	--
	MW-12B-120617	12/4/2017	16.12	12/6/2017	µg/L	**1.01**	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-13	--			7/27/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-13-012816			1/28/2016	µg/L	**2**	1 U	**12.5**	**6.9**	1 U	1 U	1 U	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-13-062917			6/29/2017	µg/L	**1.18**	1 U	**3.39**	3 U	1 U	1 U	5 U	--
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	21.87	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-13B	MW-13B-012816			1/28/2016	µg/L	**367**	1 U	**5.6**	**59.5**	1 U	**119**	1 U	0.02 U
	MW-13B-D-012816			1/28/2016	µg/L	**405**	1 U	**6.1**	**59.1**	1 U	**108**	1 U	0.02 U
	MW-13B-113016			11/30/2016	µg/L	**550**	**5.1**	**21.2**	**140**	5 U[b]	**158**	**7.9**	--
	MW-13B-062817			6/28/2017	µg/L	**308**	**3.09**	**10.3**	**103**	1 U	**121**	**5.13**	--
	MW-13B-090817			9/8/2017	--	NS-SL	NS-SL	NS-SL	NS-SL	NS-SL	NS-SL	NS-SL	NS-SL
	MW-13B-110817	11/7/2017	23.08	11/8/2017	µg/L	**325**	**3.42**	**19**	**91.6**	1 U	**173**	**5.55**	--
	MW-13B-D-110817	11/7/2017	23.08	11/8/2017	µg/L	**356**	**3.85**	**20.8**	**100**	1 U	**168**	**6.61**	--
	MW-13B-120617	12/4/2017	22.66	12/6/2017	µg/L	**269**	**3.97**	**24.4**	**100**	1 U	**140**	**8.83**	--
MW-14	MW-14-072815			7/28/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-14-012816			1/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	MW-14-113016			11/30/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-14-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-14-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-14-120617	12/4/2017	17.62	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-14B	MW-14B-052516			5/25/2016	µg/L	**5**	1 U	1 U	**4.4**	1 U	**17.2**	1 U	0.02 U
	MW-14B-052516-FD			5/25/2016	µg/L	**4.6**	1 U	1 U	**4.1**	1 U	**23.6**	1 U	0.02 U
	MW-14B-113016			11/30/2016	µg/L	**10.5**	1 U	**1.1**	**5.5**	1 U	**19.7**	1 U	--
	MW-14B-062817			6/28/2017	µg/L	**38.1**	**1.34**	**2.56**	**19.1**	1 U	**36.2**	5 U	--
	MW-14B-090817			9/8/2017	µg/L	**6.81**	1 U	1 U	**6.67**	1 U	**18.7**	5 U	--
	MW-14B-120617	12/4/2017	19.22	12/6/2017	µg/L	**8.82**	1 U	1 U	**6.91**	1 U	**24.4**	5 U	--
MW-15	MW-15-080415			8/4/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.019 U
	MW-15-012816			1/28/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-15-120716			12/7/2016	µg/L	**3,680**	**139**	**422**	**2,280**	25 U[b]	**188**	**43.8**	--
	MW-15-031417			3/14/2017	µg/L	**1,960**	**72**	**324**	**1,320**	25 U[b]	**161**	125 U[b]	--

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-15	MW-15-031417-FD			3/14/2017	µg/L	**1,820**	**61**	**286**	**1,120**	25 U[b]	**153**	125 U[b]	--
	MW-15-032017			3/20/2017	µg/L	**3,390**	**103**	**505**	**2,460**	50 U[b]	**194**	250 U[b]	--
	MW-15-033117			3/31/2017	µg/L	**2,850**	**65.4**	**444**	**1,860**	20 U[b]	**221**	100 U[b]	--
	MW-15-040617			4/6/2017	µg/L	**1,790**	**60.6**	**465**	**886**	25 U[b]	**181**	125 U[b]	--
	MW-15-062817			6/28/2017	µg/L	**73**	25 U	**29**	**110**	25 U[b]	**91.8**	125 U[b]	--
	MW-15-090817			9/8/2017	µg/L	**454**	**24**	**567**	**338**	5 U[b]	**193**	25 U[b]	--
	MW-15-120617	12/4/2017	13.66	12/6/2017	µg/L	1 U	1 U	**2**	**5**	1 U	**140**	5 U	--
MW-15B	MW-15B-080415			8/4/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.019 U
	MW-15B-012816			1/28/2016	µg/L	**4.8**	1 U	**2**	**3.9**	1 U	1 U	1 U	0.02 U
	MW-15B-113016			11/30/2016	µg/L	**337**	**34**	**565**	**194**	5 U[b]	**26.7**	**5**	--
	MW-15B-031417			3/14/2017	µg/L	**2,160**	**248**	**4,580**	**1,500**	100 U[b]	**118**	500 U[b]	--
	MW-15B-032017			3/20/2017	µg/L	**615**	**88.6**	**1,270**	**555**	25 U[b]	**67.5**	125 U[b]	--
	MW-15B-033117			3/31/2017	µg/L	**1,630**	**205**	**3,240**	**1,180**	50 U[b]	**115**	250 U[b]	--
	MW-15B-040617			4/6/2017	µg/L	**1,020**	**132**	**2,020**	**789**	25 U[b]	**84.7**	125 U[b]	--
	MW-15B-040617-FD			4/6/2017	µg/L	**973**	**124**	**1,910**	**742**	25 U[b]	**82.9**	125 U[b]	--
	MW-15B-062817			6/28/2017	µg/L	**1,510**	**145**	**3,520**	**1,280**	100 U[b]	100 U[b]	500 U[b]	--
	MW-15B-090817			9/8/2017	µg/L	**1,820**	**164**	**3,560**	**1,210**	50 U[b]	**133**	250 U[b]	--
	MW-15B-120617	12/4/2017	16.25	12/6/2017	µg/L	**1,760**	**239**	**3,630**	**1,380**	1 U	**135**	**37.6**	--
	MW-15B-D-120617	12/4/2017	16.25	12/6/2017	µg/L	**491**	**56**	**1,050**	**408**	1 U	**117**	**35.4**	--
MW-16	--			7/27/2015	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			1/19/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			11/28/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-16-062917			6/29/2017	µg/L	**12,900**	**1,770**	**36,400**	**12,500**	500 U[b]	**1,740**	2,500 U[b]	--
	--			9/5/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	12/4/2017	7.00	12/7/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
MW-17	--			7/27/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			1/19/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/13/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/20/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/31/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			4/6/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			6/26/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	10.85	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-17B	MW-17B-030116			3/1/2016	µg/L	**6,480**	**488**	**11,900**	**2,870**	**5**	**742**	**104**	0.019 U
	MW-17B-120116			12/1/2016	µg/L	**9,370**	**761**	**16,900**	**4,500**	100 U[b]	**954**	**112**	--

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-17B	MW-17B-031317			3/13/2017	µg/L	**7,350**	**770**	**14,100**	**4,510**	200 U[b]	**944**	1,000 U[b]	--
	MW-17B-032017			3/20/2017	µg/L	**10,700**	**1,360**	**21,400**	**7,910**	**323**	**1,210**	1,000 U[b]	--
	MW-17B-033117			3/31/2017	µg/L	**9,190**	**900**	**17,500**	**5,910**	100 U[b]	**1,200**	500 U[b]	
	MW-17B-033117FD			3/31/2017	µg/L	**9,190**	**956**	**18,200**	**6,330**	100 U[b]	**1,210**	500 U[b]	--
	MW-17B-040617			4/6/2017	µg/L	**7,780**	**833**	**14,900**	**5,330**	200 U[b]	**991**	1,000 U[b]	--
	MW-17B-062817			6/28/2017	µg/L	**11,200**	**704**	**21,600**	**5,650**	200 U[b]	**1,150**	1,000 U[b]	--
	MW-17-090817			9/8/2017	µg/L	**11,400**	**1,240**	**23,900**	**8,460**	20 U[b]	**1,330**	**201**	--
	MW-17B-120717	12/4/2017	17.05	12/7/2017	µg/L	**10,600**	**1,060**	**14,900**	**9,210**	10 U[b]	**1,140**	**178**	--
MW-18	--			7/27/2015	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			1/19/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			11/28/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			6/26/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			9/5/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	12/4/2017	11.64	12/4/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
MW-19	--			7/27/2015	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-19-012116			1/21/2016	µg/L	**22.8**	**18.5**	**256**	**437**	1 U	1 U	**10.7**	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/13/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/20/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
				3/31/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-19-040617			4/6/2017	µg/L	**9,810**	**1,030**	**25,000**	**10,300**	250 U[b]	250 U[b]	1,250 U[b]	--
	MW-19-062917			6/29/2017	µg/L	**9,410**	**683**	**27,200**	**9,580**	200 U[b]	**320**	1,000 U[b]	--
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	11.77	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-20	--			7/27/2015	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			1/19/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			11/28/2016	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			3/13/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			3/20/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			3/31/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			4/6/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			5/4/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			6/26/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			7/17/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			8/1/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--			9/5/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	10/3/2017	13.79	10/4/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	11/7/2017	13.61	11/8/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-20	--	12/4/2017	14.64	12/4/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
MW-21	MW-21-072715			7/27/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-21-012116			1/21/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-21-D-012116			1/21/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	MW-21-112916			11/29/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-21-031417			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-032117			3/21/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-062817-FD			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-120717	12/4/2017	17.42	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-22	--			7/27/2015	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-22-012116			1/21/2016	µg/L	**19.8**	**3.4**	**47.2**	**37.4**	1 U	1 U	1 U	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			5/3/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-22-062917			6/29/2017	µg/L	**234**	10 U	**125**	30 U	10 U[b]	10 U	50 U[b]	--
	--			7/17/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			8/1/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/3/2017	9.94	10/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/7/2017	9.96	11/8/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	9.99	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-23	MW-23-072715			7/27/2015	µg/L	5 U[b]	5 U	**7.5**	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-23D-072715			7/27/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-23-012016			1/20/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	MW-23-120216			12/2/2016	µg/L	**450**	5 U	**14.6**	**336**	5 U[b]	**46.4**	**5.9**	--
	MW-23-031317			3/13/2017	µg/L	**709**	5 U	**23.1**	**548**	5 U[b]	**127**	25 U[b]	--
	MW-23-032017			3/20/2017	µg/L	**642**	10 U	**12.7**	**579**	10 U[b]	**108**	50 U[b]	--
	MW-23-032017-FD			3/20/2017	µg/L	**620**	10 U	**12.0**	**548**	10 U[b]	**110**	50 U[b]	--
	MW-23-033117			3/31/2017	µg/L	**685**	10 U	**16.5**	**624**	10 U[b]	**130**	50 U[b]	--
	MW-23-040617			4/6/2017	µg/L	**432**	1 U	**6.6**	**254**	1 U	**76.5**	5 U	--
	MW-23-062817			6/28/2017	µg/L	**131**	10 U	10 U	**117**	10 U[b]	**19.1**	5 U	--
	MW-23-071717			7/17/2017	µg/L	**1.2**	1 U	1 U	3 U	1 U	**1** U	5 U	--
	MW-23-080117			8/1/2017	µg/L	**132**	1 U	**6.2**	**252**	1 U	**48.1**	5 U	--
	MW-23-090717			9/7/2017	µg/L	**1,110**	**9.25**	**43.1**	**999**	5 U[b]	**141**	25 U[b]	--
	MW-23-100417	10/3/2017	11.52	10/4/2017	µg/L	**703**	10 U	**17.5**	**515**	10 U[b]	**90.1**	50 U[b]	--

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-23	MW-23-100417-DUP	10/3/2017	11.52	10/4/2017	µg/L	**543**	**2.65**	**11.5**	**424**	1 U	**69.2**	5 U	--
	MW-23-110817	11/7/2017	11.10	11/8/2017	µg/L	**788**	10 U	**21.5**	**580**	10 U[b]	**118**	50 U[b]	--
	MW-23-120617	12/4/2017	11.13	12/6/2017	µg/L	**693**	10 U	**17.0**	**408**	10 U[b]	**99.5**	50 U[b]	--
MW-23B	MW-23B-080515			8/5/2015	µg/L	5 U[b]	5 U	**7.0**	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-23B-012016			1/20/2016	µg/L	1 U	1 U	**3.9**	**7.1**	1 U	1 U	1 U	0.02 U
	MW-23B-120216			12/2/2016	µg/L	1 U	**1.4**	**3.5**	**11.0**	1 U	1 U	**1.3**	--
	MW-23B-031317			3/13/2017	µg/L	1 U	**1.11**	**2.63**	**8.86**	1 U	1 U	5 U	--
	MW-23B-032017			3/20/2017	µg/L	1 U	**1.55**	**2.98**	**11.7**	1 U	1 U	5 U	--
	MW-23B-033117			3/31/2017	µg/L	1 U	**1.24**	**2.41**	**8.86**	1 U	1 U	5 U	--
	MW-23B-040617			4/6/2017	µg/L	1 U	**1.21**	**2.41**	**9.23**	1 U	1 U	5 U	--
	MW-23B-062817			6/28/2017	µg/L	1 U	1 U	**1.73**	**6.20**	1 U	1 U	5 U	--
	MW-23B-090717			9/7/2017	µg/L	1 U	1 U	**1.65**	**5.40**	1 U	1 U	5 U	--
	MW-23B-120617	12/4/2017	11.45	12/6/2017	µg/L	1 U	**1.2**	**2.48**	**7.93**	1 U	1 U	5 U	--
MW-24	MW-24-080515			8/5/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-24-012616			1/26/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	MW-24-120716			12/7/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-24-062817			6/28/2017	µg/L	**28.8**	**3.96**	**1.7**	**22.2**	1 U	1 U	5 U	--
	MW-24-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-24-120617	12/4/2017	4.51	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-24B	MW-24B-080515			8/5/2015	µg/L	5 U[b]	5 U	5 U	10 U	5 U[b]	5 U	5 U	0.02 U
	MW-24B-012616			1/26/2016	µg/L	1 U	1 U	**3.3**	**6.8**	1 U	1 U	1 U	0.019 U
	MW-24B-120716			12/7/2016	µg/L	1 U	1 U	**2.9**	**1.6**	1 U	1 U	1 U	--
	MW-24B-062817			6/28/2017	µg/L	**28.9**	**3.89**	**1.77**	**20.7**	1 U	1 U	5 U	--
	MW-24B-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-24B-120617	12/4/2017	5.69	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-25	MW-25-012716			1/27/2016	µg/L	**101**	1 U	1 U	**115**	1 U	1 U	**1.8**	0.02 U
	MW-25-012716			12/1/2016	µg/L	**675**	**30.2**	**15.3**	**619**	5 U[b]	**5.9**	**29.7**	--
	MW-25-031417			3/14/2017	µg/L	**627**	**28.6**	**10.1**	**668**	10 U[b]	10 U	50 U[b]	--
	MW-25-032017			3/20/2017	µg/L	**604**	**20.4**	20 U	**680**	20 U[b]	20 U	100 U[b]	--
	MW-25-033117			3/31/2017	µg/L	**673**	**30.1**	**12**	**736**	10 U[b]	10 U	50 U[b]	--
	MW-25-033117FD			3/31/2017	µg/L	**790**	**35.4**	**12.5**	**861**	10 U[b]	10 U	50 U[b]	--
	MW-25-040617			4/6/2017	µg/L	**558**	**24.3**	10 U	**682**	10 U[b]	10 U	50 U[b]	--
	MW-25-050317			5/3/2017	µg/L	**519**	**49.3**	**10.1**	**614**	1 U	1 U	**43.2**	--
	MW-25-062817			6/28/2017	µg/L	**431**	**34.8**	10 U	**520**	10 U[b]	10 U	50 U[b]	--
	MW-25-071717			7/17/2017	µg/L	**230**	**13.4**	10 U	**264**	10 U[b]	10 U	50 U[b]	--
	MW-25-080117			8/1/2017	µg/L	**234**	**14.4**	10 U	**277**	10 U[b]	10 U	50 U[b]	--
	MW-25-090817			9/8/2017	µg/L	**200**	**12.2**	**1.27**	**214**	1 U	1 U	**10.6**	--
	MW-25-100417	10/3/2017	8.52	10/4/2017	µg/L	**173**	**16.2**	**1.73**	**276**	1 U	**1.1**	**6.77**	--

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte:	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-25	MW-25-110817	11/7/2017	8.35	11/8/2017	µg/L	**82.9**	**7.21**	1 U	**143**	1 U	1 U	**7.74**	--
	MW-25-120617	12/4/2017	7.10	12/6/2017	µg/L	**23.8**	**1.84**	1 U	**60.5**	1 U	1 U	5 U	--
MW-25B	MW-25B-012716			1/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-25B-120116			12/1/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-25B-031417			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-090817-DUP			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-120617	12/4/2017	5.30	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-26	MW-26-012016			1/20/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	MW-26-120116			12/1/2016	µg/L	1 U	1 U	**2.3**	1 U	1 U	1 U	1 U	--
	MW-26-031417			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-040617-FD			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-050317			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-090717			9/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-100417	10/3/2017	7.71	10/4/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-110817	11/7/2017	6.56	11/8/2017	µg/L	1 U	1 U	**1.17**	3 U	1 U	1 U	5 U	--
	MW-26-120617	12/4/2017	6.83	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-26B	MW-26B-012016			1/20/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-26B-120116			12/1/2016	µg/L	1 U	1 U	1 U	**1.3**	1 U	1 U	1 U	--
	MW-26B-031417			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-090717			9/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-090717-DUP			9/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-120617	12/4/2017	9.17	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-27	MW-27-012716			1/27/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.019 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-27	MW-27-062817			6/28/2017	µg/L	**2.69**	**4.06**	**3.88**	**35.9**	1 U	1 U	5 U	--
	MW-27-090817			9/8/2017	µg/L	**4.96**	**5.75**	**2.13**	**14.8**	1 U	1 U	5 U	--
	MW-27-120517	12/4/2017	27.46	12/5/2017	µg/L	**6.48**	**8.23**	**12.5**	**20.5**	1 U	1 U	5 U	--
MW-27B	MW-27B-051216			5/12/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U
	MW-27B-120216			12/2/2016	µg/L	1 U	**5.3**	**9.1**	**45.7**	1 U	1 U	**8.9**	--
	MW-27B-062817			6/28/2017	µg/L	1 U	**4.04**	**4.04**	**32.7**	1 U	1 U	**6.09**	--
	MW-27B-090717			9/7/2017	µg/L	1 U	**3.73**	**6.35**	**30.3**	1 U	1 U	**7.54**	--
	MW-27B-120517	12/4/2017	30.70	12/5/2017	µg/L	1 U	**3.1**	**5.91**	**24.8**	1 U	1 U	**5.81**	--
	MW-27B-D-120517	12/4/2017	30.70	12/5/2017	µg/L	1 U	**3.96**	**7.24**	**31.6**	1 U	1 U	**7.09**	--
MW-28	MW-28-012716			1/27/2016	µg/L	**542**	**430**	**3,850**	**3,370**	1 U	**4.8**	**96.3**	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-28-031517			3/15/2017	µg/L	**1,120**	**68.9**	**3,350**	**1,370**	50 U[b]	50 U[b]	250 U	--
	--			3/20/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/31/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			4/6/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-28-050317			5/3/2017	µg/L	**65.9**	**14.5**	**263**	**1,010**	1 U	**2.94**	**9.33**	--
	MW-28-062817			6/28/2017	µg/L	**199**	**55**	**108**	**546**	1 U	1 U	**10.1**	--
	MW-28-071717			7/17/2017	µg/L	**219**	**64.2**	**85.8**	**422**	1 U	1 U	**14.7**	--
	MW-28-080217			8/2/2017	µg/L	**219**	**48.7**	**52.7**	**187**	1 U	**3.46**	**11.9**	--
	MW-28-090817			9/8/2017	µg/L	**130**	**16.2**	**175**	**388**	1 U	**4.77**	**13.6**	--
	--	10/3/2017	23.80	10/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/7/2017	23.78	11/7/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	23.94	12/7/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-29	MW-29-012116			1/21/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	MW-29-112916			11/29/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-29-031317			3/13/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-050317			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-090717			9/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-100417	10/3/2017	10.85	10/4/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-110817	11/7/2017	10.06	11/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-120617	12/4/2017	10.39	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-30	MW-30-012516			1/25/2016	µg/L	1 U	1 U	1 U	2 U	1 U	1 U	1 U	0.02 U
	--			11/28/2016	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-30	MW-30-050417			5/4/2017	µg/L	**104**	**3.98**	**341**	**161**	1 U	1 U	5 U	--
	MW-30-062917			6/29/2017	µg/L	**646**	25 U	**1,630**	**736**	25 U[b]	25 U	125 U[b]	--
	MW-30-071717			7/17/2017	µg/L	**922**	25 U	**2,050**	**1,320**	25 U[b]	25 U	125 U[b]	--
	MW-30-080217			8/2/2017	µg/L	**1,240**	**25.9**	**1,020**	**2,230**	25 U[b]	25 U	125 U[b]	--
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/3/2017	14.58	10/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/7/2017	14.60	11/8/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	14.47	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-31	MW-31-051016			5/10/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U
	MW-31-112916			11/29/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-31-050317			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-D-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-100417	10/3/2017	22.70	10/4/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-110817	11/7/2017	20.81	11/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-120617	12/4/2017	20.05	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-31B	MW-31B-051116			5/11/2016	µg/L	1 U	1 U	**2.7**	1 U	1 U	1 U	1 U	0.02 U
MW-32	MW-32-051016			5/10/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U
	MW-32-120616			12/6/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-32-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-32-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-32-120717	12/4/2017	10.02	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-33	MW-33-051016			5/10/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U
MW-33T	MW-33T-051016			5/10/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U
	MW-33T-120617	12/4/2017	27.12	12/6/2017	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
MW-34	MW-34-031517			3/15/2017	--	**978**	**33.0**	**143**	**218**	10 U[b]	**157**	50 U[b]	--
	MW-34-032017			3/20/2017	µg/L	**801**	10.0 U	**113**	**305**	10 U[b]	**149**	50 U[b]	--
	MW-34-033117			3/31/2017	µg/L	**728**	10.0 U	**81.4**	**224**	10 U[b]	**152**	50 U[b]	--
	MW-34-040617			4/6/2017	µg/L	**860**	**1.7**	**58.6**	**181**	1 U	**123**	5 U	--
	MW-34-050317			5/3/2017	µg/L	**287**	**2.62**	**27.2**	**130**	1 U	**124**	5 U	--
	MW-34-062817			6/28/2017	µg/L	**167**	**4.59**	**9.3**	**39.2**	1 U	**68.3**	5 U	--
	MW-34-071717			7/17/2017	µg/L	**137**	**5.83**	**19.8**	**69.5**	1 U	**73.8**	5 U	--
	MW-34-080117			8/1/2017	µg/L	**517**	10 U	**31.7**	**110**	10 U[b]	**98.3**	50 U[b]	--
	MW-34-090817			9/8/2017	µg/L	**1,430**	**6.01**	**98.0**	**264**	1 U	**191**	**7.33**	--
	MW-34-100417	10/3/2017	2.76	10/4/2017	µg/L	**919**	10 U	**36.8**	**157**	10 U[b]	**151**	50 U[b]	--

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-34	MW-34-100417-DUP	10/3/2017	2.76	10/4/2017	µg/L	**846**	**1.49**	**40.8**	**186**	1 U	**148**	5 U	--
	MW-34-110817	11/7/2017	2.48	11/8/2017	µg/L	**338**	10 U	**15.3**	**140**	10 U[b]	**266**	50 U[b]	--
	MW-34-120617	12/4/2017	2.52	12/6/2017	µg/L	**169**	10 U	**29.7**	**70**	10 U[b]	**218**	50 U[b]	--
MW-35	MW-35-051016			5/10/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U
	MW-35-120116			12/1/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-35-031417			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-050317			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-100417	10/3/2017	10.34	10/4/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-110817	11/7/2017	8.94	11/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-120617	12/4/2017	10.41	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-36	MW-36-051116			5/11/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U
	MW-36-112916			11/29/2016	µg/L	**1.3**	1 U	**6.5**	**1.1**	1 U	1 U	1 U	--
	MW-36-D-112916			11/29/2016	µg/L	1 U	1 U	**5.4**	1 U	1 U	1 U	1 U	--
	MW-36-062917			6/29/2017	µg/L	**2.11**	1 U	**2.28**	3 U	1 U	1 U	5 U	--
	MW-36-090817			9/8/2017	µg/L	**4.75**	1 U	**6.16**	**4.62**	1 U	1 U	5 U	--
	MW-36-120717	12/4/2017	20.14	12/7/2017	µg/L	**17.5**	1 U	**30.2**	**14.4**	1 U	1 U	5 U	--
MW-36B	MW-36B-051116			5/11/2016	µg/L	1 U	1 U	**7.2**	1 U	1 U	1 U	1 U	0.02 U
	MW-36B-112916			11/29/2016	µg/L	1 U	1 U	**1.6**	1 U	1 U	1 U	1 U	--
	MW-36B-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-36B-062917-FD			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-36B-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-36B-120717	12/4/2017	20.90	12/7/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-37	MW-37-113016			11/30/2016	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--
	MW-37-062817			6/28/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**1.44**	5 U	--
	MW-37-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**1.5**	5 U	--
	MW-37-120617	12/4/2017	3.47	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**2.93**	5 U	--
MW-38	MW-38-113016			11/30/2016	µg/L	1 U	1 U	1 U	1 U	1 U	**5.5**	1 U	--
	MW-38-031417			3/14/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**9.14**	5 U	--
	MW-38-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**7.55**	5 U	--
	MW-38-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**10.2**	5 U	--
	MW-38-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**8.06**	5 U	--
	MW-38-050317			5/3/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**9.08**	5 U	--

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte:	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-38	MW-38-062817			6/28/2017	µg/L	**9.71**	**1.17**	1 U	**6.63**	1 U	1 U	5 U	--
	MW-38-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**8.59**	5 U	--
	MW-38-071717-FD			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**9.78**	5 U	--
	MW-38-080117			8/1/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**7.25**	5 U	--
	MW-38-090817			9/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**12.9**	5 U	--
	MW-38-100417	10/3/2017	2.23	10/4/2017	µg/L	**1.75**	1 U	1 U	3 U	1 U	**11.2**	5 U	--
	MW-38-110817	11/7/2017	1.88	11/8/2017	µg/L	**4.48**	1 U	1 U	**12.4**	1 U	**29.2**	5 U	--
	MW-38-120617	12/4/2017	2.01	12/6/2017	µg/L	**102**	1 U	1 U	**86.1**	1 U	**38**	5 U	--
MW-39	MW-39-120716			12/7/2016	µg/L	**6,320**	**682**	**1,290**	**3,650**	50 U[b]	**311**	**86**	--
	MW-39-031417			3/14/2017	µg/L	**6,370**	**431**	**2,200**	**3,700**	10 U[b]	**199**	**117**	--
	MW-39-032017			3/20/2017	µg/L	**7,340**	**704**	**2,990**	**4,050**	100 U[b]	**248**	500 U[b]	--
	MW-39-033117			3/31/2017	µg/L	**7,540**	**899**	**3,140**	**4,400**	50 U[b]	**272**	250 U[b]	--
	MW-39-040617			4/6/2017	µg/L	**6,180**	**754**	**3,280**	**3,860**	50 U[b]	**257**	250 U[b]	--
	MW-39-062817			6/28/2017	µg/L	**5,470**	**58**	**3,360**	**3,900**	20 U[b]	**239**	100 U[b]	--
	MW-39-071717			7/17/2017	µg/L	**4,690**	100 U	**3,760**	**4,580**	100 U[b]	**344**	500 U[b]	--
	MW-39-080117			8/1/2017	µg/L	**4,630**	100 U	**2,880**	**4,740**	100 U[b]	**348**	500 U[b]	--
	MW-39-090817			9/8/2017	µg/L	**3,380**	**10.7**	**1,040**	**2,740**	1 U	**376**	**15.6**	--
	MW-39-100417	10/3/2017	3.75	10/4/2017	µg/L	**1,560**	50 U	**365**	**1,350**	50 U[b]	**305**	250 U[b]	--
	MW-39-110817	11/7/2017	4.89	11/8/2017	µg/L	**878**	50 U	**123**	**368**	50 U[b]	**442**	250 U[b]	--
	MW-39-120617	12/4/2017	5.72	12/6/2017	µg/L	**345**	50 U	**69**	**150**	50 U[b]	**355**	250 U[b]	--
	MW-39-D-120617	12/4/2017	5.72	12/6/2017	µg/L	**286**	1 U	**31**	**131**	1 U	**353**	5 U	--
MW-40	MW-40-120716			12/7/2016	µg/L	**6,730**	**588**	**7,460**	**3,390**	50 U[b]	**373**	**64.8**	--
	MW-40-031417			3/14/2017	µg/L	**11,600**	**1,280**	**16,100**	**7,260**	50 U[b]	**691**	250 U[b]	--
	MW-40-032017			3/20/2017	µg/L	**12,300**	**1,330**	**19,600**	**7,500**	200 U[b]	**654**	1,000 U[b]	--
	MW-40-033117			3/31/2017	µg/L	**13,300**	**1,500**	**19,500**	**8,070**	100 U[b]	**727**	500 U[b]	--
	MW-40-040617			4/6/2017	µg/L	**10,400**	**1,180**	**16,200**	**6,570**	200 U[b]	**650**	1,000 U[b]	--
	MW-40-062817			6/28/2017	µg/L	**9,250**	**1,030**	**19,200**	**6,540**	500 U[b]	**590**	2,500 U[b]	--
	MW-40-071717			7/17/2017	µg/L	**11,400**	**1,210**	**25,300**	**7,430**	500 U[b]	**727**	2,500 U[b]	--
	MW-40-080117			8/1/2017	µg/L	**12,000**	**1,120**	**23,200**	**8,070**	500 U[b]	**631**	2,500 U[b]	--
	MW-40-090817			9/8/2017	µg/L	**14,300**	**1,250**	**28,700**	**9,250**	20 U[b]	**716**	**219**	--
	MW-40-100417	10/3/2017	1.95	10/4/2017	µg/L	**13,800**	1,000 U[b]	**28,800**	**9,530**	1,000 U[b]	1,000 U[b]	5,000 U[b]	--
	MW-40-110817	11/7/2017	2.11	11/8/2017	µg/L	**13,500**	1,000 U[b]	**23,000**	**9,290**	1,000 U[b]	1,000 U[b]	5,000 U[b]	--
	MW-40-120617	12/4/2017	3.43	12/6/2017	µg/L	**14,300**	1,000 U[b]	**22,300**	**10,100**	1,000 U[b]	1,000 U[b]	5,000 U[b]	--
MW-41	MW-41-120716			12/7/2016	µg/L	**212**	2 U	2 U	**155**	2 U	**6.7**	**5.6**	--
	MW-41-031417			3/14/2017	µg/L	**469**	**1.78**	1 U	**275**	1 U	**4.34**	**18.1**	--
	MW-41-032017			3/20/2017	µg/L	**424**	**2.62**	1 U	**342**	1 U	1 U	**16.9**	--

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-41	MW-41-033117			3/31/2017	µg/L	**449**	5 U	5 U	**343**	5 U[b]	5 U	25 U[b]	--
	MW-41-040617			4/6/2017	µg/L	**470**	**2.06**	1 U	**258**	1 U	**3.84**	**10.6**	--
	MW-41-062817			6/28/2017	µg/L	**292**	**8.83**	**2.09**	**271**	1 U	**3.36**	**13.3**	--
	MW-41-071717			7/17/2017	µg/L	**487**	**15.8**	**3.09**	**366**	1 U	**3.62**	**27.9**	--
	MW-41-080117			8/1/2017	µg/L	**371**	10 U	10 U	**260**	10 U[b]	10 U	50 U[b]	--
	MW-41-090817			9/8/2017	µg/L	**189**	**1.51**	1 U	**90**	1 U	**3.74**	5 U	--
	MW-41-100417	10/3/2017	4.37	10/4/2017	µg/L	**93.5**	1 U	1 U	**59.9**	1 U	**1.84**	5 U	--
	MW-41-110817	11/7/2017	4.39	11/8/2017	µg/L	**99.6**	1 U	1 U	**56.6**	1 U	**2.46**	**5.68**	--
	MW-41-120617	12/4/2017	5.55	12/6/2017	µg/L	**27.6**	1 U	1 U	**11.1**	1 U	**1.62**	5 U	--
MW-42	MW-42-120716			12/7/2016	µg/L	**3.8**	1 U	1 U	**2.7**	1 U	1 U	1 U	--
	MW-42-031417			3/14/2017	µg/L	**19.3**	1 U	1 U	3 U	1 U	**1.12**	5 U	--
	MW-42-032017			3/20/2017	µg/L	**59.6**	1 U	1 U	**16.9**	1 U	**1.24**	5 U	--
	MW-42-033117			3/31/2017	µg/L	**135**	1 U	1 U	**73.8**	1 U	1 U	**5.19**	--
	MW-42-040617			4/6/2017	µg/L	**93.5**	1 U	1 U	**53.3**	1 U	**1.18**	5 U	--
	MW-42-062817			6/28/2017	µg/L	**15.1**	1 U	1 U	**11.7**	1 U	**1.25**	5 U	--
	MW-42-090817			9/8/2017	µg/L	**143**	1 U	1 U	**100**	1 U	**1.51**	**5.52**	--
	MW-42-120617	12/4/2017	5.26	12/6/2017	µg/L	**9.82**	1 U	1 U	**45**	1 U	**1.24**	5 U	--
MW-43	MW-43-110817	11/7/2017	4.45	11/8/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43-120617	12/4/2017	4.50	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-43B	MW-43B-120617	12/4/2017	4.08	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-44	--			3/13/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-44-062917			6/29/2017	µg/L	**1.06**	1 U	**7.12**	**3.11**	1 U	1 U	5 U	--
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	12/4/2017	9.40	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-44B	MW-44B-031317			3/13/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-44B-062817			6/28/2017	µg/L	1 U	1 U	**2.39**	3 U	1 U	1 U	5 U	--
	MW-44B-090717			9/7/2017	µg/L	1 U	1 U	**3.07**	3 U	1 U	1 U	5 U	--
	MW-44B-120517	12/4/2017	14.32	12/5/2017	µg/L	1 U	1 U	**2.27**	3 U	1 U	1 U	5 U	--
MW-45	--			3/13/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/20/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			3/31/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			4/6/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--			5/3/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-45-062917			6/29/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45-071717			7/17/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45-080217			8/2/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	10/3/2017	14.25	10/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	11/7/2017	14.24	11/8/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW

Table 5. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Gauging Date	Depth to Water	Sample Date	Analyte: Units	Benzene	Ethylbenzene	Toluene	Total Xylenes	1,2-DCA	MTBE	Naphthalene	EDB
				RBSL[a]:	µg/L	5.0	700	1,000	10,000	5.0	40	25	0.05
MW-45	--	12/4/2017	14.22	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
MW-45B	MW-45B-031317			3/13/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45B-032017			3/20/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45B-033117			3/31/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45B-040617			4/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45B-062817			6/28/2017	µg/L	1 U	1 U	**1.73**	3 U	1 U	1 U	5 U	--
	--			9/5/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-45B-120717	12/4/2017	15.93	12/7/2017	µg/L	1 U	1 U	**3.26**	3 U	1 U	1 U	5 U	--
MW-46	MW-46-120617	12/4/2017	9.48	12/6/2017	µg/L	**4.97**	1 U	1 U	**7.74**	1 U	**85.5**	5 U	--
MW-47	MW-47-120617	12/4/2017	17.75	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-48B	MW-48B-120617	12/4/2017	18.22	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	**2.92**	5 U	--
MW-49	MW-49-120617	12/4/2017	20.29	12/6/2017	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-50B	MW-50B-120617	12/4/2017	21.37	12/6/2017	µg/L	**1.37**	1 U	1 U	3 U	1 U	**35.5**	5 U	--

Notes:

[a] RBSL = Risk-based screening levels identified in South Carolina Underground Storage Tank Management Division *Programmatic Quality Assurance Program Plan* , *Revision 3.1* , Table D1 "RBSLs for Groundwater," February 2016.

[b] The analyte was analyzed for, but was not detected above the laboratory reporting/quantitation limit. However, the laboratory reporting/quantitation limit is above the screening criteria. The actual absence or presence of this analyte between the screening criteria and the laboratory reporting/quantitation limit cannot be determined.

*Unable to collect depth to water due to fluctuation from the sparging system operating.

Samples analyzed by EPA Methods SW 8260B and 8011.

Bold indicates the analyte was detected above the method detection limit.

Gray shading indicates the analyte exceeded RBSLs.

µg/L = microgram(s) per liter

1,2-DCA = 1,2-dichloroethane

EDB = 1,2-dibromoethane

ID = identification

MTBE = methyl tertiary butyl ether

NS-FP = sample not collected due to the presence of free product in the well

NS-HS = sample not collected due to health and safety concerns

NS-IW = sample not collected due to insufficient volume of water in well

NS-SL = sample not analyzed due to sample being lost in transit to laboratory

U = analyte was not detected above the reported sample quantitation limit

Table 6. Cumulative Product Shipped from the Site

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Date	Destination	Total Product (gal)
12/9/2014	PPL Greensboro	4,289
12/9/2014	PPL Greensboro	3,100
12/12/2014	PPL Greensboro	1,189
12/30/2014	Crystal Clean (FCC)	5,057
12/31/2014	Crystal Clean (FCC)	5,333
1/4/2015	Crystal Clean (FCC)	5,000
1/4/2015	Crystal Clean (FCC)	2,872
1/5/2015	Crystal Clean (FCC)	5,013
1/6/2015	Crystal Clean (FCC)	4,800
1/7/2015	Allied Energies	6,532
1/7/2015	Allied Energies	6,425
1/7/2015	Allied Energies	8,200
1/9/2015	Allied Energies	6,482
1/9/2015	Allied Energies	7,825
1/12/2015	Allied Energies	6,540
1/12/2015	Allied Energies	6,467
1/13/2015	Allied Energies	6,732
1/13/2015	Allied Energies	6,595
1/15/2015	Allied Energies	6,500
1/22/2015	Allied Energies	5,791
1/23/2015	Allied Energies	5,450
1/27/2015	Allied Energies	5,791
1/27/2015	Allied Energies	5,557
1/27/2015	Allied Energies	6,043
1/28/2015	Allied Energies	4,411
2/5/2015	Allied Energies	5,513
2/11/2015	Allied Energies	5,732
2/11/2015	Allied Energies	5,606
2/25/2015	Allied Energies	5,583
3/4/2015	Allied Energies	4,000
3/16/2015	Allied Energies	5,200
6/3/2015	Allied Energies	6,500
6/3/2015	Allied Energies	4,214
8/10/2015	Allied Energies	6,000
11/2/2015	Allied Energies	5,800
11/13/2015	Crystal Clean (FCC)	2,900
12/1/2015	Allied Energies	6,690
12/1/2015	Allied Energies	6,700
12/7/2015	Crystal Clean (FCC)	500
9/28/2016	Shamrock	495
10/17/2016	Shamrock	110
10/24/2016	Shamrock	85
10/31/2016	Shamrock	70
11/10/2016	Shamrock	168
1/18/2017	A&D Archdale	3,758
3/3/2017	A&D Archdale	460
3/8/2017	A&D Archdale	500
3/15/2017	A&D Archdale	4,189
4/3/2017	A&D Archdale	458
4/19/2017	A&D Archdale	927
4/19/2017	A&D Archdale	747
5/22/2017	A&D Archdale	50
6/7/2017	A&D Archdale	658
6/29/2017	A&D Archdale	695
8/25/2017	A&D Archdale	566
9/8/2017	A&D Archdale	99
12/31/2017	Remaining in frac tank (estimated)	6
	Total (gallons)	**222,974**
	Total (barrels)	**5,309**

Notes:

1. Two 1,550-gallon poly tanks were mobilized to the site in August 2017, and put into service on September 1, 2017. These will replace the frac tank that has been onsite since January 2017. Gasoline and water are field-segregated using the poly tanks prior to offsite disposal.

A&D = A&D Environmental

gal = gallons

PPL = Plantation Pipe Line Company

Table 7. Stream Gauge Construction Information

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Date Installed	Stream Bottom Elevation (ft amsl)	Elevation of Zero Mark (ft amsl)
SW-01	By hand	3/29/2016	812.39	812.82
SW-02	By hand	3/29/2016	808.36	808.65
SW-03	By hand	3/29/2016	815.05	815.09
SW-05	By hand	3/29/2016	838.69	838.75
SW-08	By hand	3/29/2016	802.14	802.04
SW-10	By hand	3/29/2016	776.62	778.09
SW-14	By hand	7/18/2017	837.13	NS

Notes:

amsl = above mean sea level relative to North American Vertical Datum of 1988 (NAVD88). Benchmark is 34.8289659 degrees north, 82.3710354 degrees west (NAD83, 2011), elevation 929.1 ft NAVD88.

ft = feet

Table 8. Well Construction Information

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
Monitoring Wells																			
MW-01	CME 550 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	850.25	853.07	15.61	8	2	13.00	837.2	5.82	15.82	3.0	13.0	847.2	837.2	10.00
MW-01B	Schramm Air Rig	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	850.45	852.99	45.26	10	6	38.50	812.0	21.03	41.03	18.5	38.5	832.0	812.0	20.00
MW-02	CME 750 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	841.24	841.04	19.78	8	2	20.00	821.2	4.80	19.80	5.0	20.0	836.2	821.2	15.00
MW-02B	Schramm Air Rig/rehabbed (10/5/2017) with a Mobile Drill B57	MW-10136	6/24/2015	Still in use	Monitoring Well/Gauging	841.18	841.19	81.55	10	2	81.70	759.5	70.00	81.70	70.0	81.7	771.2	759.5	13.00
MW-03	CME 550 HSA	MW-10136	6/23/2015	Still in use	Monitoring Well/Gauging	838.38	838.36	22.19	8	2	20.00	818.4	4.98	19.98	5.0	20.0	833.4	818.4	15.00
MW-04	CME 550 HSA	MW-10136	6/23/2015	Still in use	Monitoring Well/Gauging	844.51	844.42	20.65	8	2	20.00	824.5	4.91	19.91	5.0	20.0	839.5	824.5	15.00
MW-05	CME 550 HSA	MW-10136	6/24/2015	Still in use	Monitoring Well/Gauging	851.15	851.11	19.89	8	2	20.00	831.1	4.96	19.96	5.0	20.0	846.1	831.1	15.00
MW-06	CME 550 HSA	MW-10136	6/24/2015	Still in use	Monitoring Well/Gauging	852.98	852.92	19.20	8	2	19.60	833.4	4.54	19.54	5.0	19.6	848.0	833.4	15.00
MW-06B	Mobile Drill B57	MW-11117	10/17/2017	Still in use	Monitoring Well/Gauging	852.42	852.57	85.65	13.75	4	85.20	767.2	65.50	85.50	65.5	85.5	786.9	766.9	20.00
MW-07	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	853.02	853.02	13.60	8	2	13.50	839.5	3.50	13.50	3.5	13.5	849.5	839.5	10.00
MW-08	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	844.75	844.72	19.80	8	2	19.70	825.1	4.67	19.67	4.7	19.7	840.1	825.1	15.00
MW-09	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	843.72	843.63	20.21	8	2	19.50	824.2	4.41	19.41	4.5	19.5	839.2	824.2	15.00
MW-09B	Mobile Drill B57	MW-11117	10/17/2017	Still in use	Monitoring Well/Gauging	843.71	843.92	151.00	13.75	4	151.00	692.7	132.20	151.00	132.2	151.0	711.5	692.7	20.00
MW-10	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	842.33	845.41	23.54	8	2	20.00	822.3	8.08	23.08	5.0	20.0	837.3	822.3	15.00
MW-11	CME 550 HSA	MW-10136	7/1/2015	Still in use	Monitoring Well/Gauging	852.36	855.63	32.50	8	2	25.20	827.2	13.27	28.27	14.2	25.0	838.2	827.4	15.00
MW-12	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	832.20	834.53	21.69	8	2	19.30	812.9	6.63	21.63	4.3	19.3	827.9	812.9	15.00
MW-12B	Geoprobe 3230 DT HSA	MW-10460	12/22/2015	Still in use	Monitoring Well/Gauging	832.26	834.98	45.81	10	6	43.00	789.3	35.72	45.72	33.0	43.0	799.3	789.3	10.00
MW-13	CME 550 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	845.93	848.84	22.18	8	2	19.00	826.9	6.92	21.92	4.0	19.0	841.9	826.9	15.00
MW-13B	Geoprobe 3230 DT HSA	MW-10461	12/21/2015	Still in use	Monitoring Well/Gauging	847.19	849.82	55.36	10	6	58.00	789.2	50.64	60.64	48.0	58.0	799.2	789.2	10.00
MW-14	CME 550 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	836.47	838.70	22.20	8	2	19.30	817.2	6.53	21.53	4.3	19.3	832.2	817.2	15.00
MW-14B	Mobile ST Schramm	MW-10578	5/3/2016	Still in use	Monitoring Well/Gauging	837.12	840.20	76.97	10	6	76.90	760.2	66.07	76.07	66.0	76.0	771.1	761.1	10.00
MW-15	CME 550 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	828.68	831.03	21.22	8	2	19.00	809.7	6.35	21.35	4.0	19.0	824.7	809.7	15.00
MW-15B	CME 550 HSA	MW-10136	7/28/2015	Still in use	Monitoring Well/Gauging	828.66	831.29	74.41	10	6	77.85	750.8	70.48	80.48	67.9	77.9	760.8	750.8	10.00
MW-16	CME 750 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	847.63	847.67	20.37	8	2	20.00	827.6	5.03	20.03	5.0	20.0	842.6	827.6	15.00
MW-17	CME 750 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	855.32	855.35	15.30	8	2	11.00	844.3	6.03	11.03	6.0	11.0	849.3	844.3	5.00
MW-17B	Geoprobe 3230 DT HSA	MW-10462	1/7/2016	Still in use	Monitoring Well/Gauging	855.37	855.37	27.50	10	6	27.00	828.4	17.00	27.00	17.0	27.0	838.4	828.4	10.00
MW-18	CME 550 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	846.82	846.89	19.75	8	2	20.00	826.8	5.06	20.06	5.0	20.0	841.8	826.8	15.00
MW-19	CME 750 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	851.23	853.94	12.13	8	2	9.50	841.7	7.20	12.20	4.5	9.5	846.7	841.7	5.00
MW-20	CME 750 HSA	MW-10136	6/30/2015	Still in use	Monitoring Well/Gauging	853.07	852.89	19.45	8	2	19.00	834.1	3.81	18.81	4.0	19.0	849.1	834.1	15.00
MW-21	CME 750 HSA	MW-10136	6/30/2015	Still in use	Monitoring Well/Gauging	855.68	855.77	20.70	8	2	20.00	835.7	5.09	20.09	5.0	20.0	850.7	835.7	15.00
MW-22	CME 750 HSA	MW-10136	7/1/2015	Still in use	Monitoring Well/Gauging	854.62	854.60	10.30	8	2	11.00	843.6	5.98	10.98	6.0	11.0	848.6	843.6	5.00
MW-23	CME 750 HSA	MW-10136	7/1/2015	Still in use	Monitoring Well/Gauging	846.66	849.57	23.50	8	2	20.00	826.7	7.91	22.91	5.0	20.0	841.7	826.7	15.00
MW-23B	CME 550 HSA	MW-10136	7/22/2015	Still in use	Monitoring Well/Gauging	846.81	849.69	53.48	10	6	50.50	796.3	30.88	53.38	28.0	50.5	818.8	796.3	22.50
MW-24	CME 550 HSA	MW-10136	7/15/2015	Still in use	Monitoring Well/Gauging	815.72	817.92	15.30	8	2	13.00	802.7	10.20	15.20	8.0	13.0	807.7	802.7	5.00
MW-24B	CME 550 HSA	MW-10136	7/20/2015	Still in use	Monitoring Well/Gauging	815.83	818.72	45.10	10	6	39.50	776.3	22.39	42.39	19.5	39.5	796.3	776.3	20.00
MW-25	Geoprobe 3230 DT HSA	MW-10463	1/5/2016	Still in use	Monitoring Well/Gauging	823.46	826.18	18.07	8	2	15.00	808.5	8.04	18.04	5.0	15.0	818.5	808.5	10.00
MW-25B	Geoprobe 3230 DT HSA	MW-10464	1/5/2016	Still in use	Monitoring Well/Gauging	822.59	823.81	59.00	10	6	58.00	764.6	49.22	59.22	48.0	58.0	774.6	764.6	10.00
MW-26	Geoprobe 3230 DT HSA	MW-10465	1/4/2016	Still in use	Monitoring Well/Gauging	844.76	847.56	17.15	8	2	15.25	829.5	7.27	17.27	5.0	15.0	839.8	829.8	10.00
MW-26B	Geoprobe 3230 DT HSA	MW-10466	1/4/2016	Still in use	Monitoring Well/Gauging	844.81	847.81	43.84	10	6	38.00	806.8	29.00	41.00	26.0	38.0	818.8	806.8	12.00
MW-27	Geoprobe 3230 DT HSA	MW-10467	1/5/2016	Still in use	Monitoring Well/Gauging	854.22	854.11	29.51	8	2	30.25	824.0	15.11	30.11	15.0	30.0	839.2	824.2	15.00
MW-27B	CME 550 HSA / Schramm	MW-10578	4/26/2016	Still in use	Monitoring Well/Gauging	854.27	857.14	41.45	10	6	46.00	808.3	31.45	41.45	36.0	46.0	818.3	808.3	10.00
MW-28	Geoprobe 3230 DT HSA	MW-10468	1/5/2016	Still in use	Monitoring Well/Gauging	841.49	844.31	25.93	8	2	25.25	816.2	13.50	23.50	15.0	25.0	826.5	816.5	10.00
MW-29	Geoprobe 3230 DT HSA	MW-10469	1/4/2016	Still in use	Monitoring Well/Gauging	852.07	852.20	15.10	8	2	15.25	836.8	5.00	15.00	5.0	15.0	847.1	837.1	10.00
MW-30	Geoprobe 3230 DT HSA	MW-10470	1/6/2016	Still in use	Monitoring Well/Gauging	841.21	841.28	14.69	8	2	15.25	826.0	5.00	15.00	5.0	15.0	836.2	826.2	10.00
MW-31	CME 550 HSA	MW-10578	4/19/2016	Still in use	Monitoring Well/Gauging	842.26	845.04	28.20	8	2	25.00	817.3	13.20	28.20	10.0	25.0	832.3	817.3	15.00
MW-31B	CME 550 HSA / Schramm	MW-10578	4/22/2016	Still in use	Monitoring Well/Gauging	842.01	844.94	79.25	10	6	76.00	766.0	68.25	79.25	65.0	76.0	777.0	766.0	11.00

Table 8. Well Construction Information

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
MW-32	CME 550 HSA	MW-10578	4/19/2016	Still in use	Monitoring Well/Gauging	839.81	842.93	29.09	8	2	26.00	813.8	13.09	28.09	10.0	25.0	829.8	814.8	15.00
MW-33	CME 550 HSA	MW-10578	4/15/2016	Still in use	Monitoring Well/Gauging	846.20	849.20	28.30	8	2	27.00	819.2	11.30	26.30	10.0	25.0	836.2	821.2	15.00
MW-33T	CME 550 HSA/Air Rotary	MW-10578	4/14/2016	Still in use	Monitoring Well/Gauging	846.15	849.11	100.35	8	2	96.50	749.7	87.85	97.85	84.0	94.0	762.2	752.2	10.00
MW-34	Hand Auger	MW-10994	3/16/2017	Still in use	Monitoring Well/Gauging	813.99	816.35	7.86	4	2	5.00	809.0	5.36	7.86	2.5	5.0	811.5	809.0	2.50
MW-35	CME 550 HSA	MW-10578	4/20/2016	Still in use	Monitoring Well/Gauging	826.22	829.40	28.42	8	2	26.00	800.2	12.42	27.42	10.0	25.0	816.2	801.2	15.00
MW-36	CME 550 HSA	MW-10578	4/22/2016	Still in use	Monitoring Well/Gauging	858.66	858.47	23.65	8	2	24.50	834.2	8.65	23.65	9.5	24.5	849.2	834.2	15.00
MW-36B	CME 550 HSA / Schramm	MW-10578	4/28/2016	Still in use	Monitoring Well/Gauging	858.49	858.15	47.54	10	6	54.90	803.6	36.64	46.64	44.0	54.0	814.5	804.5	10.00
MW-37	Geoprobe 8040 HSA	MW-10759	8/9/2016	Still in use	Monitoring Well/Gauging	810.93	813.92	18.11	6.25	2	16.00	794.9	7.11	17.11	5.0	15.0	805.9	795.9	10.00
MW-38	Geoprobe 8040 HSA	MW-10759	8/9/2016	Still in use	Monitoring Well/Gauging	810.49	813.28	11.61	6.25	2	9.10	801.4	6.41	11.41	3.9	8.9	806.6	801.6	5.00
MW-39	Geoprobe 8040 HSA	MW-10759	11/29/2016	Still in use	Monitoring Well/Gauging	816.92	819.90	13.01	6.25	2	11.00	805.9	7.01	12.01	5.0	10.0	811.9	806.9	5.00
MW-40	Geoprobe 8040 HSA	MW-10759	11/30/2016	Still in use	Monitoring Well/Gauging	814.75	817.79	13.18	6.25	2	11.00	803.8	7.18	12.18	5.0	10.0	809.8	804.8	5.00
MW-41	Geoprobe 8040 HSA	MW-10759	11/28/2016	Still in use	Monitoring Well/Gauging	816.67	819.68	13.20	6.25	2	11.00	805.7	7.20	12.20	5.0	10.0	811.7	806.7	5.00
MW-42	Geoprobe 8040 HSA	MW-10759	11/28/2016	Still in use	Monitoring Well/Gauging	817.31	820.33	13.40	6.25	2	11.00	806.3	7.40	12.40	5.0	10.0	812.3	807.3	5.00
MW-43	Mobile Drill B57	MW-10964	10/20/2017	Still in use	Monitoring Well/Gauging	815.92	818.12	10.30	8.5	2	7.50	808.42	5.30	10.30	2.5	7.5	813.42	808.42	5.00
MW-43B	Mobile Drill B57	MW-10964	10/20/2017	Still in use	Monitoring Well/Gauging	816.08	818.80	54.40	13.75	4	51.00	765.08	34.40	54.40	31.0	51.0	785.08	765.08	20.00
MW-44	Hollow Stem Auger	MW-10964	1/23/2017	Still in use	Monitoring Well/Gauging	853.82	853.67	9.82	6.25	2	10.00	843.8	4.82	9.82	5.0	10.0	848.8	843.8	5.00
MW-44B	Hollow Stem Auger/Wire Line/Air Rotary	MW-10964	1/23/2017	Still in use	Monitoring Well/Gauging	853.66	853.38	34.50	10.25	4	37.10	816.6	13.50	34.50	16.1	37.1	837.6	816.6	21.00
MW-45	Hollow Stem Auger	MW-10964	1/26/2017	Still in use	Monitoring Well/Gauging	852.39	852.47	14.42	6.25	2	14.00	838.4	4.42	14.42	4.0	14.0	848.4	838.4	10.00
MW-45B	Hollow Stem Auger/Wire Line/Air Rotary	MW-10964	1/25/2017	Still in use	Monitoring Well/Gauging	852.69	852.85	40.30	10.25	4	40.30	812.4	19.00	40.30	19.0	40.3	833.7	812.4	21.30
MW-46	Geoprobe 8040 DT	MW-11117	9/13/2017	Still in use	Monitoring Well/Gauging	842.43	845.47	17.05	8.5	2	14.00	828.4	12.05	17.05	9.0	14.0	833.4	828.4	5.00
MW-47	Geoprobe 8040 DT	MW-11117	9/14/2017	Still in use	Monitoring Well/Gauging	839.89	842.98	22.79	8.5	2	20.00	819.9	12.79	22.79	10.0	20.0	829.9	819.9	10.00
MW-48B	Mobile Drill B57	MW-11117	10/18/2017	Still in use	Monitoring Well/Gauging	829.53	832.34	94.50	13.75	4	91.00	738.5	74.50	94.50	71.0	91.0	758.5	738.5	20.00
MW-49	Geoprobe 8040 DT	MW-11117	9/14/2017	Still in use	Monitoring Well/Gauging	843.65	846.78	23.30	8.5	2	21.00	822.7	8.30	23.30	6.0	21.0	837.7	822.7	15.00
MW-50B	Mobile Drill B57	MW-11247	10/17/2017	Still in use	Monitoring Well/Gauging	847.11	850.34	109.60	13.75	4	106.00	741.1	89.60	109.60	96.0	106.0	751.1	741.1	20.00
Recovery Wells																			
RW-01	HSA	MW-09978	1/28/2015	Still in use	Gauging/LNAPL Recovery	849.49	851.92	20.80	6.25	4	17	832.5	4.44	19.44	2.0	17.0	847.5	832.5	15.00
RW-02	HSA	MW-09978	1/29/2015	Still in use	Gauging/LNAPL Recovery	850.22	852.69	25.72	6.25	4	23	827.2	15.47	25.47	13.0	23.0	837.2	827.2	10.00
RW-03	HSA	MW-09978	1/29/2015	Still in use	Gauging/LNAPL Recovery	850.03	852.34	33.39	6.25	4	31.2	818.8	18.51	33.51	16.2	31.2	833.8	818.8	15.00
RW-04	HSA	MW-09978	1/29/2015	Still in use	Gauging/LNAPL Recovery	852.15	853.93	35.04	6.25	4	33	819.2	14.78	34.78	13.0	33.0	839.2	819.2	20.00
RW-05	HSA	MW-09978	1/30/2015	Still in use	Gauging/LNAPL Recovery	850.99	853.53	38.25	6.25	4	34.5	816.5	22.04	37.04	19.5	34.5	831.5	816.5	15.00
RW-06	HSA	MW-09978	1/30/2015	Still in use	Gauging/LNAPL Recovery	844.21	846.21	38.50	6.25	4	38.5	805.7	20.49	40.49	18.5	38.5	825.7	805.7	20.00
RW-07	HSA	MW-09978	2/2/2015	Still in use	Gauging/LNAPL Recovery	841.01	843.19	38.00	6.25	4	38	803.0	15.18	40.18	13.0	38.0	828.0	803.0	25.00
RW-08	HSA	MW-09978	2/2/2015	Still in use	Gauging/LNAPL Recovery	833.46	835.48	33.50	6.25	4	33.5	800.0	10.52	35.52	8.5	33.5	825.0	800.0	25.00
RW-09	HSA	MW-09978	2/3/2015	Still in use	Gauging/LNAPL Recovery	831.13	835.12	42.13	6.25	4	41.5	789.6	15.49	45.49	11.5	41.5	819.6	789.6	30.00
RW-10	HSA	MW-10006	2/4/2015	Still in use	Gauging/LNAPL Recovery	846.76	848.53	66.51	6.25	4	68.5	778.3	5.27	70.27	3.5	68.5	843.3	778.3	65.00
RW-11	HSA	MW-10006	2/4/2015	Still in use	Gauging/LNAPL Recovery	851.03	852.97	21.40	6.25	4	19.5	831.5	6.44	21.44	4.5	19.5	846.5	831.5	15.00
RW-12	HSA	MW-10006	2/5/2015	Still in use	Gauging/LNAPL Recovery	851.64	854.49	16.90	6.25	4	14	837.6	6.90	16.90	4.0	14.0	847.6	837.6	10.00
RW-13	HSA	MW-10006	2/5/2015	Still in use	Gauging/LNAPL Recovery	847.57	847.97	45.53	6.25	4	50	797.6	0.53	45.53	5.0	50.0	842.6	797.6	45.00
RW-14	HSA	MW-10006	2/6/2015	Still in use	Gauging/LNAPL Recovery	826.25	827.54	55.00	6.25	4	55	771.2	5.00	55.00	5.0	55.0	821.2	771.2	50.00
RW-15	HSA	MW-10006	2/10/2015	Still in use	Gauging/LNAPL Recovery	849.48	851.64	36.50	6.25	4	36.5	813.0	1.50	36.50	1.5	36.5	848.0	813.0	35.00
Recovery Sumps																			
RS-01	Trackhoe	MW-09978	12/29/2014	Still in use	Gauging/LNAPL Recovery	847.95	849.13	23.60	NA	4	22.42	825.5	3.18	23.60	2.0	22.4	845.9	825.5	20.42
RS-02	Trackhoe	MW-09978	12/29/2014	Still in use	Gauging/LNAPL Recovery	848.54	849.52	20.00	NA	4	19.02	829.5	2.98	20.00	2.0	19.0	846.5	829.5	17.02
RS-04	Trackhoe	MW-09978	12/30/2014	Still in use	Gauging/LNAPL Recovery	850.36	851.47	10.75	NA	4	9.64	840.7	3.11	10.75	2.0	9.6	848.4	840.7	7.64
RS-05	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	847.14	848.31	25.20	NA	4	24.03	823.1	3.17	25.20	2.0	24.0	845.1	823.1	22.03
RS-06	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	848.25	849.47	25.18	NA	4	23.96	824.3	3.22	25.18	2.0	24.0	846.2	824.3	21.96
RS-07	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	854.06	855.08	16.65	NA	4	15.63	838.4	3.02	16.65	2.0	15.6	852.1	838.4	13.63

Table 8. Well Construction Information

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
RS-08	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	852.59	854.00	20.22	NA	4	18.81	833.8	3.41	20.22	2.0	18.8	850.6	833.8	16.81
RS-09	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.75	847.60	18.85	NA	4	18.00	828.8	2.85	18.85	2.0	18.0	844.8	828.8	16.00
RS-10	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.28	847.42	20.06	NA	4	18.92	827.4	3.14	20.06	2.0	18.9	844.3	827.4	16.92
RS-11	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.35	847.44	22.06	NA	4	20.97	825.4	3.09	22.06	2.0	21.0	844.3	825.4	18.97
RS-12	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.58	847.74	21.29	NA	4	20.13	826.5	3.16	21.29	2.0	20.1	844.6	826.5	18.13
RS-13	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	845.39	845.98	19.92	NA	4	19.33	826.1	1.96	19.92	1.4	19.3	844.0	826.1	17.96
RS-14	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	844.66	845.97	19.93	NA	4	18.62	826.0	3.31	19.93	2.0	18.6	842.7	826.0	16.62
RS-15	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	845.36	846.41	19.93	NA	4	18.88	826.5	3.05	19.93	2.0	18.9	843.4	826.5	16.88
RS-16	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	844.56	845.44	19.98	NA	4	19.10	825.5	2.88	19.98	2.0	19.1	842.6	825.5	17.10
RS-17	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	843.29	844.22	19.91	NA	4	18.98	824.3	2.93	19.91	2.0	19.0	841.3	824.3	16.98
RS-18	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	846.82	847.89	19.98	NA	4	18.91	827.9	3.07	19.98	2.0	18.9	844.8	827.9	16.91
RS-20	Trackhoe	MW-09978	3/19/2015	Still in use	Gauging/LNAPL Recovery	841.73	842.69	11.84	NA	4	9.91	831.8	3.93	11.84	2.0	9.9	839.7	831.8	7.91
Recovery Trench Sumps																			
RT-1A	Trackhoe	MW-09978	1/6/2015	Still in use	Gauging/LNAPL Recovery	852.86	854.06	20.89	NA	4	20.00	832.9	3.20	21.20	2.0	20.0	850.9	832.9	18.00
RT-1B	Trackhoe	MW-09978	1/6/2015	Still in use	Gauging/LNAPL Recovery	853.29	854.15	21.10	NA	4	20.00	833.3	2.86	20.86	2.0	20.0	851.3	833.3	18.00
RT-1C	Trackhoe	MW-09978	1/6/2015	Still in use	Gauging/LNAPL Recovery	853.55	854.55	21.27	NA	4	20.00	833.5	3.00	21.00	2.0	20.0	851.5	833.5	18.00
RT-2A	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	815.66	817.48	10.81	NA	4	10.00	805.7	3.82	11.82	2.0	10.0	813.7	805.7	8.00
RT-2B	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	816.72	817.61	10.82	NA	4	10.00	806.7	2.89	10.89	2.0	10.0	814.7	806.7	8.00
RT-2C	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	816.86	818.06	10.23	NA	4	10.00	806.9	3.20	11.20	2.0	10.0	814.9	806.9	8.00
RT-2D	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.11	818.12	10.21	NA	4	10.00	807.1	3.01	11.01	2.0	10.0	815.1	807.1	8.00
RT-2E	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.32	818.25	10.24	NA	4	10.00	807.3	2.93	10.93	2.0	10.0	815.3	807.3	8.00
RT-2F	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.74	818.57	10.23	NA	4	10.00	807.7	2.83	10.83	2.0	10.0	815.7	807.7	8.00
RT-2G	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	819.27	820.07	10.24	NA	4	10.00	809.3	2.80	10.80	2.0	10.0	817.3	809.3	8.00
RT-2I	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	819.23	819.51	10.20	NA	4	10.00	809.2	2.28	10.28	2.0	10.0	817.2	809.2	8.00
RT-2J	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.47	817.63	10.22	NA	4	10.00	807.5	2.16	10.16	2.0	10.0	815.5	807.5	8.00
RT-2K	Trackhoe	MW-09978	3/20/2015	Still in use	Gauging/LNAPL Recovery	816.11	817.40	4.14	NA	4	2.50	813.6	2.64	4.14	1.0	2.5	815.1	813.6	1.50
RT-2L	Trackhoe	MW-09978	3/20/2015	Still in use	Gauging/LNAPL Recovery	817.95	819.54	6.60	NA	4	3.71	814.2	3.89	6.60	1.0	3.7	816.9	814.2	2.71
Piezometers																			
TW-04R	DPT	MW-10006	2/4/2015	Still in use	Gauging	852.68	852.64	5.46	2.2	1	5.5	847.2	2.46	5.46	2.5	5.5	850.2	847.2	3.00
TW-05R	DPT	MW-10006	2/4/2015	Still in use	Gauging	849.96	849.93	8.87	2.2	1	8.8	841.2	2.87	8.87	2.8	8.9	847.2	841.1	6.00
TW-14R	DPT	MW-10006	2/4/2015	Still in use	Gauging	853.47	853.37	6.20	2.2	1	6.5	847.0	2.20	6.20	2.5	6.3	851.0	847.2	4.00
TW-15R	DPT	MW-10006	2/4/2015	Still in use	Gauging	850.70	850.62	4.85	2.2	1	5	845.7	1.85	4.85	2.0	4.9	848.7	845.8	3.00
TW-21	DPT	MW-09978	1/22/2015	Still in use	Gauging	849.72	849.70	9.54	2.2	1	14	835.7	-0.46	9.54	4.0	9.6	845.7	840.2	10.00
TW-28	DPT	MW-09978	1/23/2015	Still in use	Gauging	851.57	851.42	31.84	2.2	1	30	821.6	11.84	31.84	10.0	32.0	841.6	819.6	20.00
TW-30	DPT	MW-09978	1/23/2015	Still in use	Gauging	851.86	851.81	23.15	2.2	1	24	827.9	8.15	23.15	9.0	23.2	842.9	828.7	15.00
TW-34	DPT	MW-09978	1/24/2015	Still in use	Gauging	854.92	854.79	25.04	2.2	1	23	831.9	10.04	25.04	8.0	25.2	846.9	829.7	15.00
TW-35	DPT	MW-09978	1/24/2015	Still in use	Gauging	854.22	854.10	25.12	2.2	1	23	831.2	10.12	25.12	8.0	25.2	846.2	829.0	15.00
TW-40	DPT	MW-09978	1/24/2015	Still in use	Gauging	853.45	853.35	34.05	2.2	1	33	820.5	14.05	34.05	13.0	34.2	840.5	819.3	20.00
TW-41	DPT	MW-09978	1/25/2015	Still in use	Gauging	849.38	849.38	32.15	2.2	1	34	815.4	7.15	32.15	9.0	32.1	840.4	817.2	25.00
TW-42	DPT	MW-09978	1/25/2015	Still in use	Gauging	847.02	846.84	27.50	2.2	1	29.5	817.5	7.50	27.50	9.5	27.7	837.5	819.3	20.00
TW-45	DPT	MW-09978	1/25/2015	Still in use	Gauging	848.26	848.31	36.86	2.2	1	37.5	810.8	11.86	36.86	12.5	36.8	835.8	811.4	25.00
TW-55	DPT	MW-10006	2/5/2015	Still in use	Gauging	846.00	845.93	41.50	2.7	1	43	803.0	11.50	41.50	13.0	41.6	833.0	804.4	30.00
TW-59	DPT	MW-09978	1/30/2015	Still in use	Gauging	834.84	834.78	21.15	2.7	1	22	812.8	6.15	21.15	7.0	21.2	827.8	813.6	15.00
TW-60	DPT	MW-09978	1/30/2015	Still in use	Gauging	828.00	828.03	37.20	2.7	1	41.5	786.5	2.20	37.20	6.5	37.2	821.5	790.8	35.00
TW-64	DPT	MW-09978	2/2/2015	Still in use	Gauging	845.89	845.88	52.85	2.2	1	55	790.9	2.85	52.85	5.0	52.9	840.9	793.0	50.00
TW-65	DPT	MW-09978	2/2/2015	Still in use	Gauging	845.66	845.62	44.81	2.2	1	44.5	801.2	9.81	44.81	9.5	44.8	836.2	800.8	35.00
TW-66	DPT	MW-09978	2/2/2015	Still in use	Gauging	820.18	820.31	23.81	2.7	1	24	796.2	3.81	23.81	4.0	23.7	816.2	796.5	20.00
TW-67	DPT	MW-09978	2/3/2015	Still in use	Gauging	852.88	852.71	26.47	2.7	1	27	825.9	6.47	26.47	7.0	26.6	845.9	826.2	20.00
TW-68	DPT	MW-09978	2/3/2015	Still in use	Gauging	846.59	846.45	29.96	2.2	1	27	819.6	9.96	29.96	7.0	30.1	839.6	816.5	20.00

Table 8. Well Construction Information

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
TW-69	DPT	MW-09978	2/3/2015	Still in use	Gauging	840.38	840.27	51.91	2.2	1	50	790.4	11.91	51.91	10.0	52.0	830.4	788.4	40.00
TW-70	DPT	MW-09978	2/3/2015	Still in use	Gauging	842.07	841.95	45.05	2.2	1	43	799.1	10.05	45.05	8.0	45.2	834.1	796.9	35.00
TW-73	DPT	MW-09978	2/3/2015	Still in use	Gauging	850.60	850.53	16.00	2.7	1	16	834.6	6.00	16.00	6.0	16.1	844.6	834.5	10.00
TW-76	DPT	MW-10006	2/4/2015	Still in use	Gauging	852.53	852.44	43.62	2.7	1	43	809.5	8.62	43.62	8.0	43.7	844.5	808.8	35.00
TW-81	DPT	MW-10006	2/5/2015	Still in use	Gauging	849.48	849.43	7.00	2.2	1	7	842.5	2.00	7.00	2.0	7.0	847.5	842.4	5.00
TW-82	DPT	MW-10006	2/5/2015	Still in use	Gauging	849.83	849.64	10.00	2.2	1	10	839.8	2.00	10.00	2.0	10.2	847.8	839.6	8.00
TW-83	DPT	MW-10006	2/5/2015	Still in use	Gauging	850.54	850.44	17.00	2.2	1	17	833.5	2.00	17.00	2.0	17.1	848.5	833.4	15.00
TW-84	DPT	MW-10006	2/5/2015	Still in use	Gauging	851.38	851.22	13.50	2.2	1	13.5	837.9	3.50	13.50	3.5	13.7	847.9	837.7	10.00
TW-85	DPT	MW-10006	2/5/2015	Still in use	Gauging	843.64	843.49	39.00	2.7	1	39	804.6	9.00	39.00	9.0	39.2	834.6	804.5	30.00
TW-86	DPT	MW-10006	2/5/2015	Still in use	Gauging	853.28	853.10	6.00	2.2	1	6	847.3	2.00	6.00	2.0	6.2	851.3	847.1	4.00
TW-87	DPT	MW-10006	2/5/2015	Still in use	Gauging	852.33	852.25	7.00	2.2	1	7	845.3	2.00	7.00	2.0	7.1	850.3	845.3	5.00
TW-90	DPT	MW-10006	2/6/2015	Still in use	Gauging	845.48	845.43	46.50	2.7	1	46.5	799.0	6.50	46.50	6.5	46.6	839.0	798.9	40.00
TW-94	DPT	MW-10006	2/10/2015	Still in use	Gauging	840.75	840.58	40.00	2.7	1	40	800.8	5.00	40.00	5.0	40.2	835.8	800.6	35.00
TW-96	DPT	MW-10006	2/11/2015	Still in use	Gauging	840.52	840.40	28.76	2.7	1	30	810.5	3.76	28.76	5.0	28.9	835.5	811.6	25.00
Vertical Air Sparging Wells																			
VAS-01	Mobile B57 HSA	SCHE03020469	7/28/2016	Still in use	Cupboard Creek Protection	853.269	NS	NA	8.50	2.00	32.20	NA	NA	NA	28.70	31.20	NA	NA	2.50
VAS-02	Mobile B57 HSA	SCHE03020469	7/27/2016	Still in use	Cupboard Creek Protection	852.360	NS	NA	8.50	2.00	27.00	NA	NA	NA	23.50	26.00	NA	NA	2.50
VAS-03	Mobile B57 HSA	SCHE03020469	7/27/2016	Still in use	Cupboard Creek Protection	852.132	NS	NA	8.50	2.00	18.30	NA	NA	NA	14.80	17.30	NA	NA	2.50
VAS-04	Geoprobe 8040 HSA	SCHE03020469	8/4/2016	Still in use	Cupboard Creek Protection	852.056	NS	NA	8.50	2.00	16.70	NA	NA	NA	13.20	15.70	NA	NA	2.50
VAS-05	Mobile B57 HSA	SCHE03020469	7/27/2016	Still in use	Cupboard Creek Protection	851.559	NS	NA	8.50	2.00	13.00	NA	NA	NA	9.50	12.00	NA	NA	2.50
VAS-06	Mobile B57 HSA	SCHE03020469	7/26/2016	Still in use	Cupboard Creek Protection	851.612	NS	NA	8.50	2.00	14.40	NA	NA	NA	10.90	13.40	NA	NA	2.50
VAS-07	Mobile B57 HSA	SCHE03020469	7/26/2016	Still in use	Cupboard Creek Protection	851.603	NS	NA	8.50	2.00	19.40	NA	NA	NA	15.90	18.40	NA	NA	2.50
VAS-08	Mobile B57 HSA	SCHE03020469	7/25/2016	Still in use	Cupboard Creek Protection	851.583	NS	NA	8.50	2.00	22.00	NA	NA	NA	18.50	21.00	NA	NA	2.50
VAS-09	Mobile B57 HSA	SCHE03020469	7/25/2016	Still in use	Cupboard Creek Protection	851.607	NS	NA	8.50	2.00	14.00	NA	NA	NA	10.50	13.00	NA	NA	2.50
VAS-10	Mobile B57 HSA	SCHE03020469	7/25/2016	Still in use	Cupboard Creek Protection	851.411	NS	NA	8.50	2.00	16.10	NA	NA	NA	12.60	15.10	NA	NA	2.50
VAS-11	Mobile B57 HSA	SCHE03020469	7/28/2016	Still in use	Cupboard Creek Protection	852.476	NS	NA	8.50	2.00	25.30	NA	NA	NA	21.80	24.30	NA	NA	2.50
VAS-12	Geoprobe 8040 HSA	SCHE03020469	8/5/2016	Still in use	Cupboard Creek Protection	851.535	NS	NA	8.50	2.00	24.20	NA	NA	NA	20.70	23.20	NA	NA	2.50
VAS-13	Geoprobe 8040 HSA	SCHE03020469	8/5/2016	Still in use	Cupboard Creek Protection	851.701	NS	NA	8.50	2.00	19.60	NA	NA	NA	16.10	18.60	NA	NA	2.50
VAS-14	Geoprobe 8040 HSA	SCHE03020469	8/4/2016	Still in use	Cupboard Creek Protection	851.239	NS	NA	8.50	2.00	16.20	NA	NA	NA	12.70	15.20	NA	NA	2.50
VAS-15	Geoprobe 8040 HSA	SCHE03020469	8/4/2016	Still in use	Cupboard Creek Protection	850.732	NS	NA	8.50	2.00	15.50	NA	NA	NA	12.00	14.50	NA	NA	2.50
VAS-16	Geoprobe 8040 HSA	SCHE03020469	8/3/2016	Still in use	Cupboard Creek Protection	850.305	NS	NA	8.50	2.00	17.90	NA	NA	NA	14.40	16.90	NA	NA	2.50
VAS-17	Geoprobe 8040 HSA	SCHE03020469	8/3/2016	Still in use	Cupboard Creek Protection	849.842	NS	NA	8.50	2.00	19.30	NA	NA	NA	15.80	18.30	NA	NA	2.50
VAS-18	Geoprobe 8040 HSA	SCHE03020469	8/8/2016	Still in use	Cupboard Creek Protection	849.513	NS	NA	8.50	2.00	16.50	NA	NA	NA	13.00	15.50	NA	NA	2.50
VAS-19	Mobile B57 HSA	SCHE03020469	7/26/2016	Still in use	Cupboard Creek Protection	850.465	NS	NA	8.50	2.00	17.20	NA	NA	NA	13.60	16.10	NA	NA	2.50
VAS-20	Mobile B57 HSA	SCHE03020469	7/19/2016	Still in use	Brown's Creek Protection	827.789	NS	NA	8.50	2.00	47.60	NA	NA	NA	44.60	47.10	NA	NA	2.50
VAS-21	Mobile B57 HSA	SCHE03020469	7/19/2016	Still in use	Brown's Creek Protection	826.304	NS	NA	8.50	2.00	53.50	NA	NA	NA	50.00	52.50	NA	NA	2.50
VAS-22	Mobile B57 HSA	SCHE03020469	7/21/2016	Still in use	Brown's Creek Protection	827.394	NS	NA	8.50	2.00	57.00	NA	NA	NA	53.50	56.00	NA	NA	2.50
VAS-23	Mobile B57 HSA	SCHE03020469	7/22/2016	Still in use	Brown's Creek Protection	827.211	NS	NA	8.50	2.00	49.50	NA	NA	NA	46.00	48.50	NA	NA	2.50
VAS-24	Mobile B57 HSA	SCHE03020469	7/5/2016	Still in use	Brown's Creek Protection	826.803	NS	NA	8.50	2.00	58.50	NA	NA	NA	55.00	57.50	NA	NA	2.50
VAS-25	Mobile B57 HSA	SCHE03020469	7/11/2016	Still in use	Brown's Creek Protection	826.411	NS	NA	8.50	2.00	54.00	NA	NA	NA	50.50	53.00	NA	NA	2.50
VAS-26	Mobile B57 HSA	SCHE03020469	7/11/2016	Still in use	Brown's Creek Protection	825.180	NS	NA	8.50	2.00	55.00	NA	NA	NA	51.50	54.00	NA	NA	2.50
VAS-27	Mobile B57 HSA	SCHE03020469	7/8/2016	Still in use	Brown's Creek Protection	826.369	NS	NA	8.50	2.00	54.00	NA	NA	NA	50.50	53.00	NA	NA	2.50
VAS-28	Mobile B57 HSA	SCHE03020469	7/6/2016	Still in use	Brown's Creek Protection	828.930	NS	NA	8.50	2.00	23.10	NA	NA	NA	19.80	22.30	NA	NA	2.50
VAS-29	Mobile B57 HSA	SCHE03020469	7/6/2016	Still in use	Brown's Creek Protection	832.025	NS	NA	8.50	2.00	27.50	NA	NA	NA	24.00	26.50	NA	NA	2.50
VAS-30	Mobile B57 HSA	SCHE03020469	6/21/2016	Still in use	Brown's Creek Protection	831.485	NS	NA	8.50	2.00	52.90	NA	NA	NA	49.40	51.90	NA	NA	2.50

Table 8. Well Construction Information

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
VAS-31	Mobile B57 HSA	SCHE03020469	6/21/2016	Still in use	Brown's Creek Protection	828.337	NS	NA	8.50	2.00	42.00	NA	NA	NA	38.50	41.00	NA	NA	2.50
VAS-32	Mobile B57 HSA	SCHE03020469	6/30/2016	Still in use	Brown's Creek Protection	836.257	NS	NA	8.50	2.00	43.00	NA	NA	NA	39.50	42.00	NA	NA	2.50
VAS-33	Mobile B57 HSA	SCHE03020469	6/29/2016	Still in use	Brown's Creek Protection	840.900	NS	NA	8.50	2.00	52.60	NA	NA	NA	49.10	51.60	NA	NA	2.50
VAS-34	Mobile B57 HSA	SCHE03020469	7/13/2016	Still in use	Brown's Creek Protection	836.585	NS	NA	8.50	2.00	53.50	NA	NA	NA	50.00	52.50	NA	NA	2.50
VAS-35	Mobile B57 HSA	SCHE03020469	7/13/2016	Still in use	Brown's Creek Protection	831.212	NS	NA	8.50	2.00	40.00	NA	NA	NA	36.50	39.00	NA	NA	2.50
VAS-36	Mobile B57 HSA	SCHE03020469	7/7/2016	Still in use	Brown's Creek Protection	831.361	NS	NA	8.50	2.00	33.20	NA	NA	NA	29.70	32.20	NA	NA	2.50
VAS-37	Mobile B57 HSA	SCHE03020469	7/7/2016	Still in use	Brown's Creek Protection	832.454	NS	NA	8.50	2.00	16.50	NA	NA	NA	13.00	15.50	NA	NA	2.50
VAS-38	Mobile B57 HSA	SCHE03020469	7/6/2016	Still in use	Brown's Creek Protection	834.566	NS	NA	8.50	2.00	21.10	NA	NA	NA	16.60	19.10	NA	NA	2.50
VAS-39	Mobile B57 HSA	SCHE03020469	6/22/2016	Still in use	Brown's Creek Protection	835.956	NS	NA	8.50	2.00	42.40	NA	NA	NA	38.90	41.40	NA	NA	2.50
VAS-40	Mobile B57 HSA	SCHE03020469	6/23/2016	Still in use	Brown's Creek Protection	833.753	NS	NA	8.50	2.00	40.00	NA	NA	NA	36.50	39.00	NA	NA	2.50
VAS-41	Mobile B57 HSA	SCHE03020469	6/28/2016	Still in use	Brown's Creek Protection	845.071	NS	NA	8.50	2.00	27.80	NA	NA	NA	24.30	26.80	NA	NA	2.50
VAS-42A	Mobile B57 HSA	SCHE03020469	7/14/2016	Still in use	Brown's Creek Protection	845.304	NS	NA	8.50	2.00	39.30	NA	NA	NA	35.80	38.30	NA	NA	2.50
VAS-43A	Mobile B57 HSA	SCHE03020469	7/15/2016	Still in use	Brown's Creek Protection	843.078	NS	NA	8.50	2.00	66.50	NA	NA	NA	63.00	65.50	NA	NA	2.50
VAS-44A	Mobile B57 HSA	SCHE03020469	7/18/2016	Still in use	Brown's Creek Protection	838.353	NS	NA	8.50	2.00	72.50	NA	NA	NA	69.00	71.50	NA	NA	2.50
VAS-46	Mobile B57 HSA	SCHE03020469	6/24/2016	Still in use	Brown's Creek Protection	839.503	NS	NA	8.50	2.00	20.80	NA	NA	NA	18.00	20.50	NA	NA	2.50
Vertical Bedrock Sparging Wells																			
VBS-01	Hollow Stem Auger/Wire Line/Air Rotary	SCHE03020469M	1/28/2017	Still in use	Brown's Creek Protection	NS	NS	38.15	4.00	2.00	38.50	NA	NA	NA	34.50	38.50	NA	NA	2.00
VBS-02	Hollow Stem Auger/Wire Line/Air Rotary	SCHE03020469M	1/28/2017	Still in use	Brown's Creek Protection	NS	NS	31.05	4.00	2.00	31.00	NA	NA	NA	27.00	31.00	NA	NA	2.00
VBS-03	Hollow Stem Auger/Wire Line/Air Rotary	SCHE03020469M	1/27/2017	Still in use	Brown's Creek Protection	NS	NS	36.20	4.00	2.00	36.20	NA	NA	NA	32.20	36.20	NA	NA	2.00

Notes:

amsl = above mean sea level relative to North American Vertical Datum of 1988 (NAVD88). Benchmark is 34.8289659 degrees north, 82.3710354 degrees west (NAD83, 2011), elevation 929.1 ft NAVD88.

bgs = below ground surface

BTOC = below top of casing

DPT = direct push

ft = feet

HSA = hollow-stem auger

in = inches

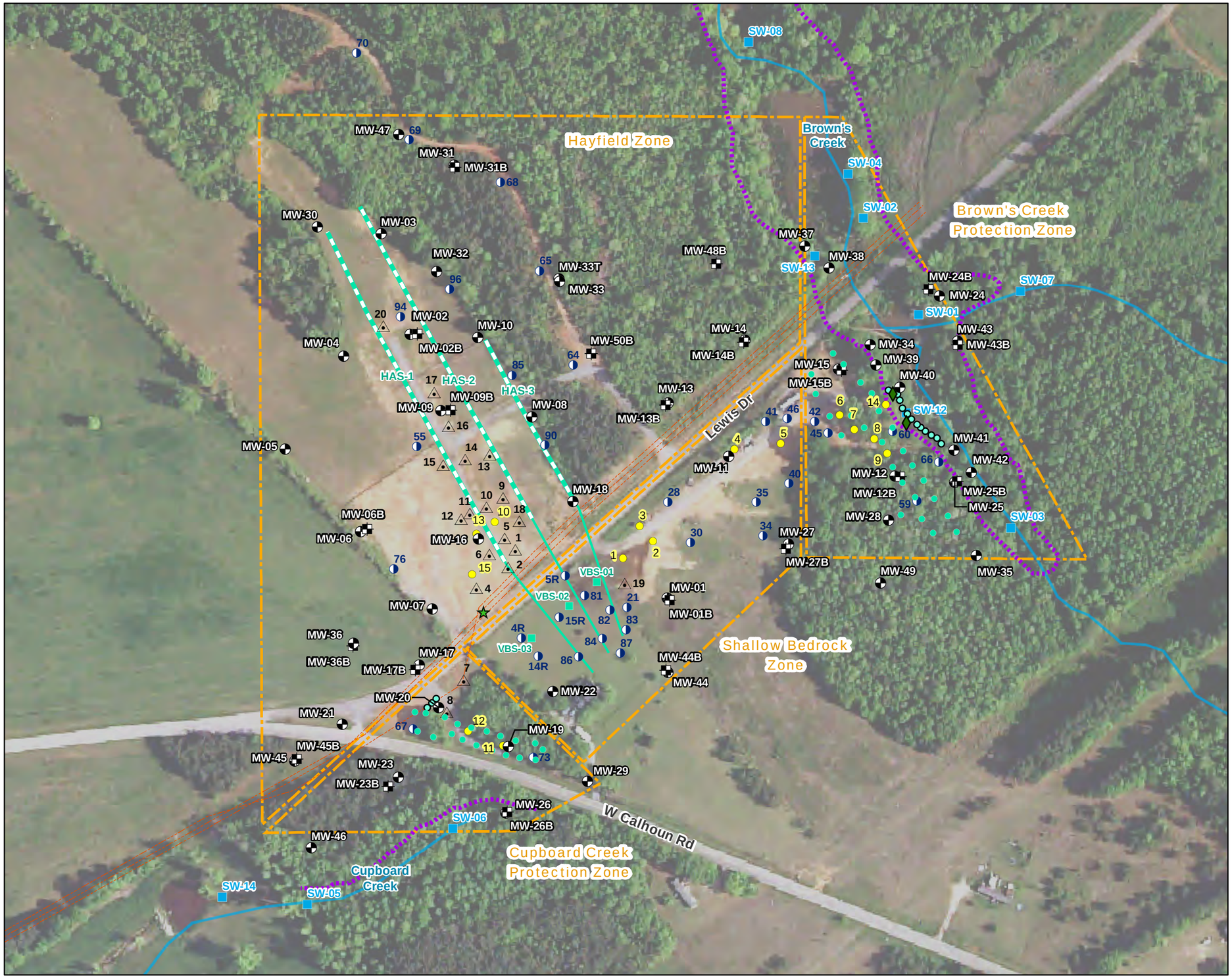
NA = not applicable

NS = location not surveyed

RNE = Refusal not encountered

TOC = top of casing

Figures



VICINITY MAP

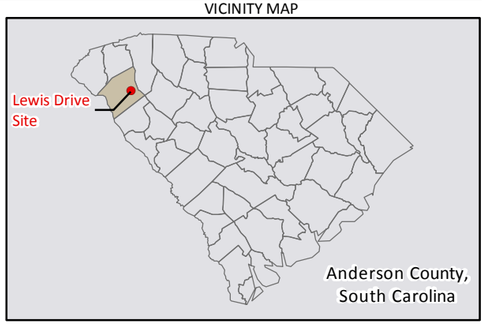


Figure 1. Site Overview
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

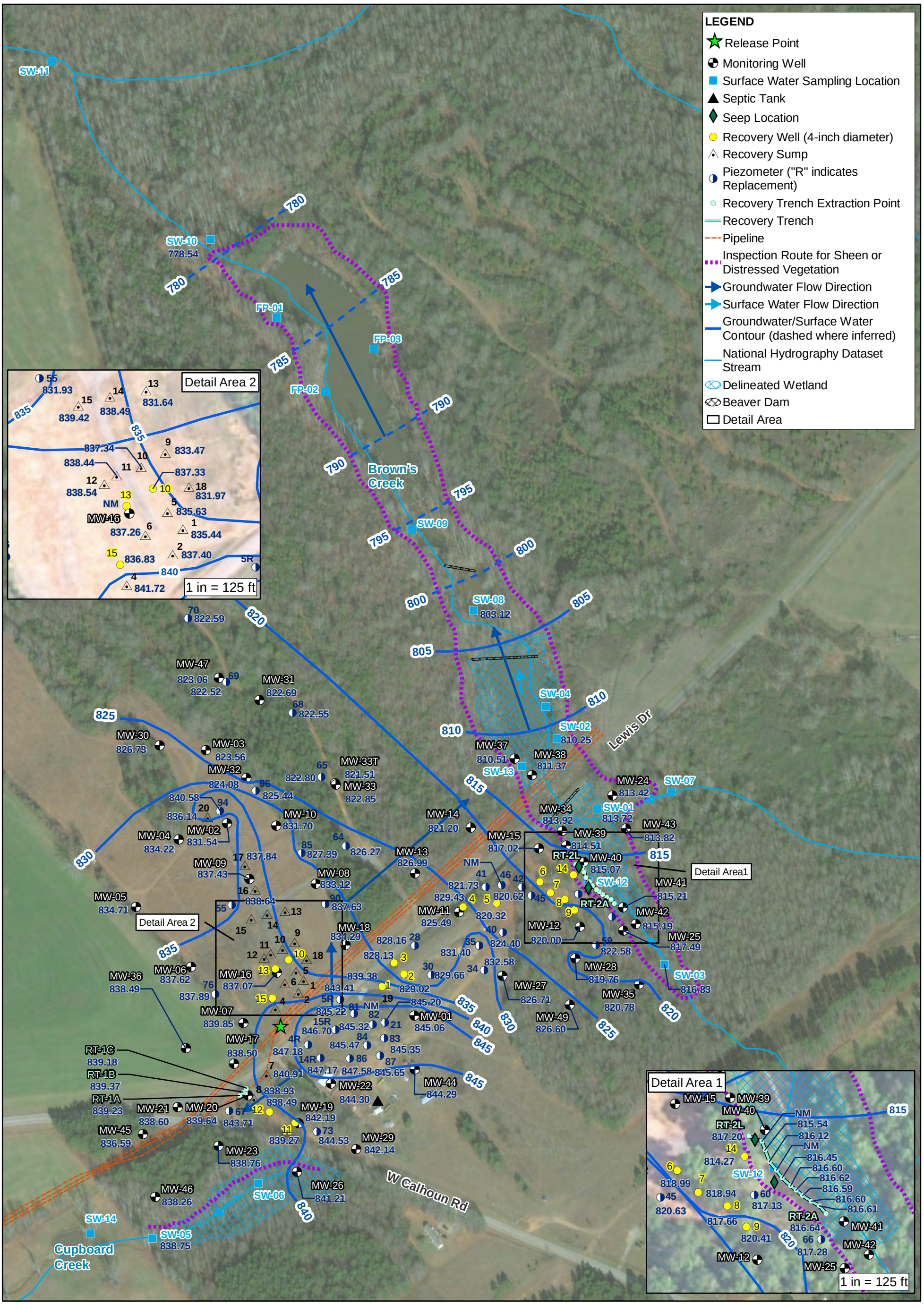
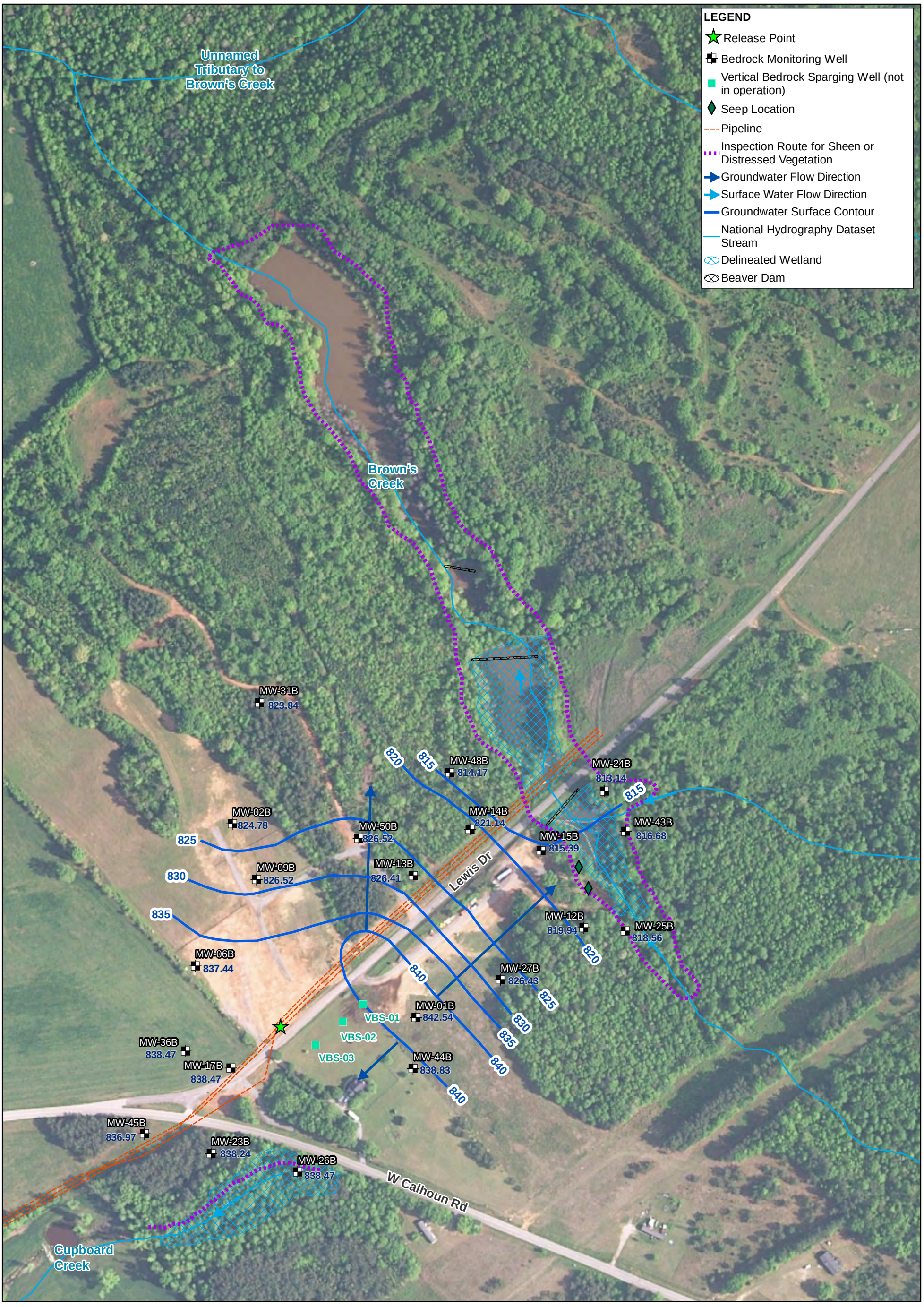


Figure 2A. Residuum Groundwater and Surface Water Elevation Map

Lewis Drive Remediation Site

Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"



823.84 Corrected Groundwater Elevation as of 12/21/2017 and 12/27/2017 in feet above mean sea level

Base Map Sources:
*USDA, Farm Service Agency (FSA), National Agriculture Imagery Program (NAIP), Published 8/19/ 2015
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

Figure 2B. Bedrock Groundwater Elevation Map
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

LEGEND

- Release Point
- Monitoring Well
- Bedrock Monitoring Well
- Seep Location
- Recovery Sump
- Piezometer ("R" indicates Replacement)
- Recovery Well (4-inch diameter)
- Vertical Bedrock Sparging Well
- Vertical Saprolite Sparging Well
- Surface Water Sampling Location
- Septic Tank
- Recovery Trench Extraction Point
- Recovery Trench
- Surface Water Flow Direction
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- Pipeline
- National Hydrography Dataset Stream
- Delineated Wetland
- Beaver Dam
- Detail Area
- Approximate Extent of Product > 0.01' Thickness based on 6/10/2016 data (data not shown)
- Approximate Extent of Product > 0.01' Thickness base on 12/21/17 and 12/27/17 data

0.32 Product thickness in feet as of 12/21/2017 and 12/27/2017

NP No product detected

NM Not measured

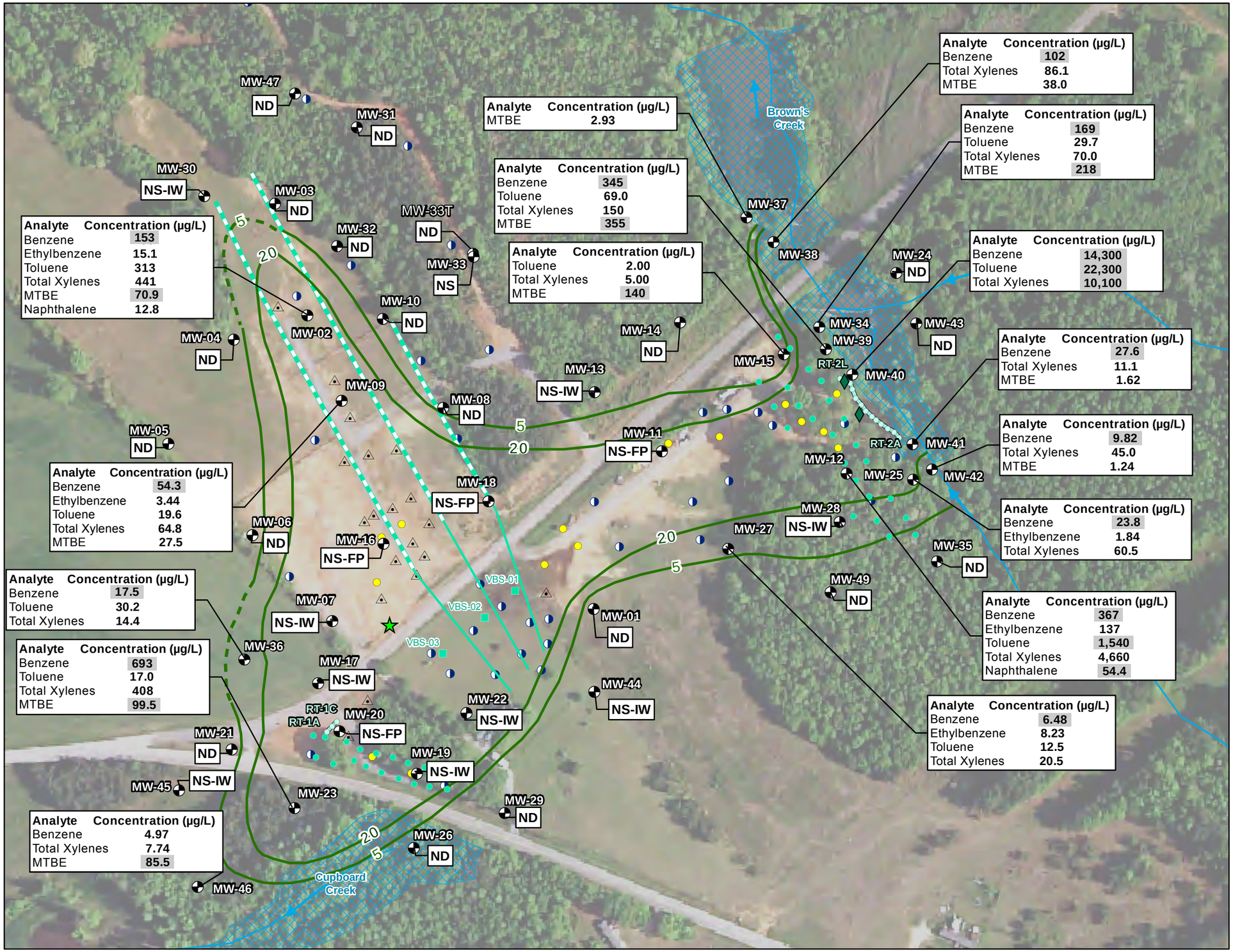
Base Map Sources:
*USDA, Farm Service Agency (FSA), National Agriculture Imagery Program (NAIP), Published 8/19/ 2015
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

N

0 175 350

Scale in Feet

Figure 3. Product Thickness Map
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"



LEGEND

- Release Point
- Residuum Monitoring Well
- Piezometer
- Vertical Bedrock Sparging Well
- Vertical Saprolite Sparging Well
- Seep Location
- Recovery Well (4" diameter)
- Recovery Sump
- Recovery Trench Point
- Recovery Trench
- Surface Water Flow Direction
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- Dissolved Benzene Plume Extent (µg/L) (Dashed where inferred)
- National Hydrography Dataset Stream
- Delineated Wetland

NOTES:

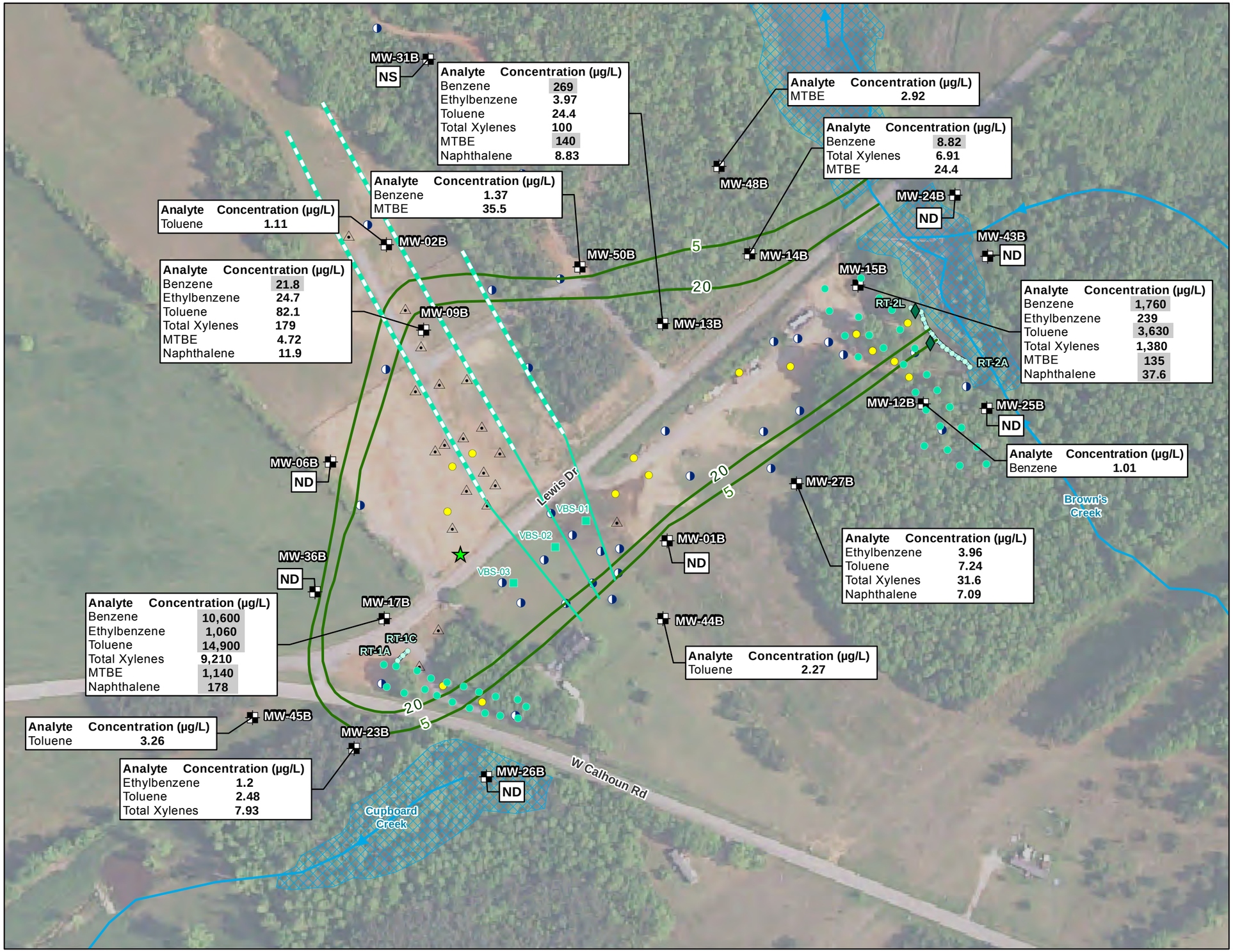
1. Total Xylenes is the sum of m&p xylenes and o-xylene.
2. MTBE = Methyl Tertiary Butyl Ether
3. µg/L = microgram(s) per liter
4. Only detected analytes are shown on map.
5. ND = Groundwater was collected and analyzed, but no analytes were detected above the reported sample quantitation limit.
6. NS = Not scheduled to be sampled for this event
7. NS-FP = Sample not collected due to the presence of free product in the well
8. NS-IW = Sample not collected due to insufficient volume of water in well

Gray shading indicates the analyte exceeded risk-based screening levels (RBSLs) identified in South Carolina Underground Storage Tank Management Division Programmatic Quality Assurance Program Plan Revision 3.1, Table D1 "RBSLs for Groundwater", February 2016.

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2015. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

0 175 350
Approximate scale in feet

FIGURE 4A. Groundwater Analytical Results in Residuum Aquifer, December 2017
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"



LEGEND

- Release Point
- Bedrock Monitoring Well
- Piezometer
- Vertical Bedrock Sparing Well
- Vertical Saprolite Sparing Well
- Seep Location
- Recovery Well (4" diameter)
- Recovery Sump
- Recovery Trench Point
- Recovery Trench
- Surface Water Flow Direction
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- Dissolved Benzene Plume Extent (µg/L)
- National Hydrography Dataset Stream
- Delineated Wetland

NOTES:
Total Xylenes is the sum of m&p xylenes and o-xylene.
MTBE = Methyl Tertiary Butyl Ether
µg/L = microgram(s) per liter
Only detected analytes are shown on map.
ND = Groundwater was collected and analyzed, but no analytes were detected above the reported sample quantitation limit.
NS = Not sampled during this event.

Gray shading indicates the analyte exceeded risk-based screening levels (RBSLs) identified in South Carolina Underground Storage Tank Management Division Programmatic Quality Assurance Program Plan Revision 3.1, Table D1 "RBSLs for Groundwater", February 2016.

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2015. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

0 175 350
Approximate scale in feet

FIGURE 4B. Groundwater Analytical Results in Bedrock Aquifer, December 2017
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Attachment A
Surface Water Analytical Laboratory Reports

ANALYTICAL REPORT

December 08, 2017

CH2M Hill- Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L955602
Samples Received:	12/06/2017
Project Number:	684910.LD.MR.SW
Description:	Lewis Drive Site
Site:	LEWIS DR.
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

SW11-120517 L955602-01 GW

Collected by: M. Warren | Collected date/time: 12/05/17 08:15 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 14:20	12/07/17 14:20	ACG

SW10-120517 L955602-02 GW

Collected by: M. Warren | Collected date/time: 12/05/17 08:30 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 14:39	12/07/17 14:39	ACG

FP01-120517 L955602-03 GW

Collected by: M. Warren | Collected date/time: 12/05/17 08:50 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 14:58	12/07/17 14:58	ACG

FP02-120517 L955602-04 GW

Collected by: M. Warren | Collected date/time: 12/05/17 08:55 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 15:17	12/07/17 15:17	ACG

SW09-120517 L955602-05 GW

Collected by: M. Warren | Collected date/time: 12/05/17 09:10 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 15:37	12/07/17 15:37	ACG

SW08-120517 L955602-06 GW

Collected by: M. Warren | Collected date/time: 12/05/17 09:20 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 15:56	12/07/17 15:56	ACG

SW13-120517 L955602-07 GW

Collected by: M. Warren | Collected date/time: 12/05/17 09:25 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 16:15	12/07/17 16:15	ACG

FP03-120517 L955602-08 GW

Collected by: M. Warren | Collected date/time: 12/05/17 09:45 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 16:34	12/07/17 16:34	ACG

SW04-120517 L955602-09 GW

Collected by: M. Warren | Collected date/time: 12/05/17 10:00 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 16:54	12/07/17 16:54	ACG

SW02-120517 L955602-10 GW

Collected by: M. Warren | Collected date/time: 12/05/17 10:05 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 17:13	12/07/17 17:13	ACG

SW01-120517 L955602-12 GW

Collected by: M. Warren | Collected date/time: 12/05/17 10:15 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 17:32	12/07/17 17:32	ACG

SW07-120517 L955602-13 GW

Collected by: M. Warren | Collected date/time: 12/05/17 10:25 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 17:51	12/07/17 17:51	ACG

SW12-120517 L955602-14 GW

Collected by: M. Warren | Collected date/time: 12/05/17 10:35 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 18:10	12/07/17 18:10	ACG

SW03-120517 L955602-15 GW

Collected by: M. Warren | Collected date/time: 12/05/17 10:40 | Received date/time: 12/06/17 08:45

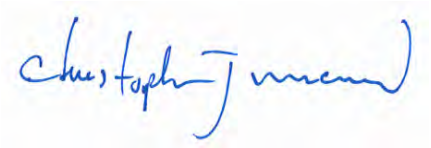
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 18:30	12/07/17 18:30	ACG

SW14-120517 L955602-16 GW

Collected by: M. Warren | Collected date/time: 12/05/17 11:15 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 18:49	12/07/17 18:49	ACG

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



Chris McCord
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 14:20	WG1050755
Toluene	ND		1.00	1	12/07/2017 14:20	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 14:20	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 14:20	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 14:20	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 14:20	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 14:20	WG1050755
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2017 14:20*	WG1050755
(S) Dibromofluoromethane	*90.4*		*76.0-123*		*12/07/2017 14:20*	WG1050755
(S) a,a,a-Trifluorotoluene	*99.4*		*80.0-120*		*12/07/2017 14:20*	WG1050755
(S) 4-Bromofluorobenzene	*116*		*80.0-120*		*12/07/2017 14:20*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 14:39	WG1050755
Toluene	ND		1.00	1	12/07/2017 14:39	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 14:39	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 14:39	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 14:39	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 14:39	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 14:39	WG1050755
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2017 14:39*	WG1050755
(S) Dibromofluoromethane	*91.4*		*76.0-123*		*12/07/2017 14:39*	WG1050755
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*		*12/07/2017 14:39*	WG1050755
(S) 4-Bromofluorobenzene	*119*		*80.0-120*		*12/07/2017 14:39*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 14:58	WG1050755
Toluene	ND		1.00	1	12/07/2017 14:58	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 14:58	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 14:58	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 14:58	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 14:58	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 14:58	WG1050755
(S) Toluene-d8	*109*		*80.0-120*		*12/07/2017 14:58*	WG1050755
(S) Dibromofluoromethane	*90.7*		*76.0-123*		*12/07/2017 14:58*	WG1050755
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*12/07/2017 14:58*	WG1050755
(S) 4-Bromofluorobenzene	*121*	J1	*80.0-120*		*12/07/2017 14:58*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 15:17	WG1050755
Toluene	ND		1.00	1	12/07/2017 15:17	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 15:17	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 15:17	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 15:17	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 15:17	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 15:17	WG1050755
(S) Toluene-d8	*111*		*80.0-120*		*12/07/2017 15:17*	WG1050755
(S) Dibromofluoromethane	*90.6*		*76.0-123*		*12/07/2017 15:17*	WG1050755
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*12/07/2017 15:17*	WG1050755
(S) 4-Bromofluorobenzene	*118*		*80.0-120*		*12/07/2017 15:17*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 15:37	WG1050755
Toluene	ND		1.00	1	12/07/2017 15:37	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 15:37	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 15:37	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 15:37	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 15:37	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 15:37	WG1050755
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2017 15:37*	WG1050755
(S) Dibromofluoromethane	*92.3*		*76.0-123*		*12/07/2017 15:37*	WG1050755
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*12/07/2017 15:37*	WG1050755
(S) 4-Bromofluorobenzene	*118*		*80.0-120*		*12/07/2017 15:37*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 15:56	WG1050755
Toluene	ND		1.00	1	12/07/2017 15:56	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 15:56	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 15:56	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 15:56	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 15:56	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 15:56	WG1050755
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2017 15:56*	WG1050755
(S) Dibromofluoromethane	*91.2*		*76.0-123*		*12/07/2017 15:56*	WG1050755
(S) a,a,a-Trifluorotoluene	*98.9*		*80.0-120*		*12/07/2017 15:56*	WG1050755
(S) 4-Bromofluorobenzene	*119*		*80.0-120*		*12/07/2017 15:56*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 16:15	WG1050755
Toluene	ND		1.00	1	12/07/2017 16:15	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 16:15	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 16:15	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 16:15	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 16:15	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 16:15	WG1050755
(S) Toluene-d8	*107*		*80.0-120*		*12/07/2017 16:15*	WG1050755
(S) Dibromofluoromethane	*90.2*		*76.0-123*		*12/07/2017 16:15*	WG1050755
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*		*12/07/2017 16:15*	WG1050755
(S) 4-Bromofluorobenzene	*120*		*80.0-120*		*12/07/2017 16:15*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 16:34	WG1050755
Toluene	ND		1.00	1	12/07/2017 16:34	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 16:34	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 16:34	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 16:34	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 16:34	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 16:34	WG1050755
(S) Toluene-d8	*107*		*80.0-120*		*12/07/2017 16:34*	WG1050755
(S) Dibromofluoromethane	*91.7*		*76.0-123*		*12/07/2017 16:34*	WG1050755
(S) a,a,a-Trifluorotoluene	*99.8*		*80.0-120*		*12/07/2017 16:34*	WG1050755
(S) 4-Bromofluorobenzene	*116*		*80.0-120*		*12/07/2017 16:34*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 16:54	WG1050755
Toluene	5.53		1.00	1	12/07/2017 16:54	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 16:54	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 16:54	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 16:54	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 16:54	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 16:54	WG1050755
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2017 16:54*	WG1050755
(S) Dibromofluoromethane	*92.7*		*76.0-123*		*12/07/2017 16:54*	WG1050755
(S) a,a,a-Trifluorotoluene	*99.6*		*80.0-120*		*12/07/2017 16:54*	WG1050755
(S) 4-Bromofluorobenzene	*117*		*80.0-120*		*12/07/2017 16:54*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	26.6		1.00	1	12/07/2017 17:13	WG1050755
Toluene	8.39		1.00	1	12/07/2017 17:13	WG1050755
Ethylbenzene	1.80		1.00	1	12/07/2017 17:13	WG1050755
o-Xylene	7.17		1.00	1	12/07/2017 17:13	WG1050755
m&p-Xylene	10.2		2.00	1	12/07/2017 17:13	WG1050755
Xylenes, Total	17.4		3.00	1	12/07/2017 17:13	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 17:13	WG1050755
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2017 17:13*	WG1050755
(S) Dibromofluoromethane	*90.2*		*76.0-123*		*12/07/2017 17:13*	WG1050755
(S) a,a,a-Trifluorotoluene	*99.5*		*80.0-120*		*12/07/2017 17:13*	WG1050755
(S) 4-Bromofluorobenzene	*120*		*80.0-120*		*12/07/2017 17:13*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.59		1.00	1	12/07/2017 17:32	WG1050755
Toluene	1.15		1.00	1	12/07/2017 17:32	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 17:32	WG1050755
o-Xylene	2.14		1.00	1	12/07/2017 17:32	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 17:32	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 17:32	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 17:32	WG1050755
(S) Toluene-d8	*109*		*80.0-120*		*12/07/2017 17:32*	WG1050755
(S) Dibromofluoromethane	*91.3*		*76.0-123*		*12/07/2017 17:32*	WG1050755
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*12/07/2017 17:32*	WG1050755
(S) 4-Bromofluorobenzene	*117*		*80.0-120*		*12/07/2017 17:32*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 17:51	WG1050755
Toluene	ND		1.00	1	12/07/2017 17:51	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 17:51	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 17:51	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 17:51	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 17:51	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 17:51	WG1050755
(S) Toluene-d8	*105*		*80.0-120*		*12/07/2017 17:51*	WG1050755
(S) Dibromofluoromethane	*92.3*		*76.0-123*		*12/07/2017 17:51*	WG1050755
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*		*12/07/2017 17:51*	WG1050755
(S) 4-Bromofluorobenzene	*119*		*80.0-120*		*12/07/2017 17:51*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	16.6		1.00	1	12/07/2017 18:10	WG1050755
Toluene	12.6		1.00	1	12/07/2017 18:10	WG1050755
Ethylbenzene	2.91		1.00	1	12/07/2017 18:10	WG1050755
o-Xylene	13.3		1.00	1	12/07/2017 18:10	WG1050755
m&p-Xylene	20.1		2.00	1	12/07/2017 18:10	WG1050755
Xylenes, Total	33.4		3.00	1	12/07/2017 18:10	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 18:10	WG1050755
(S) Toluene-d8	*107*		*80.0-120*		*12/07/2017 18:10*	WG1050755
(S) Dibromofluoromethane	*89.7*		*76.0-123*		*12/07/2017 18:10*	WG1050755
(S) a,a,a-Trifluorotoluene	*98.2*		*80.0-120*		*12/07/2017 18:10*	WG1050755
(S) 4-Bromofluorobenzene	*123*	J1	*80.0-120*		*12/07/2017 18:10*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 18:30	WG1050755
Toluene	ND		1.00	1	12/07/2017 18:30	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 18:30	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 18:30	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 18:30	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 18:30	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 18:30	WG1050755
(S) Toluene-d8	*107*		*80.0-120*		*12/07/2017 18:30*	WG1050755
(S) Dibromofluoromethane	*90.7*		*76.0-123*		*12/07/2017 18:30*	WG1050755
(S) a,a,a-Trifluorotoluene	*102*		*80.0-120*		*12/07/2017 18:30*	WG1050755
(S) 4-Bromofluorobenzene	*112*		*80.0-120*		*12/07/2017 18:30*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 18:49	WG1050755
Toluene	ND		1.00	1	12/07/2017 18:49	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 18:49	WG1050755
o-Xylene	ND		1.00	1	12/07/2017 18:49	WG1050755
m&p-Xylene	ND		2.00	1	12/07/2017 18:49	WG1050755
Xylenes, Total	ND		3.00	1	12/07/2017 18:49	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 18:49	WG1050755
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2017 18:49*	WG1050755
(S) Dibromofluoromethane	*90.4*		*76.0-123*		*12/07/2017 18:49*	WG1050755
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*12/07/2017 18:49*	WG1050755
(S) 4-Bromofluorobenzene	*115*		*80.0-120*		*12/07/2017 18:49*	WG1050755

Method Blank (MB)

(MB) R3271497-2 12/07/17 11:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*89.7*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*98.9*			*80.0-120*
(S) 4-Bromofluorobenzene	*118*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3271497-1 12/07/17 10:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	25.8	103	70.0-130	
Ethylbenzene	25.0	30.0	120	70.0-130	
Naphthalene	25.0	20.9	83.4	70.0-130	
Toluene	25.0	29.7	119	70.0-130	
Xylenes, Total	75.0	89.8	120	70.0-130	
o-Xylene	25.0	29.4	118	70.0-130	
m&p-Xylenes	50.0	60.4	121	70.0-130	
(S) Toluene-d8			*109*	*80.0-120*	
(S) Dibromofluoromethane			*89.5*	*76.0-123*	
(S) a,a,a-Trifluorotoluene			*102*	*80.0-120*	
(S) 4-Bromofluorobenzene			*118*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

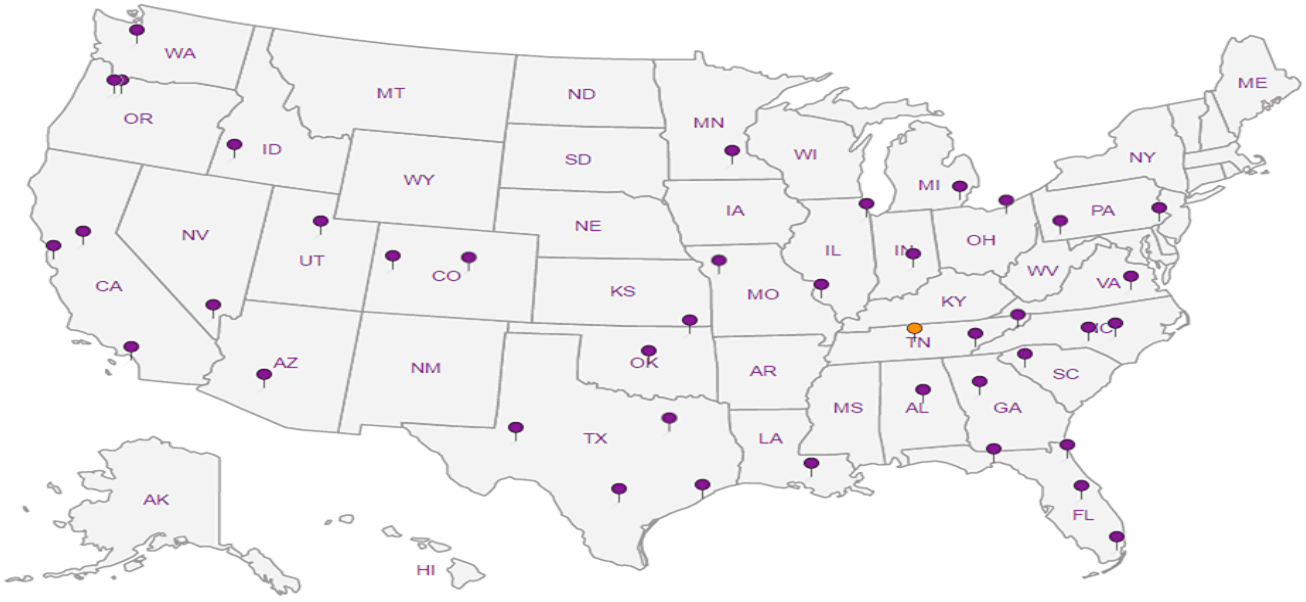
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Site

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.SW

Lab Project # KINCH2MGA-LEWIS

Collected by (print): M. WARREN

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260BTEXNSC-TB 40mlAmb-HCl-Blk	BTEX	NAPHTHALENE
SW11-120517	GRAB	GW	NA	12/05/17	0815	3	X		X	X
SW10-120517		GW			0830	3	X			
FP01-120517		GW			0850	3	X			
FP02-120517		GW			0855	3	X			
SW09-120517		GW			0910	3	X			
SW08-120517		GW			0920	3	X			
SW13-120517		GW			0925	3	X			
FP03-120517		GW			0945	3	X			
SW04-120517		GW			1000	3	X			
SW02-120517		GW			1005	3	X			

Analysis / Container / Preservative

Pres Chk: X X X

Chain of Custody Page 1 of 2

ESC LABORATORIES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 955602

D245

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P627790
TSR: 526 - Chris McCord
PB: 11-27-17

Shipped Via: FedEX Ground

Remarks | Sample # (lab only)

-01
-02
-03
-04
-05
-06
-07
-08
-09
-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier ____

Tracking # 4142 5221 3142

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/05/17	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes (No) HCL / MeoH TBR

Temp: 2.5 corr 3.0 Bottles Received: 48

Preservation required by Login: Date/Time

Date: 12/6/17 Time: 0815

Hold:

Conditions NCF OK

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Site

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # LEWIS DR.

Lab Project # KINCH2MGA-LEWIS

Collected by (print): M. WARREN

Site/Facility ID # 684910.LD.MR.SW

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk: X

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260BTEXNSC-TB 40mlAmb-HCl-Blk	BTEX	NAPHTHALENE	Remarks	Sample # (lab only)
SW02-D-120517	GRAB	GW	NA	120517	1010	3	X		X	X		-11
SW01-120517		GW			1015	3	X					-12
SW07-120517		GW			1025	3	X					-13
SW12-120517		GW			1035	3	X					-14
SW03-120517		GW			1040	3	X					-15
SW14-120517		GW			1115	3	X	*				-16

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Relinquished by : (Signature) — Date: 12/05/17 Time: 1730 — Received by: (Signature)

Relinquished by : (Signature) — Date: — Time: — Received by: (Signature)

Relinquished by : (Signature) — Date: — Time: — Received for lab by: (Signature) 861

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: 4.5 °C Bottles Received: 48

Date: 12/6/17 Time: 08145

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Chain of Custody Page 2 of 2

ESC LABORATORY SCIENCES
A subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 455602

Table #

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P627790
TSR: 526 - Chris McCord
PB: 12-22-17

Shipped Via: FedEx Ground

ANALYTICAL REPORT

January 04, 2018

CH2M Hill- Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L957851
Samples Received:	12/15/2017
Project Number:	684910.LD.MR.SW
Description:	Lewis Drive Surface Water
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

SW11-121417 L957851-01 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 12:40 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 17:34	12/15/17 17:34	JHH

SW10-121417 L957851-02 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 12:50 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 17:53	12/15/17 17:53	JHH

FP01-121417 L957851-03 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 13:00 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 18:12	12/15/17 18:12	JHH

FP02-121417 L957851-04 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 13:05 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 18:31	12/15/17 18:31	JHH

SW09-121417 L957851-05 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 13:40 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 18:51	12/15/17 18:51	JHH

SW08-121417 L957851-06 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 13:50 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 19:10	12/15/17 19:10	JHH

SW13-121417 L957851-07 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 14:00 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 19:29	12/15/17 19:29	GLN

FP03-121417 L957851-08 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 14:10 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 19:49	12/15/17 19:49	JHH

SW04-121417 L957851-09 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 14:25 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 20:08	12/15/17 20:08	GLN

SW02-121417 L957851-10 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 14:30 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 20:27	12/15/17 20:27	GLN

SW01-121417 L957851-11 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 14:45 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 20:46	12/15/17 20:46	GLN

SW07-121417 L957851-12 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 15:00 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 21:06	12/15/17 21:06	GLN

SW12-121417 L957851-13 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 15:05 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 21:25	12/15/17 21:25	GLN

SW03-121417 L957851-14 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 15:15 | Received date/time: 12/15/17 08:45

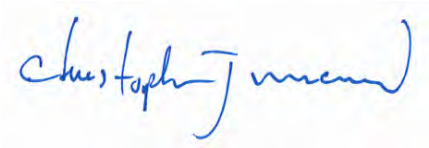
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 21:44	12/15/17 21:44	GLN

TB01-121417 L957851-15 GW

Collected by: Melissa Warren | Collected date/time: 12/14/17 15:25 | Received date/time: 12/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1054201	1	12/15/17 16:55	12/15/17 16:55	GLN

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



Chris McCord
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 17:34	WG1054201
Toluene	ND		1.00	1	12/15/2017 17:34	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 17:34	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 17:34	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 17:34	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 17:34	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 17:34	WG1054201
(S) Toluene-d8	*108*		*80.0-120*		*12/15/2017 17:34*	WG1054201
(S) Dibromofluoromethane	*87.2*		*76.0-123*		*12/15/2017 17:34*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 17:34*	WG1054201
(S) 4-Bromofluorobenzene	*91.3*		*80.0-120*		*12/15/2017 17:34*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 17:53	WG1054201
Toluene	ND		1.00	1	12/15/2017 17:53	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 17:53	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 17:53	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 17:53	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 17:53	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 17:53	WG1054201
(S) Toluene-d8	*109*		*80.0-120*		*12/15/2017 17:53*	WG1054201
(S) Dibromofluoromethane	*87.1*		*76.0-123*		*12/15/2017 17:53*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 17:53*	WG1054201
(S) 4-Bromofluorobenzene	*92.3*		*80.0-120*		*12/15/2017 17:53*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 18:12	WG1054201
Toluene	ND		1.00	1	12/15/2017 18:12	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 18:12	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 18:12	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 18:12	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 18:12	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 18:12	WG1054201
(S) Toluene-d8	*110*		*80.0-120*		*12/15/2017 18:12*	WG1054201
(S) Dibromofluoromethane	*86.7*		*76.0-123*		*12/15/2017 18:12*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 18:12*	WG1054201
(S) 4-Bromofluorobenzene	*91.0*		*80.0-120*		*12/15/2017 18:12*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 18:31	WG1054201
Toluene	ND		1.00	1	12/15/2017 18:31	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 18:31	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 18:31	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 18:31	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 18:31	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 18:31	WG1054201
(S) Toluene-d8	*110*		*80.0-120*		*12/15/2017 18:31*	WG1054201
(S) Dibromofluoromethane	*87.2*		*76.0-123*		*12/15/2017 18:31*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 18:31*	WG1054201
(S) 4-Bromofluorobenzene	*90.7*		*80.0-120*		*12/15/2017 18:31*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 18:51	WG1054201
Toluene	ND		1.00	1	12/15/2017 18:51	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 18:51	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 18:51	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 18:51	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 18:51	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 18:51	WG1054201
(S) Toluene-d8	*108*		*80.0-120*		*12/15/2017 18:51*	WG1054201
(S) Dibromofluoromethane	*88.1*		*76.0-123*		*12/15/2017 18:51*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 18:51*	WG1054201
(S) 4-Bromofluorobenzene	*90.1*		*80.0-120*		*12/15/2017 18:51*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 19:10	WG1054201
Toluene	ND		1.00	1	12/15/2017 19:10	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 19:10	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 19:10	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 19:10	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 19:10	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 19:10	WG1054201
(S) Toluene-d8	*109*		*80.0-120*		*12/15/2017 19:10*	WG1054201
(S) Dibromofluoromethane	*89.4*		*76.0-123*		*12/15/2017 19:10*	WG1054201
(S) a,a,a-Trifluorotoluene	*113*		*80.0-120*		*12/15/2017 19:10*	WG1054201
(S) 4-Bromofluorobenzene	*92.7*		*80.0-120*		*12/15/2017 19:10*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 19:29	WG1054201
Toluene	ND		1.00	1	12/15/2017 19:29	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 19:29	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 19:29	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 19:29	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 19:29	WG1054201
Methyl tert-butyl ether	2.20		1.00	1	12/15/2017 19:29	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 19:29	WG1054201
(S) Toluene-d8	*110*		*80.0-120*		*12/15/2017 19:29*	WG1054201
(S) Dibromofluoromethane	*87.6*		*76.0-123*		*12/15/2017 19:29*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 19:29*	WG1054201
(S) 4-Bromofluorobenzene	*93.2*		*80.0-120*		*12/15/2017 19:29*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 19:49	WG1054201
Toluene	ND		1.00	1	12/15/2017 19:49	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 19:49	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 19:49	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 19:49	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 19:49	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 19:49	WG1054201
(S) Toluene-d8	*111*		*80.0-120*		*12/15/2017 19:49*	WG1054201
(S) Dibromofluoromethane	*87.7*		*76.0-123*		*12/15/2017 19:49*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 19:49*	WG1054201
(S) 4-Bromofluorobenzene	*93.1*		*80.0-120*		*12/15/2017 19:49*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 20:08	WG1054201
Toluene	ND		1.00	1	12/15/2017 20:08	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 20:08	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 20:08	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 20:08	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 20:08	WG1054201
Methyl tert-butyl ether	1.34		1.00	1	12/15/2017 20:08	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 20:08	WG1054201
(S) Toluene-d8	*109*		*80.0-120*		*12/15/2017 20:08*	WG1054201
(S) Dibromofluoromethane	*87.2*		*76.0-123*		*12/15/2017 20:08*	WG1054201
(S) a,a,a-Trifluorotoluene	*110*		*80.0-120*		*12/15/2017 20:08*	WG1054201
(S) 4-Bromofluorobenzene	*92.0*		*80.0-120*		*12/15/2017 20:08*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	21.1		1.00	1	12/15/2017 20:27	WG1054201
Toluene	9.40		1.00	1	12/15/2017 20:27	WG1054201
Ethylbenzene	1.53		1.00	1	12/15/2017 20:27	WG1054201
o-Xylene	7.32		1.00	1	12/15/2017 20:27	WG1054201
m&p-Xylene	9.74		2.00	1	12/15/2017 20:27	WG1054201
Xylenes, Total	17.1		3.00	1	12/15/2017 20:27	WG1054201
Methyl tert-butyl ether	3.88		1.00	1	12/15/2017 20:27	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 20:27	WG1054201
(S) Toluene-d8	*110*		*80.0-120*		*12/15/2017 20:27*	WG1054201
(S) Dibromofluoromethane	*86.9*		*76.0-123*		*12/15/2017 20:27*	WG1054201
(S) a,a,a-Trifluorotoluene	*114*		*80.0-120*		*12/15/2017 20:27*	WG1054201
(S) 4-Bromofluorobenzene	*90.9*		*80.0-120*		*12/15/2017 20:27*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	4.52		1.00	1	12/15/2017 20:46	WG1054201
Toluene	4.52		1.00	1	12/15/2017 20:46	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 20:46	WG1054201
o-Xylene	3.20		1.00	1	12/15/2017 20:46	WG1054201
m&p-Xylene	3.48		2.00	1	12/15/2017 20:46	WG1054201
Xylenes, Total	6.68		3.00	1	12/15/2017 20:46	WG1054201
Methyl tert-butyl ether	1.77		1.00	1	12/15/2017 20:46	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 20:46	WG1054201
(S) Toluene-d8	*110*		*80.0-120*		*12/15/2017 20:46*	WG1054201
(S) Dibromofluoromethane	*88.5*		*76.0-123*		*12/15/2017 20:46*	WG1054201
(S) a,a,a-Trifluorotoluene	*114*		*80.0-120*		*12/15/2017 20:46*	WG1054201
(S) 4-Bromofluorobenzene	*92.0*		*80.0-120*		*12/15/2017 20:46*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 21:06	WG1054201
Toluene	ND		1.00	1	12/15/2017 21:06	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 21:06	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 21:06	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 21:06	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 21:06	WG1054201
Methyl tert-butyl ether	ND		1.00	1	12/15/2017 21:06	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 21:06	WG1054201
(S) Toluene-d8	*112*		*80.0-120*		*12/15/2017 21:06*	WG1054201
(S) Dibromofluoromethane	*86.3*		*76.0-123*		*12/15/2017 21:06*	WG1054201
(S) a,a,a-Trifluorotoluene	*112*		*80.0-120*		*12/15/2017 21:06*	WG1054201
(S) 4-Bromofluorobenzene	*91.9*		*80.0-120*		*12/15/2017 21:06*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	9.19		1.00	1	12/15/2017 21:25	WG1054201
Toluene	8.26		1.00	1	12/15/2017 21:25	WG1054201
Ethylbenzene	2.66		1.00	1	12/15/2017 21:25	WG1054201
o-Xylene	12.1		1.00	1	12/15/2017 21:25	WG1054201
m&p-Xylene	18.0		2.00	1	12/15/2017 21:25	WG1054201
Xylenes, Total	30.1		3.00	1	12/15/2017 21:25	WG1054201
Methyl tert-butyl ether	ND		1.00	1	12/15/2017 21:25	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 21:25	WG1054201
(S) Toluene-d8	*110*		*80.0-120*		*12/15/2017 21:25*	WG1054201
(S) Dibromofluoromethane	*87.5*		*76.0-123*		*12/15/2017 21:25*	WG1054201
(S) a,a,a-Trifluorotoluene	*114*		*80.0-120*		*12/15/2017 21:25*	WG1054201
(S) 4-Bromofluorobenzene	*90.2*		*80.0-120*		*12/15/2017 21:25*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 21:44	WG1054201
Toluene	ND		1.00	1	12/15/2017 21:44	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 21:44	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 21:44	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 21:44	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 21:44	WG1054201
Methyl tert-butyl ether	ND		1.00	1	12/15/2017 21:44	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 21:44	WG1054201
(S) Toluene-d8	*109*		*80.0-120*		*12/15/2017 21:44*	WG1054201
(S) Dibromofluoromethane	*87.5*		*76.0-123*		*12/15/2017 21:44*	WG1054201
(S) a,a,a-Trifluorotoluene	*114*		*80.0-120*		*12/15/2017 21:44*	WG1054201
(S) 4-Bromofluorobenzene	*89.3*		*80.0-120*		*12/15/2017 21:44*	WG1054201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/15/2017 16:55	WG1054201
Toluene	ND		1.00	1	12/15/2017 16:55	WG1054201
Ethylbenzene	ND		1.00	1	12/15/2017 16:55	WG1054201
o-Xylene	ND		1.00	1	12/15/2017 16:55	WG1054201
m&p-Xylene	ND		2.00	1	12/15/2017 16:55	WG1054201
Xylenes, Total	ND		3.00	1	12/15/2017 16:55	WG1054201
Methyl tert-butyl ether	ND		1.00	1	12/15/2017 16:55	WG1054201
Naphthalene	ND		5.00	1	12/15/2017 16:55	WG1054201
(S) Toluene-d8	*110*		*80.0-120*		*12/15/2017 16:55*	WG1054201
(S) Dibromofluoromethane	*86.2*		*76.0-123*		*12/15/2017 16:55*	WG1054201
(S) a,a,a-Trifluorotoluene	*114*		*80.0-120*		*12/15/2017 16:55*	WG1054201
(S) 4-Bromofluorobenzene	*90.1*		*80.0-120*		*12/15/2017 16:55*	WG1054201

Method Blank (MB)

(MB) R3273812-2 12/15/17 16:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) Toluene-d8	*110*			*80.0-120*
(S) Dibromofluoromethane	*87.9*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*112*			*80.0-120*
(S) 4-Bromofluorobenzene	*88.9*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3273812-1 12/15/17 15:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	20.5	81.8	70.0-130	
Ethylbenzene	25.0	25.8	103	70.0-130	
Methyl tert-butyl ether	25.0	21.1	84.3	70.0-130	
Naphthalene	25.0	20.1	80.6	70.0-130	
Toluene	25.0	25.1	100	70.0-130	
Xylenes, Total	75.0	79.1	105	70.0-130	
o-Xylene	25.0	26.5	106	70.0-130	
m&p-Xylenes	50.0	52.6	105	70.0-130	
(S) Toluene-d8			*110*	*80.0-120*	
(S) Dibromofluoromethane			*87.9*	*76.0-123*	
(S) a,a,a-Trifluorotoluene			*113*	*80.0-120*	
(S) 4-Bromofluorobenzene			*91.0*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

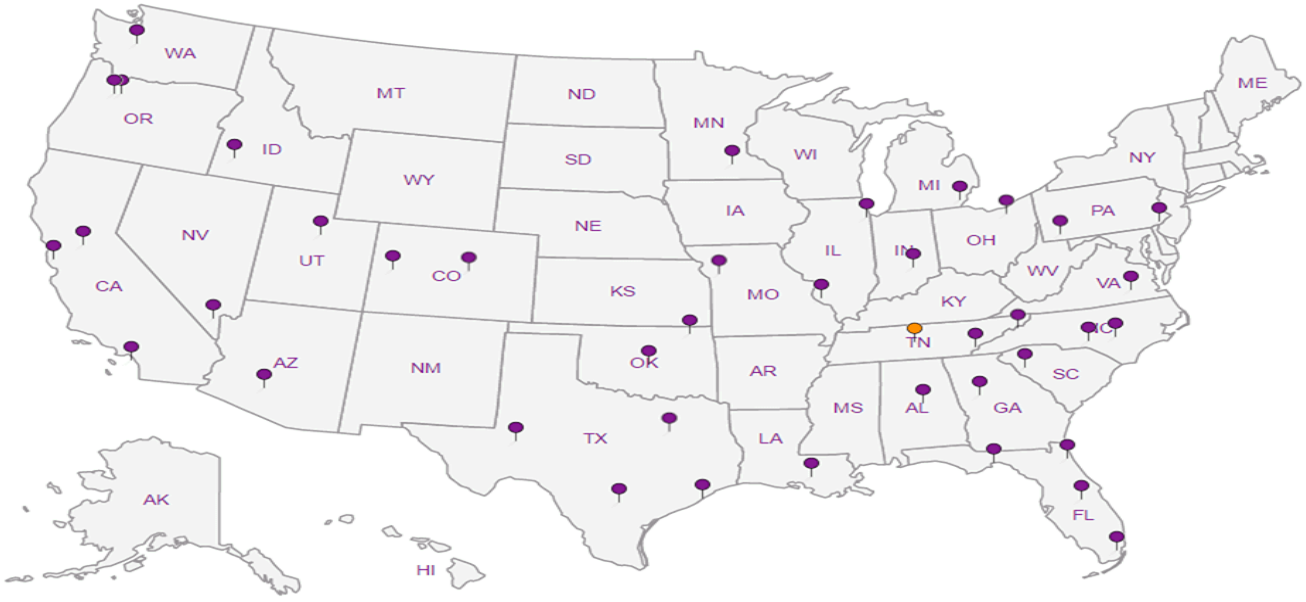
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Surface Water

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.SW

Lab Project # KINCH2MGA-LEWIS

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
X Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260BTEXNSC-TB 40mlAmb-HCl-Blk	BTEX	NAPHTHALENE							Remarks	Sample # (lab only)
SW11-121417	GRAB	GW	NA	12/14/17	1240	3	X		X	X								-01
SW10-121417		GW			1250	3	X											02
FP01-121417		GW			1300	3	X											03
FP02-121417		GW			1305	3	X											04
SW09-121417		GW			1340	3	X											05
SW08-121417		GW			1350	3	X											06
SW13-121417		GW			1400	3	X											07
FP03-121417		GW			1410	3	X											08
SW04-121417		GW			1425	3	X											09
SW02-121417		GW			1430	3	X											10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 414252260218

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	12/14/17	1615		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.5 °C Bottles Received: 42
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/15/17 Time: 0845
				Hold: Condition: NCF / OK

Chain of Custody Page 1 of 2

ESC LABORATORIES
a subsidiary of Pace Analytical
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L957851

F108

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P631354
TSR: 526 - Chris McCord
PB: 12-12-17
Shipped Via: FedEX Ground

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Surface Water

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MP.SW

Lab Project # KINCH2MGA-LEWIS

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N X Y

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
X Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260BTEXNSC-TB 40mlAmb-HCl-Blk	BTEX	NAPHTHALENE	Remarks	Sample # (lab only)
SW01-121417	GRAB	GW	NA	12/14/17	1445	3	X		X	X		-11
SW07-121417	"	GW	"	"	1500	3	X		X	X		12
SW12-121417	"	GW	"	"	1505	3	X		X	X		13
SW03-121417	"	GW	"	"	1515	3	X		X	X		14
———	—	GW	—	—	———	3	X		X	X		15
TB01-121417	GRAB	GW	NA	12/14/17	1525	1		X	X	X		16

Chain of Custody Page 2 of 2

ESC LAB SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L957851

Table #

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P631354
TSR: 526 - Chris McCord
PB: 12-12-17G

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: ___ UPS X FedEx ___ Courier ___

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: X N
Correct bottles used: X N
Sufficient volume sent: X N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/14/17	1615	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 0.5 °C Bottles Received: 42

Date: 12/15/17 Time: 0645

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Attachment B
Groundwater Analytical Laboratory Reports

ANALYTICAL REPORT

October 12, 2017

CH2M Hill- Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L941579
Samples Received:	10/05/2017
Project Number:	684910.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DR
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Jason Romer
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-25-100417 L941579-01 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 10:41 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/07/17 21:23	10/07/17 21:23	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	10	10/11/17 00:58	10/11/17 00:58	DWR

MW-35-100417 L941579-02 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 10:51 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/07/17 21:44	10/07/17 21:44	ACG

MW-29-100417 L941579-03 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 11:12 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/07/17 22:06	10/07/17 22:06	ACG

MW-26-100417 L941579-04 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 11:22 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/07/17 22:28	10/07/17 22:28	ACG

MW-23-100417 L941579-05 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 11:32 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	10	10/07/17 22:49	10/07/17 22:49	ACG

MW-23-100417-DUP L941579-06 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 11:35 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/07/17 23:11	10/07/17 23:11	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	20	10/11/17 01:16	10/11/17 01:16	DWR

FB01-100417 L941579-09 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 13:11 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/08/17 00:16	10/08/17 00:16	ACG

TB01-100417 L941579-10 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 13:17 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/07/17 21:01	10/07/17 21:01	ACG

MW-02-100417 L941579-11 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 08:25 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	50	10/08/17 00:38	10/08/17 00:38	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	500	10/11/17 01:35	10/11/17 01:35	DWR

MW-10-100417 L941579-12 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 08:41 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/08/17 01:00	10/08/17 01:00	ACG

MW-05-100417 L941579-13 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 08:54 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/08/17 01:22	10/08/17 01:22	ACG

MW-31-100417 L941579-14 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 09:18 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/08/17 01:43	10/08/17 01:43	ACG

MW-38-100417 L941579-15 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 09:38 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/08/17 02:05	10/08/17 02:05	ACG

MW-34-100417 L941579-16 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 09:52 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	10	10/08/17 02:27	10/08/17 02:27	ACG

MW-34-100417-DUP L941579-17 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 09:56 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/08/17 02:48	10/08/17 02:48	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	50	10/11/17 01:54	10/11/17 01:54	DWR

MW-39-100417 L941579-18 GW

Collected by: Melissa Warren | Collected date/time: 10/04/17 10:07 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	50	10/08/17 03:10	10/08/17 03:10	ACG

MW-40-100417 L941579-19 GW

Collected by: Melissa Warren
Collected date/time: 10/04/17 10:15
Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1000	10/08/17 03:32	10/08/17 03:32	ACG

MW-41-100417 L941579-20 GW

Collected by: Melissa Warren
Collected date/time: 10/04/17 10:31
Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1028816	1	10/08/17 03:53	10/08/17 03:53	ACG

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

Jason Romer
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	173		10.0	10	10/11/2017 00:58	WG1028816
Toluene	1.73		1.00	1	10/07/2017 21:23	WG1028816
Ethylbenzene	16.2		1.00	1	10/07/2017 21:23	WG1028816
Total Xylenes	276		3.00	1	10/07/2017 21:23	WG1028816
Methyl tert-butyl ether	1.10		1.00	1	10/07/2017 21:23	WG1028816
Naphthalene	6.77		5.00	1	10/07/2017 21:23	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/07/2017 21:23	WG1028816
(S) Toluene-d8	*102*		*80.0-120*		*10/11/2017 00:58*	WG1028816
(S) Toluene-d8	*106*		*80.0-120*		*10/07/2017 21:23*	WG1028816
(S) Dibromofluoromethane	*92.8*		*76.0-123*		*10/11/2017 00:58*	WG1028816
(S) Dibromofluoromethane	*98.1*		*76.0-123*		*10/07/2017 21:23*	WG1028816
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*10/11/2017 00:58*	WG1028816
(S) 4-Bromofluorobenzene	*95.3*		*80.0-120*		*10/07/2017 21:23*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2017 21:44	WG1028816
Toluene	ND		1.00	1	10/07/2017 21:44	WG1028816
Ethylbenzene	ND		1.00	1	10/07/2017 21:44	WG1028816
Total Xylenes	ND		3.00	1	10/07/2017 21:44	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/07/2017 21:44	WG1028816
Naphthalene	ND		5.00	1	10/07/2017 21:44	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/07/2017 21:44	WG1028816
(S) Toluene-d8	*107*		*80.0-120*		*10/07/2017 21:44*	WG1028816
(S) Dibromofluoromethane	*103*		*76.0-123*		*10/07/2017 21:44*	WG1028816
(S) 4-Bromofluorobenzene	*94.0*		*80.0-120*		*10/07/2017 21:44*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2017 22:06	WG1028816
Toluene	ND		1.00	1	10/07/2017 22:06	WG1028816
Ethylbenzene	ND		1.00	1	10/07/2017 22:06	WG1028816
Total Xylenes	ND		3.00	1	10/07/2017 22:06	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/07/2017 22:06	WG1028816
Naphthalene	ND		5.00	1	10/07/2017 22:06	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/07/2017 22:06	WG1028816
(S) Toluene-d8	*106*		*80.0-120*		*10/07/2017 22:06*	WG1028816
(S) Dibromofluoromethane	*104*		*76.0-123*		*10/07/2017 22:06*	WG1028816
(S) 4-Bromofluorobenzene	*94.9*		*80.0-120*		*10/07/2017 22:06*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2017 22:28	WG1028816
Toluene	ND		1.00	1	10/07/2017 22:28	WG1028816
Ethylbenzene	ND		1.00	1	10/07/2017 22:28	WG1028816
Total Xylenes	ND		3.00	1	10/07/2017 22:28	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/07/2017 22:28	WG1028816
Naphthalene	ND		5.00	1	10/07/2017 22:28	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/07/2017 22:28	WG1028816
(S) Toluene-d8	*107*		*80.0-120*		*10/07/2017 22:28*	WG1028816
(S) Dibromofluoromethane	*103*		*76.0-123*		*10/07/2017 22:28*	WG1028816
(S) 4-Bromofluorobenzene	*93.2*		*80.0-120*		*10/07/2017 22:28*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	703		10.0	10	10/07/2017 22:49	WG1028816
Toluene	17.5		10.0	10	10/07/2017 22:49	WG1028816
Ethylbenzene	ND		10.0	10	10/07/2017 22:49	WG1028816
Total Xylenes	515		30.0	10	10/07/2017 22:49	WG1028816
Methyl tert-butyl ether	90.1		10.0	10	10/07/2017 22:49	WG1028816
Naphthalene	ND		50.0	10	10/07/2017 22:49	WG1028816
1,2-Dichloroethane	ND		10.0	10	10/07/2017 22:49	WG1028816
(S) Toluene-d8	*108*		*80.0-120*		*10/07/2017 22:49*	WG1028816
(S) Dibromofluoromethane	*102*		*76.0-123*		*10/07/2017 22:49*	WG1028816
(S) 4-Bromofluorobenzene	*92.7*		*80.0-120*		*10/07/2017 22:49*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	543		20.0	20	10/11/2017 01:16	WG1028816
Toluene	11.5		1.00	1	10/07/2017 23:11	WG1028816
Ethylbenzene	2.65		1.00	1	10/07/2017 23:11	WG1028816
Total Xylenes	424		3.00	1	10/07/2017 23:11	WG1028816
Methyl tert-butyl ether	69.2		1.00	1	10/07/2017 23:11	WG1028816
Naphthalene	ND		5.00	1	10/07/2017 23:11	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/07/2017 23:11	WG1028816
(S) Toluene-d8	*108*		*80.0-120*		*10/07/2017 23:11*	WG1028816
(S) Toluene-d8	*100*		*80.0-120*		*10/11/2017 01:16*	WG1028816
(S) Dibromofluoromethane	*95.3*		*76.0-123*		*10/07/2017 23:11*	WG1028816
(S) Dibromofluoromethane	*91.8*		*76.0-123*		*10/11/2017 01:16*	WG1028816
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*10/11/2017 01:16*	WG1028816
(S) 4-Bromofluorobenzene	*93.8*		*80.0-120*		*10/07/2017 23:11*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2017 00:16	WG1028816
Toluene	ND		1.00	1	10/08/2017 00:16	WG1028816
Ethylbenzene	ND		1.00	1	10/08/2017 00:16	WG1028816
Total Xylenes	ND		3.00	1	10/08/2017 00:16	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/08/2017 00:16	WG1028816
Naphthalene	ND		5.00	1	10/08/2017 00:16	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/08/2017 00:16	WG1028816
(S) Toluene-d8	*111*		*80.0-120*		*10/08/2017 00:16*	WG1028816
(S) Dibromofluoromethane	*105*		*76.0-123*		*10/08/2017 00:16*	WG1028816
(S) 4-Bromofluorobenzene	*92.4*		*80.0-120*		*10/08/2017 00:16*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2017 21:01	WG1028816
Toluene	ND		1.00	1	10/07/2017 21:01	WG1028816
Ethylbenzene	ND		1.00	1	10/07/2017 21:01	WG1028816
Total Xylenes	ND		3.00	1	10/07/2017 21:01	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/07/2017 21:01	WG1028816
Naphthalene	ND		5.00	1	10/07/2017 21:01	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/07/2017 21:01	WG1028816
(S) Toluene-d8	*108*		*80.0-120*		*10/07/2017 21:01*	WG1028816
(S) Dibromofluoromethane	*103*		*76.0-123*		*10/07/2017 21:01*	WG1028816
(S) 4-Bromofluorobenzene	*94.6*		*80.0-120*		*10/07/2017 21:01*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	3510		50.0	50	10/08/2017 00:38	WG1028816
Toluene	11900		500	500	10/11/2017 01:35	WG1028816
Ethylbenzene	306		50.0	50	10/08/2017 00:38	WG1028816
Total Xylenes	11200		150	50	10/08/2017 00:38	WG1028816
Methyl tert-butyl ether	53.9		50.0	50	10/08/2017 00:38	WG1028816
Naphthalene	ND		250	50	10/08/2017 00:38	WG1028816
1,2-Dichloroethane	ND		50.0	50	10/08/2017 00:38	WG1028816
(S) Toluene-d8	*114*		*80.0-120*		*10/08/2017 00:38*	WG1028816
(S) Toluene-d8	*98.7*		*80.0-120*		*10/11/2017 01:35*	WG1028816
(S) Dibromofluoromethane	*101*		*76.0-123*		*10/08/2017 00:38*	WG1028816
(S) Dibromofluoromethane	*90.5*		*76.0-123*		*10/11/2017 01:35*	WG1028816
(S) 4-Bromofluorobenzene	*94.5*		*80.0-120*		*10/08/2017 00:38*	WG1028816
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*10/11/2017 01:35*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2017 01:00	WG1028816
Toluene	ND		1.00	1	10/08/2017 01:00	WG1028816
Ethylbenzene	ND		1.00	1	10/08/2017 01:00	WG1028816
Total Xylenes	ND		3.00	1	10/08/2017 01:00	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/08/2017 01:00	WG1028816
Naphthalene	ND		5.00	1	10/08/2017 01:00	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/08/2017 01:00	WG1028816
(S) Toluene-d8	*116*		*80.0-120*		*10/08/2017 01:00*	WG1028816
(S) Dibromofluoromethane	*104*		*76.0-123*		*10/08/2017 01:00*	WG1028816
(S) 4-Bromofluorobenzene	*93.7*		*80.0-120*		*10/08/2017 01:00*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	10/08/2017 01:22	WG1028816
Toluene	ND		1.00	1	10/08/2017 01:22	WG1028816
Ethylbenzene	ND		1.00	1	10/08/2017 01:22	WG1028816
Total Xylenes	ND		3.00	1	10/08/2017 01:22	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/08/2017 01:22	WG1028816
Naphthalene	ND		5.00	1	10/08/2017 01:22	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/08/2017 01:22	WG1028816
(S) Toluene-d8	*117*		*80.0-120*		*10/08/2017 01:22*	WG1028816
(S) Dibromofluoromethane	*102*		*76.0-123*		*10/08/2017 01:22*	WG1028816
(S) 4-Bromofluorobenzene	*91.9*		*80.0-120*		*10/08/2017 01:22*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2017 01:43	WG1028816
Toluene	ND		1.00	1	10/08/2017 01:43	WG1028816
Ethylbenzene	ND		1.00	1	10/08/2017 01:43	WG1028816
Total Xylenes	ND		3.00	1	10/08/2017 01:43	WG1028816
Methyl tert-butyl ether	ND		1.00	1	10/08/2017 01:43	WG1028816
Naphthalene	ND		5.00	1	10/08/2017 01:43	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/08/2017 01:43	WG1028816
(S) Toluene-d8	*119*		*80.0-120*		*10/08/2017 01:43*	WG1028816
(S) Dibromofluoromethane	*102*		*76.0-123*		*10/08/2017 01:43*	WG1028816
(S) 4-Bromofluorobenzene	*93.9*		*80.0-120*		*10/08/2017 01:43*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.75		1.00	1	10/08/2017 02:05	WG1028816
Toluene	ND		1.00	1	10/08/2017 02:05	WG1028816
Ethylbenzene	ND		1.00	1	10/08/2017 02:05	WG1028816
Total Xylenes	ND		3.00	1	10/08/2017 02:05	WG1028816
Methyl tert-butyl ether	11.2		1.00	1	10/08/2017 02:05	WG1028816
Naphthalene	ND		5.00	1	10/08/2017 02:05	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/08/2017 02:05	WG1028816
(S) Toluene-d8	*121*	J1	*80.0-120*		*10/08/2017 02:05*	WG1028816
(S) Dibromofluoromethane	*101*		*76.0-123*		*10/08/2017 02:05*	WG1028816
(S) 4-Bromofluorobenzene	*92.5*		*80.0-120*		*10/08/2017 02:05*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	919		10.0	10	10/08/2017 02:27	WG1028816
Toluene	36.8		10.0	10	10/08/2017 02:27	WG1028816
Ethylbenzene	ND		10.0	10	10/08/2017 02:27	WG1028816
Total Xylenes	157		30.0	10	10/08/2017 02:27	WG1028816
Methyl tert-butyl ether	151		10.0	10	10/08/2017 02:27	WG1028816
Naphthalene	ND		50.0	10	10/08/2017 02:27	WG1028816
1,2-Dichloroethane	ND		10.0	10	10/08/2017 02:27	WG1028816
(S) Toluene-d8	*122*	J1	*80.0-120*		*10/08/2017 02:27*	WG1028816
(S) Dibromofluoromethane	*100*		*76.0-123*		*10/08/2017 02:27*	WG1028816
(S) 4-Bromofluorobenzene	*93.5*		*80.0-120*		*10/08/2017 02:27*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	846		50.0	50	10/11/2017 01:54	WG1028816
Toluene	40.8		1.00	1	10/08/2017 02:48	WG1028816
Ethylbenzene	1.49		1.00	1	10/08/2017 02:48	WG1028816
Total Xylenes	186		3.00	1	10/08/2017 02:48	WG1028816
Methyl tert-butyl ether	148		1.00	1	10/08/2017 02:48	WG1028816
Naphthalene	ND		5.00	1	10/08/2017 02:48	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/08/2017 02:48	WG1028816
(S) Toluene-d8	*124*	J1	*80.0-120*		*10/08/2017 02:48*	WG1028816
(S) Toluene-d8	*99.0*		*80.0-120*		*10/11/2017 01:54*	WG1028816
(S) Dibromofluoromethane	*92.6*		*76.0-123*		*10/11/2017 01:54*	WG1028816
(S) Dibromofluoromethane	*90.6*		*76.0-123*		*10/08/2017 02:48*	WG1028816
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*10/11/2017 01:54*	WG1028816
(S) 4-Bromofluorobenzene	*95.0*		*80.0-120*		*10/08/2017 02:48*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1560		50.0	50	10/08/2017 03:10	WG1028816
Toluene	365		50.0	50	10/08/2017 03:10	WG1028816
Ethylbenzene	ND		50.0	50	10/08/2017 03:10	WG1028816
Total Xylenes	1350		150	50	10/08/2017 03:10	WG1028816
Methyl tert-butyl ether	305		50.0	50	10/08/2017 03:10	WG1028816
Naphthalene	ND		250	50	10/08/2017 03:10	WG1028816
1,2-Dichloroethane	ND		50.0	50	10/08/2017 03:10	WG1028816
(S) Toluene-d8	*125*	J1	*80.0-120*		*10/08/2017 03:10*	WG1028816
(S) Dibromofluoromethane	*99.5*		*76.0-123*		*10/08/2017 03:10*	WG1028816
(S) 4-Bromofluorobenzene	*95.4*		*80.0-120*		*10/08/2017 03:10*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	13800		1000	1000	10/08/2017 03:32	WG1028816
Toluene	28800		1000	1000	10/08/2017 03:32	WG1028816
Ethylbenzene	ND		1000	1000	10/08/2017 03:32	WG1028816
Total Xylenes	9530		3000	1000	10/08/2017 03:32	WG1028816
Methyl tert-butyl ether	ND		1000	1000	10/08/2017 03:32	WG1028816
Naphthalene	ND		5000	1000	10/08/2017 03:32	WG1028816
1,2-Dichloroethane	ND		1000	1000	10/08/2017 03:32	WG1028816
(S) Toluene-d8	*125*	J1	*80.0-120*		*10/08/2017 03:32*	WG1028816
(S) Dibromofluoromethane	*99.8*		*76.0-123*		*10/08/2017 03:32*	WG1028816
(S) 4-Bromofluorobenzene	*94.7*		*80.0-120*		*10/08/2017 03:32*	WG1028816

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	93.5		1.00	1	10/08/2017 03:53	WG1028816
Toluene	ND		1.00	1	10/08/2017 03:53	WG1028816
Ethylbenzene	ND		1.00	1	10/08/2017 03:53	WG1028816
Total Xylenes	59.9		3.00	1	10/08/2017 03:53	WG1028816
Methyl tert-butyl ether	1.84		1.00	1	10/08/2017 03:53	WG1028816
Naphthalene	ND		5.00	1	10/08/2017 03:53	WG1028816
1,2-Dichloroethane	ND		1.00	1	10/08/2017 03:53	WG1028816
(S) Toluene-d8	*128*	J1	*80.0-120*		*10/08/2017 03:53*	WG1028816
(S) Dibromofluoromethane	*95.2*		*76.0-123*		*10/08/2017 03:53*	WG1028816
(S) 4-Bromofluorobenzene	*95.3*		*80.0-120*		*10/08/2017 03:53*	WG1028816

Method Blank (MB)

(MB) R3256248-2 10/07/17 20:39

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*105*			*80.0-120*
(S) Dibromofluoromethane	*103*			*76.0-123*
(S) 4-Bromofluorobenzene	*93.9*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3256248-1 10/07/17 19:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	27.5	110	70.0-130	
1,2-Dichloroethane	25.0	26.1	104	70.0-130	
Ethylbenzene	25.0	25.3	101	70.0-130	
Methyl tert-butyl ether	25.0	25.8	103	70.0-130	
Naphthalene	25.0	17.5	70.1	70.0-130	
Toluene	25.0	25.2	101	70.0-130	
Xylenes, Total	75.0	75.8	101	70.0-130	
(S) Toluene-d8			*102*	*80.0-120*	
(S) Dibromofluoromethane			*104*	*76.0-123*	
(S) 4-Bromofluorobenzene			*96.7*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

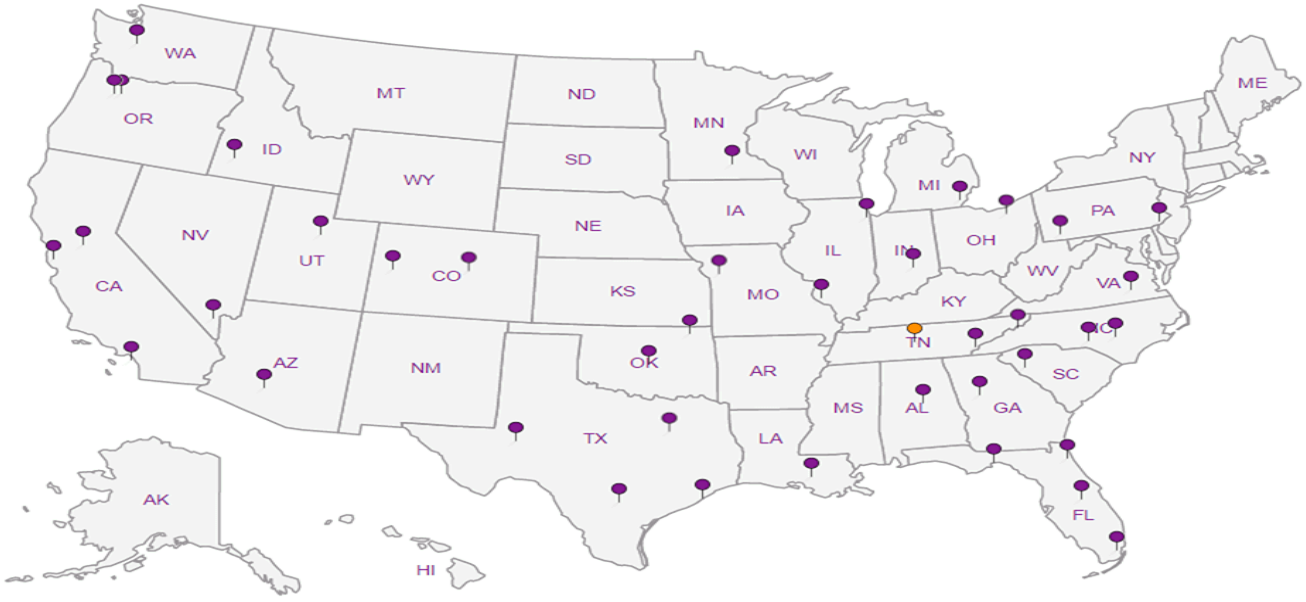
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MRGW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARNER

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N ___ Y X

Chain of Custody Page 2 of 2

ESC LABORATORY SCIENCES
a subsidiary of Accutest

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L941579

H104

Acctnum: KINCH2MGA
Template: T121318
Prelogin: P620330
TSR: 526 - Chris McCord
PB: 9-26-17

Shipped Via: FedEX Ground

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW-25-100417	GRAB	GW	NA	10/4/17	1041	3	X		X	X	X	X		-01
MW-35-100417		GW			1051	3	X							02
MW-29-100417		GW			1112	3	X							03
MW-26-100417		GW			1122	3	X							04
MW-23-100417		GW			1132	3	X							05
MW-23-100417-DUP		GW			1135	3	X							06
CHANDLER-HH-W-100417		GW			1355	3	X							07
CHANDLER-AG-W-100417		GW			1425	3	X							08
FB01-100417		GW			1311	3	X	X						09
TB01-100417		GW			1317	1	X	X						10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 7474 0934 8237

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: X Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	
	10/4/17	1730			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7 °C	Bottles Received: 57
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10-05-17	Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR,GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWISDR.

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW-02-100417	GRAB	GW	NA	10/04/17	0825	3	X		X	X	X	X		-11
MW-10-100417		GW			0841	3	X							12
MW-05-100417		GW			0854	3	X							13
MW-31-100417		GW			0918	3	X							14
MW-38-100417		GW			0938	3	X							15
MW-34-100417		GW			0952	3	X							16
MW-34-100417-DUP		GW			0956	3	X							17
MW-39-100417		GW			1007	3	X							18
MW-40-100417		GW			1015	3	X							19
MW-41-100417		GW			1031	3	X							20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 7474 0434 8237

Relinquished by : (Signature) — Date: 10/04/17 — Time: 1730

Received by: (Signature)

Trip Blank Received: Yes / No
HCl / MeoH
TBR
1

Relinquished by : (Signature) — Date: — Time:

Received by: (Signature)

Temp: 1.2 °C Bottles Received: 57

If preservation required by Login: Date/Time

Relinquished by : (Signature) — Date: — Time:

Received for lab by: (Signature) — Date: 10-05-17 — Time: 0845

Hold:

Condition: NCF (OK)

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X __N
Sufficient volume sent: X __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: X __N

Chain of Custody Page 1 of 2

ESC LABORATORY SCIENCES
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12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L941579

Table #

Acctnum: KINCH2MGA
Template: T121318
Prelogin: P620330
TSR: 526 - Chris McCord
PB: 9-26-17b
Shipped Via: FedEx Ground

ANALYTICAL REPORT

November 16, 2017

CH2M Hill- Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L949634
Samples Received:	11/09/2017
Project Number:	684910.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-29-110817 L949634-01 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 07:55 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/09/17 22:52	11/09/17 22:52	ACG

MW-26-110817 L949634-02 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 08:05 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/09/17 23:13	11/09/17 23:13	ACG

MW-23-110817 L949634-03 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 08:15 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	10	11/09/17 23:34	11/09/17 23:34	ACG

MW-43-110817 L949634-04 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 08:38 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/09/17 23:55	11/09/17 23:55	ACG

MW-38-110817 L949634-05 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 08:48 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 00:17	11/10/17 00:17	ACG

MW-34-110817 L949634-06 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 08:58 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	10	11/10/17 00:38	11/10/17 00:38	ACG

MW-39-110817 L949634-07 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 09:05 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	50	11/10/17 00:59	11/10/17 00:59	ACG

MW-40-110817 L949634-08 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 09:15 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1000	11/10/17 01:21	11/10/17 01:21	ACG

MW-35-110817 L949634-09 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 09:38 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 01:42	11/10/17 01:42	ACG

MW-25-110817 L949634-10 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 09:45 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/13/17 20:17	11/13/17 20:17	DWR

MW-41-110817 L949634-11 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 09:55 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 02:26	11/10/17 02:26	ACG

MW-13B-110817 L949634-12 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 10:07 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 02:47	11/10/17 02:47	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	10	11/13/17 20:36	11/13/17 20:36	DWR

MW-13B-D-110817 L949634-13 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 10:10 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 03:08	11/10/17 03:08	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	10	11/13/17 20:56	11/13/17 20:56	DWR

MW-31-110817 L949634-14 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 10:20 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 03:29	11/10/17 03:29	ACG

MW-05-110817 L949634-15 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 10:35 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 04:55	11/10/17 04:55	ACG

MW-03-110817 L949634-16 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 10:55 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 05:17	11/10/17 05:17	ACG

MW-10-110817 L949634-17 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 11:05 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 05:38	11/10/17 05:38	ACG

MW-02-110817 L949634-18 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 11:15 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	100	11/13/17 21:16	11/13/17 21:16	DWR

TB01-110817 L949634-19 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 11:48 | Received date/time: 11/09/17 08:45

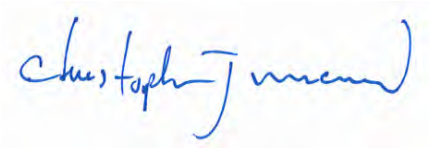
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/13/17 21:54	11/13/17 21:54	DWR

FB01-110817 L949634-20 GW

Collected by: Melissa Warren | Collected date/time: 11/08/17 11:50 | Received date/time: 11/09/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1041205	1	11/10/17 06:21	11/10/17 06:21	ACG

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



Chris McCord
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/09/2017 22:52	WG1041205
Toluene	ND		1.00	1	11/09/2017 22:52	WG1041205
Ethylbenzene	ND		1.00	1	11/09/2017 22:52	WG1041205
Total Xylenes	ND		3.00	1	11/09/2017 22:52	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/09/2017 22:52	WG1041205
Naphthalene	ND		5.00	1	11/09/2017 22:52	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/09/2017 22:52	WG1041205
(S) Toluene-d8	*99.0*		*80.0-120*		*11/09/2017 22:52*	WG1041205
(S) Dibromofluoromethane	*108*		*76.0-123*		*11/09/2017 22:52*	WG1041205
(S) 4-Bromofluorobenzene	*97.1*		*80.0-120*		*11/09/2017 22:52*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/09/2017 23:13	WG1041205
Toluene	1.17		1.00	1	11/09/2017 23:13	WG1041205
Ethylbenzene	ND		1.00	1	11/09/2017 23:13	WG1041205
Total Xylenes	ND		3.00	1	11/09/2017 23:13	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/09/2017 23:13	WG1041205
Naphthalene	ND		5.00	1	11/09/2017 23:13	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/09/2017 23:13	WG1041205
(S) Toluene-d8	*99.0*		*80.0-120*		*11/09/2017 23:13*	WG1041205
(S) Dibromofluoromethane	*109*		*76.0-123*		*11/09/2017 23:13*	WG1041205
(S) 4-Bromofluorobenzene	*97.6*		*80.0-120*		*11/09/2017 23:13*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	788		10.0	10	11/09/2017 23:34	WG1041205
Toluene	21.5		10.0	10	11/09/2017 23:34	WG1041205
Ethylbenzene	ND		10.0	10	11/09/2017 23:34	WG1041205
Total Xylenes	580		30.0	10	11/09/2017 23:34	WG1041205
Methyl tert-butyl ether	118		10.0	10	11/09/2017 23:34	WG1041205
Naphthalene	ND		50.0	10	11/09/2017 23:34	WG1041205
1,2-Dichloroethane	ND		10.0	10	11/09/2017 23:34	WG1041205
(S) Toluene-d8	*101*		*80.0-120*		*11/09/2017 23:34*	WG1041205
(S) Dibromofluoromethane	*108*		*76.0-123*		*11/09/2017 23:34*	WG1041205
(S) 4-Bromofluorobenzene	*96.2*		*80.0-120*		*11/09/2017 23:34*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/09/2017 23:55	WG1041205
Toluene	ND		1.00	1	11/09/2017 23:55	WG1041205
Ethylbenzene	ND		1.00	1	11/09/2017 23:55	WG1041205
Total Xylenes	ND		3.00	1	11/09/2017 23:55	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/09/2017 23:55	WG1041205
Naphthalene	ND		5.00	1	11/09/2017 23:55	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/09/2017 23:55	WG1041205
(S) Toluene-d8	*98.4*		*80.0-120*		*11/09/2017 23:55*	WG1041205
(S) Dibromofluoromethane	*108*		*76.0-123*		*11/09/2017 23:55*	WG1041205
(S) 4-Bromofluorobenzene	*99.5*		*80.0-120*		*11/09/2017 23:55*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	4.48		1.00	1	11/10/2017 00:17	WG1041205
Toluene	ND		1.00	1	11/10/2017 00:17	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 00:17	WG1041205
Total Xylenes	12.4		3.00	1	11/10/2017 00:17	WG1041205
Methyl tert-butyl ether	29.2		1.00	1	11/10/2017 00:17	WG1041205
Naphthalene	ND		5.00	1	11/10/2017 00:17	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 00:17	WG1041205
(S) Toluene-d8	*100*		*80.0-120*		*11/10/2017 00:17*	WG1041205
(S) Dibromofluoromethane	*108*		*76.0-123*		*11/10/2017 00:17*	WG1041205
(S) 4-Bromofluorobenzene	*99.7*		*80.0-120*		*11/10/2017 00:17*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	338		10.0	10	11/10/2017 00:38	WG1041205
Toluene	15.3		10.0	10	11/10/2017 00:38	WG1041205
Ethylbenzene	ND		10.0	10	11/10/2017 00:38	WG1041205
Total Xylenes	140		30.0	10	11/10/2017 00:38	WG1041205
Methyl tert-butyl ether	266		10.0	10	11/10/2017 00:38	WG1041205
Naphthalene	ND		50.0	10	11/10/2017 00:38	WG1041205
1,2-Dichloroethane	ND		10.0	10	11/10/2017 00:38	WG1041205
(S) Toluene-d8	*99.0*		*80.0-120*		*11/10/2017 00:38*	WG1041205
(S) Dibromofluoromethane	*109*		*76.0-123*		*11/10/2017 00:38*	WG1041205
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*11/10/2017 00:38*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	878		50.0	50	11/10/2017 00:59	WG1041205
Toluene	123		50.0	50	11/10/2017 00:59	WG1041205
Ethylbenzene	ND		50.0	50	11/10/2017 00:59	WG1041205
Total Xylenes	368		150	50	11/10/2017 00:59	WG1041205
Methyl tert-butyl ether	442		50.0	50	11/10/2017 00:59	WG1041205
Naphthalene	ND		250	50	11/10/2017 00:59	WG1041205
1,2-Dichloroethane	ND		50.0	50	11/10/2017 00:59	WG1041205
(S) Toluene-d8	*99.5*		*80.0-120*		*11/10/2017 00:59*	WG1041205
(S) Dibromofluoromethane	*108*		*76.0-123*		*11/10/2017 00:59*	WG1041205
(S) 4-Bromofluorobenzene	*99.4*		*80.0-120*		*11/10/2017 00:59*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	13500		1000	1000	11/10/2017 01:21	WG1041205
Toluene	23000		1000	1000	11/10/2017 01:21	WG1041205
Ethylbenzene	ND		1000	1000	11/10/2017 01:21	WG1041205
Total Xylenes	9290		3000	1000	11/10/2017 01:21	WG1041205
Methyl tert-butyl ether	ND		1000	1000	11/10/2017 01:21	WG1041205
Naphthalene	ND		5000	1000	11/10/2017 01:21	WG1041205
1,2-Dichloroethane	ND		1000	1000	11/10/2017 01:21	WG1041205
(S) Toluene-d8	*100*		*80.0-120*		*11/10/2017 01:21*	WG1041205
(S) Dibromofluoromethane	*108*		*76.0-123*		*11/10/2017 01:21*	WG1041205
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*11/10/2017 01:21*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/10/2017 01:42	WG1041205
Toluene	ND		1.00	1	11/10/2017 01:42	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 01:42	WG1041205
Total Xylenes	ND		3.00	1	11/10/2017 01:42	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/10/2017 01:42	WG1041205
Naphthalene	ND		5.00	1	11/10/2017 01:42	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 01:42	WG1041205
(S) Toluene-d8	*100*		*80.0-120*		*11/10/2017 01:42*	WG1041205
(S) Dibromofluoromethane	*107*		*76.0-123*		*11/10/2017 01:42*	WG1041205
(S) 4-Bromofluorobenzene	*96.8*		*80.0-120*		*11/10/2017 01:42*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	82.9		1.00	1	11/13/2017 20:17	WG1041205
Toluene	ND		1.00	1	11/13/2017 20:17	WG1041205
Ethylbenzene	7.21		1.00	1	11/13/2017 20:17	WG1041205
Total Xylenes	143		3.00	1	11/13/2017 20:17	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/13/2017 20:17	WG1041205
Naphthalene	7.74		5.00	1	11/13/2017 20:17	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/13/2017 20:17	WG1041205
(S) Toluene-d8	*104*		*80.0-120*		*11/13/2017 20:17*	WG1041205
(S) Dibromofluoromethane	*99.8*		*76.0-123*		*11/13/2017 20:17*	WG1041205
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*11/13/2017 20:17*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	99.6		1.00	1	11/10/2017 02:26	WG1041205
Toluene	ND		1.00	1	11/10/2017 02:26	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 02:26	WG1041205
Total Xylenes	56.6		3.00	1	11/10/2017 02:26	WG1041205
Methyl tert-butyl ether	2.46		1.00	1	11/10/2017 02:26	WG1041205
Naphthalene	5.68		5.00	1	11/10/2017 02:26	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 02:26	WG1041205
(S) Toluene-d8	*101*		*80.0-120*		*11/10/2017 02:26*	WG1041205
(S) Dibromofluoromethane	*106*		*76.0-123*		*11/10/2017 02:26*	WG1041205
(S) 4-Bromofluorobenzene	*99.5*		*80.0-120*		*11/10/2017 02:26*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	325		10.0	10	11/13/2017 20:36	WG1041205
Toluene	19.0		1.00	1	11/10/2017 02:47	WG1041205
Ethylbenzene	3.42		1.00	1	11/10/2017 02:47	WG1041205
Total Xylenes	91.6		3.00	1	11/10/2017 02:47	WG1041205
Methyl tert-butyl ether	173		1.00	1	11/10/2017 02:47	WG1041205
Naphthalene	5.55		5.00	1	11/10/2017 02:47	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 02:47	WG1041205
(S) Toluene-d8	*99.9*		*80.0-120*		*11/10/2017 02:47*	WG1041205
(S) Toluene-d8	*102*		*80.0-120*		*11/13/2017 20:36*	WG1041205
(S) Dibromofluoromethane	*110*		*76.0-123*		*11/10/2017 02:47*	WG1041205
(S) Dibromofluoromethane	*100*		*76.0-123*		*11/13/2017 20:36*	WG1041205
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*11/13/2017 20:36*	WG1041205
(S) 4-Bromofluorobenzene	*98.3*		*80.0-120*		*11/10/2017 02:47*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	356		10.0	10	11/13/2017 20:56	WG1041205
Toluene	20.8		1.00	1	11/10/2017 03:08	WG1041205
Ethylbenzene	3.85		1.00	1	11/10/2017 03:08	WG1041205
Total Xylenes	100		3.00	1	11/10/2017 03:08	WG1041205
Methyl tert-butyl ether	168		1.00	1	11/10/2017 03:08	WG1041205
Naphthalene	6.61		5.00	1	11/10/2017 03:08	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 03:08	WG1041205
(S) Toluene-d8	*102*		*80.0-120*		*11/13/2017 20:56*	WG1041205
(S) Toluene-d8	*100*		*80.0-120*		*11/10/2017 03:08*	WG1041205
(S) Dibromofluoromethane	*101*		*76.0-123*		*11/13/2017 20:56*	WG1041205
(S) Dibromofluoromethane	*111*		*76.0-123*		*11/10/2017 03:08*	WG1041205
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*11/13/2017 20:56*	WG1041205
(S) 4-Bromofluorobenzene	*99.7*		*80.0-120*		*11/10/2017 03:08*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/10/2017 03:29	WG1041205
Toluene	ND		1.00	1	11/10/2017 03:29	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 03:29	WG1041205
Total Xylenes	ND		3.00	1	11/10/2017 03:29	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/10/2017 03:29	WG1041205
Naphthalene	ND		5.00	1	11/10/2017 03:29	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 03:29	WG1041205
(S) Toluene-d8	*99.7*		*80.0-120*		*11/10/2017 03:29*	WG1041205
(S) Dibromofluoromethane	*107*		*76.0-123*		*11/10/2017 03:29*	WG1041205
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*11/10/2017 03:29*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/10/2017 04:55	WG1041205
Toluene	ND		1.00	1	11/10/2017 04:55	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 04:55	WG1041205
Total Xylenes	ND		3.00	1	11/10/2017 04:55	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/10/2017 04:55	WG1041205
Naphthalene	ND		5.00	1	11/10/2017 04:55	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 04:55	WG1041205
(S) Toluene-d8	*99.9*		*80.0-120*		*11/10/2017 04:55*	WG1041205
(S) Dibromofluoromethane	*106*		*76.0-123*		*11/10/2017 04:55*	WG1041205
(S) 4-Bromofluorobenzene	*97.5*		*80.0-120*		*11/10/2017 04:55*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/10/2017 05:17	WG1041205
Toluene	ND		1.00	1	11/10/2017 05:17	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 05:17	WG1041205
Total Xylenes	ND		3.00	1	11/10/2017 05:17	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/10/2017 05:17	WG1041205
Naphthalene	ND		5.00	1	11/10/2017 05:17	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 05:17	WG1041205
(S) Toluene-d8	*98.8*		*80.0-120*		*11/10/2017 05:17*	WG1041205
(S) Dibromofluoromethane	*108*		*76.0-123*		*11/10/2017 05:17*	WG1041205
(S) 4-Bromofluorobenzene	*99.3*		*80.0-120*		*11/10/2017 05:17*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/10/2017 05:38	WG1041205
Toluene	ND		1.00	1	11/10/2017 05:38	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 05:38	WG1041205
Total Xylenes	ND		3.00	1	11/10/2017 05:38	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/10/2017 05:38	WG1041205
Naphthalene	ND		5.00	1	11/10/2017 05:38	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 05:38	WG1041205
(S) Toluene-d8	*101*		*80.0-120*		*11/10/2017 05:38*	WG1041205
(S) Dibromofluoromethane	*109*		*76.0-123*		*11/10/2017 05:38*	WG1041205
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*11/10/2017 05:38*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	850		100	100	11/13/2017 21:16	WG1041205
Toluene	1370		100	100	11/13/2017 21:16	WG1041205
Ethylbenzene	ND		100	100	11/13/2017 21:16	WG1041205
Total Xylenes	3520		300	100	11/13/2017 21:16	WG1041205
Methyl tert-butyl ether	ND		100	100	11/13/2017 21:16	WG1041205
Naphthalene	ND		500	100	11/13/2017 21:16	WG1041205
1,2-Dichloroethane	ND		100	100	11/13/2017 21:16	WG1041205
(S) Toluene-d8	*102*		*80.0-120*		*11/13/2017 21:16*	WG1041205
(S) Dibromofluoromethane	*99.1*		*76.0-123*		*11/13/2017 21:16*	WG1041205
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*11/13/2017 21:16*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/13/2017 21:54	WG1041205
Toluene	ND		1.00	1	11/13/2017 21:54	WG1041205
Ethylbenzene	ND		1.00	1	11/13/2017 21:54	WG1041205
Total Xylenes	ND		3.00	1	11/13/2017 21:54	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/13/2017 21:54	WG1041205
Naphthalene	ND		5.00	1	11/13/2017 21:54	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/13/2017 21:54	WG1041205
(S) Toluene-d8	*104*		*80.0-120*		*11/13/2017 21:54*	WG1041205
(S) Dibromofluoromethane	*101*		*76.0-123*		*11/13/2017 21:54*	WG1041205
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*11/13/2017 21:54*	WG1041205

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/10/2017 06:21	WG1041205
Toluene	ND		1.00	1	11/10/2017 06:21	WG1041205
Ethylbenzene	ND		1.00	1	11/10/2017 06:21	WG1041205
Total Xylenes	ND		3.00	1	11/10/2017 06:21	WG1041205
Methyl tert-butyl ether	ND		1.00	1	11/10/2017 06:21	WG1041205
Naphthalene	ND		5.00	1	11/10/2017 06:21	WG1041205
1,2-Dichloroethane	ND		1.00	1	11/10/2017 06:21	WG1041205
(S) Toluene-d8	*99.1*		*80.0-120*		*11/10/2017 06:21*	WG1041205
(S) Dibromofluoromethane	*107*		*76.0-123*		*11/10/2017 06:21*	WG1041205
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*11/10/2017 06:21*	WG1041205

Method Blank (MB)

(MB) R3265108-2 11/09/17 22:30

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*99.6*			*80.0-120*
(S) Dibromofluoromethane	*105*			*76.0-123*
(S) 4-Bromofluorobenzene	*93.1*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3265108-1 11/09/17 19:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	24.3	97.1	70.0-130	
1,2-Dichloroethane	25.0	26.7	107	70.0-130	
Ethylbenzene	25.0	23.3	93.2	70.0-130	
Methyl tert-butyl ether	25.0	28.1	112	70.0-130	
Naphthalene	25.0	18.5	73.9	70.0-130	
Toluene	25.0	22.7	90.9	70.0-130	
Xylenes, Total	75.0	70.7	94.3	70.0-130	
(S) Toluene-d8			*98.4*	*80.0-120*	
(S) Dibromofluoromethane			*108*	*76.0-123*	
(S) 4-Bromofluorobenzene			*101*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

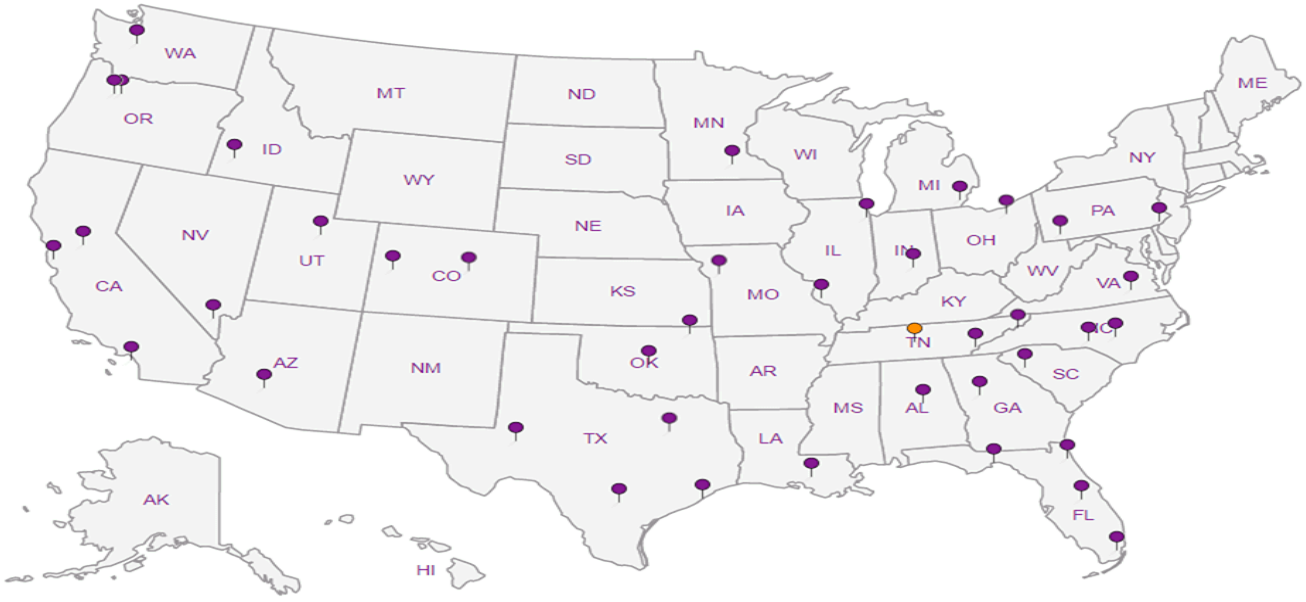
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Pres Chk

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature): Melissa Warren

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW-29-110817	GRAB	GW	NA	11/08/17	0755	3	X		X	X	X	X		-01
MW-26-110817		GW			0805	3	X							-02
MW-23-110817		GW			0815	3	X							-03
MW-43-110817		GW			0838	3	X							-04
MW-38-110817		GW			0848	3	X							-05
MW-34-110817		GW			0858	3	X							-06
MW-39-110817		GW			0905	3	X							-07
MW-40-110817		GW			0915	3	X							-08
MW-35-110817		GW			0938	3	X							-09
MW-25-110817		GW			0945	3	X							-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4142 5216 2137

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Melissa Warren	11/08/17	1500	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by (Signature)

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: 1.5 °C corr 5.0

Bottles Received: 57

Date: 11/9/17 Time: 08:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist

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

Chain of Custody Page 1 of 2

ESC LABORATORIES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L949634

D074

Acctnum: KINCH2MGA
Template: T121318
Prelogin: P624845
TSR: 526 - Chris McCord
PB: 10-31-17 GL
Shipped Via: FedEX Ground

Chain of Custody Page 2 of 2

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 949634

Table #

Acctnum: KINCH2MGA

Template: T121318

Prelogin: P624845

TSR: 526 - Chris McCord

PB: 10-31-17

Shipped Via: FedEX Ground

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2 - DCA	Remarks	Sample # (lab only)
MW-41-110817	GRAB	GW	NA	11/08/17	0955	3	X		X	X	X	X		-11
MW-13B-110817		GW			1007	3	X							-12
MW-13B-D-110817		GW			1010	3	X							-13
MW-31-110817		GW			1020	3	X							-14
MW-05-110817		GW			1035	3	X							-15
MW-03-110817		GW			1055	3	X							-16
MW-10-110817		GW			1105	3	X							-17
MW-02-110817		GW			1115	3	X							-18
TB01-110817		GW			1148	1	X	X						-19
FB01-110817		GW			1150	3	X	X						-20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4142 5216 2137

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No (HCl) / MeoH TBR
	11/08/17	1500		1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.5 °C Bottles Received: 57
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/9/17 Time: 08:45
			SCI	Hold: Condition: NCF / (OK)

ANALYTICAL REPORT

December 12, 2017

CH2M Hill- Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L955277
Samples Received:	12/06/2017
Project Number:	684910.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LWEIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-03-120517 L955277-01 GW

Collected by: M. Warren | Collected date/time: 12/05/17 13:30 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050179	1	12/07/17 14:17	12/07/17 14:17	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050179	1	12/07/17 14:17	12/07/17 14:17	MCG
Wet Chemistry by Method 9056A	WG1050075	1	12/06/17 16:53	12/06/17 16:53	DR
Volatile Organic Compounds (GC) by Method RSK175	WG1051277	1	12/08/17 14:19	12/08/17 14:19	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 15:51	12/06/17 15:51	LRL

MW-27B-120517 L955277-02 GW

Collected by: M. Warren | Collected date/time: 12/05/17 15:00 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 16:11	12/06/17 16:11	LRL

MW-27B-D-120517 L955277-03 GW

Collected by: M. Warren | Collected date/time: 12/05/17 15:05 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 16:30	12/06/17 16:30	LRL

MW-27-120517 L955277-04 GW

Collected by: M. Warren | Collected date/time: 12/05/17 15:10 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050179	1	12/07/17 14:23	12/07/17 14:23	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050179	1	12/07/17 14:23	12/07/17 14:23	MCG
Wet Chemistry by Method 9056A	WG1050075	1	12/06/17 17:07	12/06/17 17:07	DR
Volatile Organic Compounds (GC) by Method RSK175	WG1051277	1	12/08/17 14:22	12/08/17 14:22	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 16:50	12/06/17 16:50	LRL

MW-01-120517 L955277-05 GW

Collected by: M. Warren | Collected date/time: 12/05/17 15:55 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050179	1	12/07/17 14:29	12/07/17 14:29	MCG
Wet Chemistry by Method 3500Fe B-2011	WG1051868	1	12/11/17 14:11	12/11/17 14:11	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1050179	1	12/07/17 14:29	12/07/17 14:29	MCG
Wet Chemistry by Method 9056A	WG1050075	1	12/06/17 17:20	12/06/17 17:20	DR
Volatile Organic Compounds (GC) by Method RSK175	WG1051277	1	12/08/17 14:26	12/08/17 14:26	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 17:09	12/06/17 17:09	LRL

MW-01B-120517 L955277-06 GW

Collected by: M. Warren | Collected date/time: 12/05/17 16:10 | Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 17:28	12/06/17 17:28	LRL

MW-44B-120517 L955277-07 GW

Collected by: M. Warren
Collected date/time: 12/05/17 16:20
Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 17:48	12/06/17 17:48	LRL

FB01-120517 L955277-08 GW

Collected by: M. Warren
Collected date/time: 12/05/17 16:25
Received date/time: 12/06/17 08:45

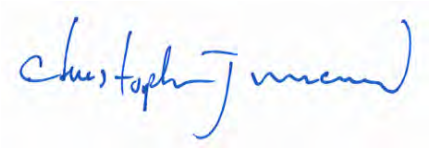
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 18:08	12/06/17 18:08	LRL

TB01-120517 L955277-09 GW

Collected by: M. Warren
Collected date/time: 12/05/17 16:30
Received date/time: 12/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050212	1	12/06/17 15:32	12/06/17 15:32	LRL

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



Chris McCord
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/07/2017 14:17	WG1050179

Sample Narrative:
L955277-01 WG1050179: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/07/2017 14:17	WG1050179

Sample Narrative:
L955277-01 WG1050179: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	288		100	1	12/06/2017 16:53	WG1050075
Sulfate	ND		5000	1	12/06/2017 16:53	WG1050075

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/08/2017 14:19	WG1051277
Ethane	ND		13.0	1	12/08/2017 14:19	WG1051277
Ethene	ND		13.0	1	12/08/2017 14:19	WG1051277

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2017 15:51	WG1050212
Toluene	ND		1.00	1	12/06/2017 15:51	WG1050212
Ethylbenzene	ND		1.00	1	12/06/2017 15:51	WG1050212
Total Xylenes	ND		3.00	1	12/06/2017 15:51	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 15:51	WG1050212
Naphthalene	ND		5.00	1	12/06/2017 15:51	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 15:51	WG1050212
(S) Toluene-d8	*102*		*80.0-120*		*12/06/2017 15:51*	WG1050212
(S) Dibromofluoromethane	*97.6*		*76.0-123*		*12/06/2017 15:51*	WG1050212
(S) 4-Bromofluorobenzene	*96.9*		*80.0-120*		*12/06/2017 15:51*	WG1050212

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2017 16:11	WG1050212
Toluene	5.91		1.00	1	12/06/2017 16:11	WG1050212
Ethylbenzene	3.10		1.00	1	12/06/2017 16:11	WG1050212
Total Xylenes	24.8		3.00	1	12/06/2017 16:11	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 16:11	WG1050212
Naphthalene	5.81		5.00	1	12/06/2017 16:11	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 16:11	WG1050212
(S) Toluene-d8	*103*		*80.0-120*		*12/06/2017 16:11*	WG1050212
(S) Dibromofluoromethane	*98.2*		*76.0-123*		*12/06/2017 16:11*	WG1050212
(S) 4-Bromofluorobenzene	*95.1*		*80.0-120*		*12/06/2017 16:11*	WG1050212

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/06/2017 16:30	WG1050212
Toluene	7.24		1.00	1	12/06/2017 16:30	WG1050212
Ethylbenzene	3.96		1.00	1	12/06/2017 16:30	WG1050212
Total Xylenes	31.6		3.00	1	12/06/2017 16:30	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 16:30	WG1050212
Naphthalene	7.09		5.00	1	12/06/2017 16:30	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 16:30	WG1050212
(S) Toluene-d8	*101*		*80.0-120*		*12/06/2017 16:30*	WG1050212
(S) Dibromofluoromethane	*99.3*		*76.0-123*		*12/06/2017 16:30*	WG1050212
(S) 4-Bromofluorobenzene	*97.5*		*80.0-120*		*12/06/2017 16:30*	WG1050212

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	49900		20000	1	12/07/2017 14:23	WG1050179

Sample Narrative:
L955277-04 WG1050179: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	36100	T8	20000	1	12/07/2017 14:23	WG1050179

Sample Narrative:
L955277-04 WG1050179: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/06/2017 17:07	WG1050075
Sulfate	13100		5000	1	12/06/2017 17:07	WG1050075

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	220		10.0	1	12/08/2017 14:22	WG1051277
Ethane	ND		13.0	1	12/08/2017 14:22	WG1051277
Ethene	ND		13.0	1	12/08/2017 14:22	WG1051277

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	6.48		1.00	1	12/06/2017 16:50	WG1050212
Toluene	12.5		1.00	1	12/06/2017 16:50	WG1050212
Ethylbenzene	8.23		1.00	1	12/06/2017 16:50	WG1050212
Total Xylenes	20.5		3.00	1	12/06/2017 16:50	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 16:50	WG1050212
Naphthalene	ND		5.00	1	12/06/2017 16:50	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 16:50	WG1050212
(S) Toluene-d8	*99.9*		*80.0-120*		*12/06/2017 16:50*	WG1050212
(S) Dibromofluoromethane	*98.0*		*76.0-123*		*12/06/2017 16:50*	WG1050212
(S) 4-Bromofluorobenzene	*95.1*		*80.0-120*		*12/06/2017 16:50*	WG1050212

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/07/2017 14:29	WG1050179

Sample Narrative:
L955277-05 WG1050179: Endpoint pH 4.5

Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ferrous Iron	768	T8	50.0	1	12/11/2017 14:11	WG1051868

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/07/2017 14:29	WG1050179

Sample Narrative:
L955277-05 WG1050179: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	224		100	1	12/06/2017 17:20	WG1050075
Sulfate	ND		5000	1	12/06/2017 17:20	WG1050075

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/08/2017 14:26	WG1051277
Ethane	ND		13.0	1	12/08/2017 14:26	WG1051277
Ethene	ND		13.0	1	12/08/2017 14:26	WG1051277

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2017 17:09	WG1050212
Toluene	ND		1.00	1	12/06/2017 17:09	WG1050212
Ethylbenzene	ND		1.00	1	12/06/2017 17:09	WG1050212
Total Xylenes	ND		3.00	1	12/06/2017 17:09	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 17:09	WG1050212
Naphthalene	ND		5.00	1	12/06/2017 17:09	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 17:09	WG1050212
(S) Toluene-d8	*102*		*80.0-120*		*12/06/2017 17:09*	WG1050212
(S) Dibromofluoromethane	*98.5*		*76.0-123*		*12/06/2017 17:09*	WG1050212
(S) 4-Bromofluorobenzene	*95.0*		*80.0-120*		*12/06/2017 17:09*	WG1050212

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/06/2017 17:28	WG1050212
Toluene	ND		1.00	1	12/06/2017 17:28	WG1050212
Ethylbenzene	ND		1.00	1	12/06/2017 17:28	WG1050212
Total Xylenes	ND		3.00	1	12/06/2017 17:28	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 17:28	WG1050212
Naphthalene	ND		5.00	1	12/06/2017 17:28	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 17:28	WG1050212
(S) Toluene-d8	*101*		*80.0-120*		*12/06/2017 17:28*	WG1050212
(S) Dibromofluoromethane	*96.5*		*76.0-123*		*12/06/2017 17:28*	WG1050212
(S) 4-Bromofluorobenzene	*95.2*		*80.0-120*		*12/06/2017 17:28*	WG1050212

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2017 17:48	WG1050212
Toluene	2.27		1.00	1	12/06/2017 17:48	WG1050212
Ethylbenzene	ND		1.00	1	12/06/2017 17:48	WG1050212
Total Xylenes	ND		3.00	1	12/06/2017 17:48	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 17:48	WG1050212
Naphthalene	ND		5.00	1	12/06/2017 17:48	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 17:48	WG1050212
(S) Toluene-d8	*104*		*80.0-120*		*12/06/2017 17:48*	WG1050212
(S) Dibromofluoromethane	*98.5*		*76.0-123*		*12/06/2017 17:48*	WG1050212
(S) 4-Bromofluorobenzene	*97.2*		*80.0-120*		*12/06/2017 17:48*	WG1050212

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2017 18:08	WG1050212
Toluene	ND		1.00	1	12/06/2017 18:08	WG1050212
Ethylbenzene	ND		1.00	1	12/06/2017 18:08	WG1050212
Total Xylenes	ND		3.00	1	12/06/2017 18:08	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 18:08	WG1050212
Naphthalene	ND		5.00	1	12/06/2017 18:08	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 18:08	WG1050212
(S) Toluene-d8	*102*		*80.0-120*		*12/06/2017 18:08*	WG1050212
(S) Dibromofluoromethane	*100*		*76.0-123*		*12/06/2017 18:08*	WG1050212
(S) 4-Bromofluorobenzene	*94.6*		*80.0-120*		*12/06/2017 18:08*	WG1050212

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2017 15:32	WG1050212
Toluene	ND		1.00	1	12/06/2017 15:32	WG1050212
Ethylbenzene	ND		1.00	1	12/06/2017 15:32	WG1050212
Total Xylenes	ND		3.00	1	12/06/2017 15:32	WG1050212
Methyl tert-butyl ether	ND		1.00	1	12/06/2017 15:32	WG1050212
Naphthalene	ND		5.00	1	12/06/2017 15:32	WG1050212
1,2-Dichloroethane	ND		1.00	1	12/06/2017 15:32	WG1050212
(S) Toluene-d8	*102*		*80.0-120*		*12/06/2017 15:32*	WG1050212
(S) Dibromofluoromethane	*95.8*		*76.0-123*		*12/06/2017 15:32*	WG1050212
(S) 4-Bromofluorobenzene	*94.8*		*80.0-120*		*12/06/2017 15:32*	WG1050212

L954824-12 Original Sample (OS) • Duplicate (DUP)

(OS) L954824-12 12/07/17 11:23 • (DUP) R3271430-1 12/07/17 11:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Alkalinity	729000	756000	1	4.00		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

L955185-01 Original Sample (OS) • Duplicate (DUP)

(OS) L955185-01 12/07/17 13:57 • (DUP) R3271430-7 12/07/17 14:05

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Alkalinity	ND	5960	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271430-5 12/07/17 12:31 • (LCSD) R3271430-6 12/07/17 13:43

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Alkalinity	100000	96100	101000	96.0	101	85.0-115			5.00	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

Method Blank (MB)

(MB) R3271992-1 12/11/17 14:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ferrous Iron	U		15.0	50.0

L956062-01 Original Sample (OS) • Duplicate (DUP)

(OS) L956062-01 12/11/17 14:13 • (DUP) R3271992-6 12/11/17 14:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Ferrous Iron	67.0	67.0	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271992-2 12/11/17 14:08 • (LCSD) R3271992-3 12/11/17 14:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Ferrous Iron	1000	1080	1070	108	107	85-115			1.11	20

L954883-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L954883-01 12/11/17 14:09 • (MS) R3271992-4 12/11/17 14:10 • (MSD) R3271992-5 12/11/17 14:11

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Ferrous Iron	1500	U	1550	1550	103	103	1	80-120			0.0646	20

Method Blank (MB)

(MB) R3270934-1 12/06/17 06:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

L955264-01 Original Sample (OS) • Duplicate (DUP)

(OS) L955264-01 12/06/17 15:19 • (DUP) R3270934-4 12/06/17 15:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	ND	61.9	1	0		15
Sulfate	7800	7880	1	1		15

L955289-01 Original Sample (OS) • Duplicate (DUP)

(OS) L955289-01 12/06/17 17:34 • (DUP) R3270934-7 12/06/17 17:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	454	582	1	25	J3	15
Sulfate	6090	6220	1	2		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3270934-2 12/06/17 06:45 • (LCSD) R3270934-3 12/06/17 06:58

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Nitrate	8000	8090	8100	101	101	80-120			0	15
Sulfate	40000	39900	39900	100	100	80-120			0	15

L955264-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L955264-01 12/06/17 15:19 • (MS) R3270934-5 12/06/17 15:46 • (MSD) R3270934-6 12/06/17 16:00

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Nitrate	5000	ND	5320	5560	105	110	1	80-120			4	15
Sulfate	50000	7800	58300	58600	101	102	1	80-120			0	15

L955289-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L955289-01 12/06/17 17:34 • (MS) R3270934-8 12/06/17 18:00

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	454	5670	104	1	80-120	
Sulfate	50000	6090	57700	103	1	80-120	

Method Blank (MB)

(MB) R3271543-1 12/08/17 14:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L955239-05 Original Sample (OS) • Duplicate (DUP)

(OS) L955239-05 12/08/17 14:16 • (DUP) R3271543-2 12/08/17 15:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	0.000	1	0.000		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271543-3 12/08/17 15:31 • (LCSD) R3271543-4 12/08/17 15:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	74.1	74.2	109	109	85.0-115			0.153	20
Ethane	129	112	114	86.8	88.2	85.0-115			1.54	20
Ethene	127	114	116	89.6	91.0	85.0-115			1.58	20

Method Blank (MB)

(MB) R3271536-2 12/06/17 13:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*101*			*80.0-120*
(S) Dibromofluoromethane	*95.9*			*76.0-123*
(S) 4-Bromofluorobenzene	*95.2*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271536-1 12/06/17 12:17 • (LCSD) R3271536-3 12/06/17 13:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	24.6	26.4	98.4	106	70.0-130			6.94	20
1,2-Dichloroethane	25.0	24.1	25.3	96.4	101	70.0-130			4.86	20
Ethylbenzene	25.0	24.6	26.7	98.5	107	70.0-130			8.19	20
Methyl tert-butyl ether	25.0	24.2	25.6	97.0	103	70.0-130			5.61	20
Naphthalene	25.0	23.4	26.3	93.5	105	70.0-130			11.7	20
Toluene	25.0	24.4	26.4	97.7	105	70.0-130			7.71	20
Xylenes, Total	75.0	73.8	81.6	98.4	109	70.0-130			10.0	20
(S) Toluene-d8				*99.7*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*99.1*	*98.6*	*76.0-123*				
(S) 4-Bromofluorobenzene				*100*	*93.0*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

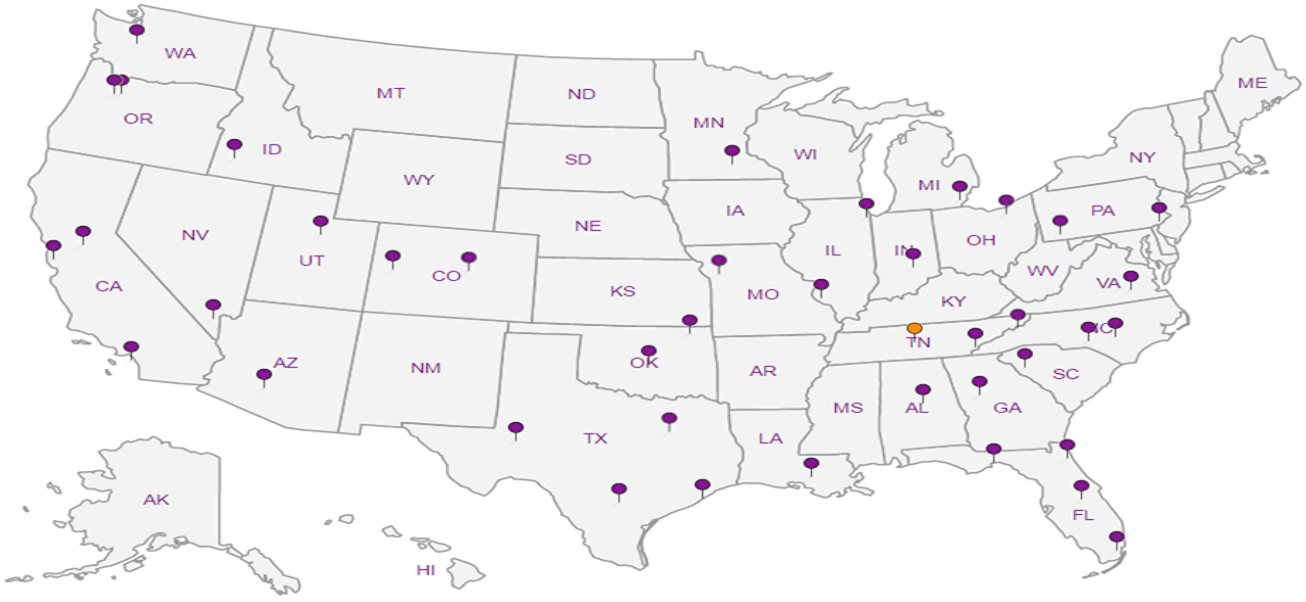
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): M. WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 1 of 1

ESC LABS SCIENCES — a subsidiary of Accutest

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L955277

A068

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P627788
TSR: 526 - Chris McCord
PB: 11-22-17

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2 DCA	Remarks	Sample # (lab only)
MW-03-120517	GRAB	GW	NA	12/05/17	1330	7	X	X	X	X		X	X	X	X		-01
MW-27B-120517		GW			1500	3				X	X	X	X	X	X		-02
MW-27B-D-120517		GW			1505	3				X	X	X	X	X	X		-03
MW-27-120517		GW			1510	7	X	X	X	X		X	X	X	X		-04
MW-01-120517		GW			1555	7	X	X	X	X		X	X	X	X		-05
MW-01B-120517		GW			1610	3				X		X	X	X	X		-06
MW-44B-120517		GW			1620	3				X		X	X	X	X		-07
FB01-120517		GW			1625	3				X	X	X	X	X	X		-08
TB01-120517		GW			1630	1					X						-09
		GW															

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.
MW-27B-120517 AND MW-27B-D-120517 ARE NOT BLANKS.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4142 5221 3131

Sample Receipt Checklist

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

	Date:	Time:		
Relinquished by : (Signature)	12/5/17	1730	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
Relinquished by : (Signature)			Received by: (Signature)	Temp: 0.3 °C Bottles Received: 35 — If preservation required by Login: Date/Time
Relinquished by : (Signature)			Received for lab by: (Signature)	Date: 12/6/17 Time: 845 — Hold: — Condition: NCF / OK

Andy Vann

From: Chris McCord
Sent: Wednesday, December 06, 2017 4:25 PM
To: Login; Sample Storage; Due WetLab
Cc: Chris Unterstein
Subject: L955277 *KINCH2MGA*

Please add FERUSFE to L955277-05.

Sample storage – Please label one of the 40mlAmb-HCl from VOCs for this test and take to Wetlab.

Chris U. – Limited volume. Could not analyze in the field. Please hold and analyze with other field sample for DUP/MS/MSD.

Thanks,

Christopher McCord
Project Manager
ESC Lab Sciences-a subsidiary of Pace Analytical
12065 Lebanon Road | Mt. Juliet, TN 37122
O: 615.773.3281 |C: 615.504.3183
cmccord@esclabsciences.com | www.esclabsciences.com

ANALYTICAL REPORT

December 14, 2017

CH2M Hill- Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L955704
Samples Received:	12/07/2017
Project Number:	684910.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DR.
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-26-120617 L955704-01 GW

Collected by: M. Warren | Collected date/time: 12/06/17 07:40 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050755	1	12/07/17 19:08	12/07/17 19:08	ACG

MW-26B-120617 L955704-02 GW

Collected by: M. Warren | Collected date/time: 12/06/17 07:50 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 01:57	12/08/17 01:57	LRL

MW-23-120617 L955704-03 GW

Collected by: M. Warren | Collected date/time: 12/06/17 08:00 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	10	12/08/17 02:17	12/08/17 02:17	LRL

MW-23B-120617 L955704-04 GW

Collected by: M. Warren | Collected date/time: 12/06/17 08:05 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 02:36	12/08/17 02:36	LRL

MW-46-120617 L955704-05 GW

Collected by: M. Warren | Collected date/time: 12/06/17 08:20 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 02:56	12/08/17 02:56	LRL

MW-29-120617 L955704-06 GW

Collected by: M. Warren | Collected date/time: 12/06/17 08:35 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 03:15	12/08/17 03:15	LRL

MW-43B-120617 L955704-07 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:05 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 03:35	12/08/17 03:35	LRL

MW-43-120617 L955704-08 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:10 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 03:55	12/08/17 03:55	LRL

MW-24-120617 L955704-09 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:15 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 04:15	12/08/17 04:15	LRL

MW-24B-120617 L955704-10 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:25 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 04:34	12/08/17 04:34	LRL

MW-37-120617 L955704-11 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:35 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 04:54	12/08/17 04:54	LRL

MW-38-120617 L955704-12 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:40 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 05:13	12/08/17 05:13	LRL

MW-15B-120617 L955704-13 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:50 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 05:32	12/08/17 05:32	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	50	12/09/17 06:41	12/09/17 06:41	LRL

MW-15B-D-120617 L955704-14 GW

Collected by: M. Warren | Collected date/time: 12/06/17 09:55 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 05:52	12/08/17 05:52	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	50	12/09/17 07:00	12/09/17 07:00	LRL

MW-15-120617 L955704-15 GW

Collected by: M. Warren | Collected date/time: 12/06/17 10:05 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050810	1	12/11/17 14:30	12/11/17 14:30	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050810	1	12/11/17 14:30	12/11/17 14:30	MCG
Wet Chemistry by Method 9056A	WG1051268	1	12/08/17 09:09	12/08/17 09:09	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052064	1	12/11/17 11:10	12/11/17 11:10	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 06:12	12/08/17 06:12	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/09/17 07:19	12/09/17 07:19	LRL

MW-34-120617 L955704-16 GW

Collected by: M. Warren | Collected date/time: 12/06/17 10:20 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	10	12/08/17 06:31	12/08/17 06:31	LRL

MW-39-120617 L955704-17 GW

Collected by: M. Warren | Collected date/time: 12/06/17 10:25 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	50	12/08/17 06:51	12/08/17 06:51	LRL

MW-39-D-120617 L955704-18 GW

Collected by: M. Warren | Collected date/time: 12/06/17 10:30 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 07:11	12/08/17 07:11	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	10	12/09/17 07:39	12/09/17 07:39	LRL

MW-40-120617 L955704-19 GW

Collected by: M. Warren | Collected date/time: 12/06/17 10:40 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050810	1	12/11/17 14:36	12/11/17 14:36	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050810	1	12/11/17 14:36	12/11/17 14:36	MCG
Wet Chemistry by Method 9056A	WG1050751	1	12/07/17 16:36	12/07/17 16:36	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052064	1	12/11/17 11:13	12/11/17 11:13	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1000	12/08/17 07:30	12/08/17 07:30	LRL

MW-41-120617 L955704-20 GW

Collected by: M. Warren | Collected date/time: 12/06/17 12:15 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 07:50	12/08/17 07:50	LRL

MW-25B-120617 L955704-21 GW

Collected by: M. Warren | Collected date/time: 12/06/17 12:40 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050994	1	12/08/17 08:10	12/08/17 08:10	LRL

MW-25-120617 L955704-22 GW

Collected by: M. Warren | Collected date/time: 12/06/17 12:45 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050810	1	12/11/17 14:41	12/11/17 14:41	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050810	1	12/11/17 14:41	12/11/17 14:41	MCG
Wet Chemistry by Method 9056A	WG1050751	1	12/07/17 16:50	12/07/17 16:50	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052064	1	12/11/17 11:20	12/11/17 11:20	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/07/17 22:02	12/07/17 22:02	DWR

MW-35-120617 L955704-23 GW

Collected by: M. Warren | Collected date/time: 12/06/17 13:05 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050810	1	12/11/17 14:47	12/11/17 14:47	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050810	1	12/11/17 14:47	12/11/17 14:47	MCG
Wet Chemistry by Method 9056A	WG1050751	1	12/07/17 17:58	12/07/17 17:58	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052064	1	12/11/17 13:31	12/11/17 13:31	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/07/17 22:22	12/07/17 22:22	DWR

MW-49-120617 L955704-24 GW

Collected by: M. Warren | Collected date/time: 12/06/17 13:20 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/07/17 22:41	12/07/17 22:41	DWR

MW-12B-120617 L955704-25 GW

Collected by: M. Warren | Collected date/time: 12/06/17 13:35 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/07/17 23:01	12/07/17 23:01	DWR

MW-12-120617 L955704-26 GW

Collected by: M. Warren | Collected date/time: 12/06/17 13:45 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050810	1	12/11/17 14:53	12/11/17 14:53	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050810	1	12/11/17 14:53	12/11/17 14:53	MCG
Wet Chemistry by Method 9056A	WG1050751	1	12/07/17 18:12	12/07/17 18:12	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052064	1	12/11/17 13:36	12/11/17 13:36	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	10	12/07/17 23:20	12/07/17 23:20	DWR

MW-14-120617 L955704-27 GW

Collected by: M. Warren | Collected date/time: 12/06/17 14:25 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/07/17 23:40	12/07/17 23:40	DWR

MW-14B-120617 L955704-28 GW

Collected by: M. Warren | Collected date/time: 12/06/17 14:30 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 00:00	12/08/17 00:00	DWR

MW-13B-120617 L955704-29 GW

Collected by: M. Warren | Collected date/time: 12/06/17 14:40 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 00:19	12/08/17 00:19	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	10	12/11/17 16:58	12/11/17 16:58	BMB

MW-42-120617 L955704-30 GW

Collected by: M. Warren | Collected date/time: 12/06/17 12:30 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1050810	1	12/11/17 14:59	12/11/17 14:59	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1050810	1	12/11/17 14:59	12/11/17 14:59	MCG
Wet Chemistry by Method 9056A	WG1050751	1	12/07/17 18:25	12/07/17 18:25	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052064	1	12/11/17 11:50	12/11/17 11:50	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 00:38	12/08/17 00:38	DWR

MW-50B-120617 L955704-31 GW

Collected by: M. Warren | Collected date/time: 12/06/17 15:00 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 00:58	12/08/17 00:58	DWR

MW-48B-120617 L955704-32 GW

Collected by: M. Warren | Collected date/time: 12/06/17 15:10 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 01:17	12/08/17 01:17	DWR

MW-47-120617 L955704-33 GW

Collected by: M. Warren | Collected date/time: 12/06/17 15:45 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 01:37	12/08/17 01:37	DWR

MW-31-120617 L955704-34 GW

Collected by: M. Warren | Collected date/time: 12/06/17 15:50 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 01:57	12/08/17 01:57	DWR

MW-33T-120617 L955704-35 GW

Collected by: M. Warren | Collected date/time: 12/06/17 16:00 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 02:16	12/08/17 02:16	DWR

FB01-120617 L955704-36 GW

Collected by: M. Warren | Collected date/time: 12/06/17 16:05 | Received date/time: 12/07/17 08:45

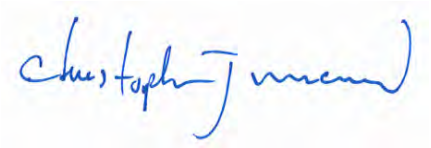
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/08/17 02:36	12/08/17 02:36	DWR

TB01-120617 L955704-37 GW

Collected by: M. Warren | Collected date/time: 12/06/17 15:05 | Received date/time: 12/07/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1050996	1	12/07/17 19:44	12/07/17 19:44	DWR

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



Chris McCord
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 19:08	WG1050755
Toluene	ND		1.00	1	12/07/2017 19:08	WG1050755
Ethylbenzene	ND		1.00	1	12/07/2017 19:08	WG1050755
Total Xylenes	ND		3.00	1	12/07/2017 19:08	WG1050755
Methyl tert-butyl ether	ND		1.00	1	12/07/2017 19:08	WG1050755
Naphthalene	ND		5.00	1	12/07/2017 19:08	WG1050755
1,2-Dichloroethane	ND		1.00	1	12/07/2017 19:08	WG1050755
(S) Toluene-d8	*106*		*80.0-120*		*12/07/2017 19:08*	WG1050755
(S) Dibromofluoromethane	*90.3*		*76.0-123*		*12/07/2017 19:08*	WG1050755
(S) 4-Bromofluorobenzene	*116*		*80.0-120*		*12/07/2017 19:08*	WG1050755

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 01:57	WG1050994
Toluene	ND		1.00	1	12/08/2017 01:57	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 01:57	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 01:57	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 01:57	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 01:57	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 01:57	WG1050994
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2017 01:57*	WG1050994
(S) Dibromofluoromethane	*97.6*		*76.0-123*		*12/08/2017 01:57*	WG1050994
(S) 4-Bromofluorobenzene	*98.7*		*80.0-120*		*12/08/2017 01:57*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	693		10.0	10	12/08/2017 02:17	WG1050994
Toluene	17.0		10.0	10	12/08/2017 02:17	WG1050994
Ethylbenzene	ND		10.0	10	12/08/2017 02:17	WG1050994
Total Xylenes	408		30.0	10	12/08/2017 02:17	WG1050994
Methyl tert-butyl ether	99.5		10.0	10	12/08/2017 02:17	WG1050994
Naphthalene	ND		50.0	10	12/08/2017 02:17	WG1050994
1,2-Dichloroethane	ND		10.0	10	12/08/2017 02:17	WG1050994
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2017 02:17*	WG1050994
(S) Dibromofluoromethane	*98.7*		*76.0-123*		*12/08/2017 02:17*	WG1050994
(S) 4-Bromofluorobenzene	*97.9*		*80.0-120*		*12/08/2017 02:17*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 02:36	WG1050994
Toluene	2.48		1.00	1	12/08/2017 02:36	WG1050994
Ethylbenzene	1.20		1.00	1	12/08/2017 02:36	WG1050994
Total Xylenes	7.93		3.00	1	12/08/2017 02:36	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 02:36	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 02:36	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 02:36	WG1050994
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 02:36*	WG1050994
(S) Dibromofluoromethane	*95.9*		*76.0-123*		*12/08/2017 02:36*	WG1050994
(S) 4-Bromofluorobenzene	*98.8*		*80.0-120*		*12/08/2017 02:36*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	4.97		1.00	1	12/08/2017 02:56	WG1050994
Toluene	ND		1.00	1	12/08/2017 02:56	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 02:56	WG1050994
Total Xylenes	7.74		3.00	1	12/08/2017 02:56	WG1050994
Methyl tert-butyl ether	85.5		1.00	1	12/08/2017 02:56	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 02:56	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 02:56	WG1050994
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2017 02:56*	WG1050994
(S) Dibromofluoromethane	*98.2*		*76.0-123*		*12/08/2017 02:56*	WG1050994
(S) 4-Bromofluorobenzene	*98.7*		*80.0-120*		*12/08/2017 02:56*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 03:15	WG1050994
Toluene	ND		1.00	1	12/08/2017 03:15	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 03:15	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 03:15	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 03:15	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 03:15	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 03:15	WG1050994
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2017 03:15*	WG1050994
(S) Dibromofluoromethane	*98.4*		*76.0-123*		*12/08/2017 03:15*	WG1050994
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*12/08/2017 03:15*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 03:35	WG1050994
Toluene	ND		1.00	1	12/08/2017 03:35	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 03:35	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 03:35	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 03:35	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 03:35	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 03:35	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 03:35*	WG1050994
(S) Dibromofluoromethane	*97.7*		*76.0-123*		*12/08/2017 03:35*	WG1050994
(S) 4-Bromofluorobenzene	*99.2*		*80.0-120*		*12/08/2017 03:35*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 03:55	WG1050994
Toluene	ND		1.00	1	12/08/2017 03:55	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 03:55	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 03:55	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 03:55	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 03:55	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 03:55	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 03:55*	WG1050994
(S) Dibromofluoromethane	*99.2*		*76.0-123*		*12/08/2017 03:55*	WG1050994
(S) 4-Bromofluorobenzene	*98.8*		*80.0-120*		*12/08/2017 03:55*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/08/2017 04:15	WG1050994
Toluene	ND		1.00	1	12/08/2017 04:15	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 04:15	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 04:15	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 04:15	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 04:15	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 04:15	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 04:15*	WG1050994
(S) Dibromofluoromethane	*99.2*		*76.0-123*		*12/08/2017 04:15*	WG1050994
(S) 4-Bromofluorobenzene	*96.3*		*80.0-120*		*12/08/2017 04:15*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 04:34	WG1050994
Toluene	ND		1.00	1	12/08/2017 04:34	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 04:34	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 04:34	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 04:34	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 04:34	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 04:34	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 04:34*	WG1050994
(S) Dibromofluoromethane	*95.6*		*76.0-123*		*12/08/2017 04:34*	WG1050994
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*12/08/2017 04:34*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 04:54	WG1050994
Toluene	ND		1.00	1	12/08/2017 04:54	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 04:54	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 04:54	WG1050994
Methyl tert-butyl ether	2.93		1.00	1	12/08/2017 04:54	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 04:54	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 04:54	WG1050994
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2017 04:54*	WG1050994
(S) Dibromofluoromethane	*97.5*		*76.0-123*		*12/08/2017 04:54*	WG1050994
(S) 4-Bromofluorobenzene	*98.9*		*80.0-120*		*12/08/2017 04:54*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	102		1.00	1	12/08/2017 05:13	WG1050994
Toluene	ND		1.00	1	12/08/2017 05:13	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 05:13	WG1050994
Total Xylenes	86.1		3.00	1	12/08/2017 05:13	WG1050994
Methyl tert-butyl ether	38.0		1.00	1	12/08/2017 05:13	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 05:13	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 05:13	WG1050994
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 05:13*	WG1050994
(S) Dibromofluoromethane	*96.6*		*76.0-123*		*12/08/2017 05:13*	WG1050994
(S) 4-Bromofluorobenzene	*98.2*		*80.0-120*		*12/08/2017 05:13*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1760		50.0	50	12/09/2017 06:41	WG1050994
Toluene	3630		50.0	50	12/09/2017 06:41	WG1050994
Ethylbenzene	239		50.0	50	12/09/2017 06:41	WG1050994
Total Xylenes	1380		150	50	12/09/2017 06:41	WG1050994
Methyl tert-butyl ether	135		1.00	1	12/08/2017 05:32	WG1050994
Naphthalene	37.6		5.00	1	12/08/2017 05:32	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 05:32	WG1050994
(S) Toluene-d8	*95.9*		*80.0-120*		*12/09/2017 06:41*	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 05:32*	WG1050994
(S) Dibromofluoromethane	*98.2*		*76.0-123*		*12/09/2017 06:41*	WG1050994
(S) Dibromofluoromethane	*109*		*76.0-123*		*12/08/2017 05:32*	WG1050994
(S) 4-Bromofluorobenzene	*99.7*		*80.0-120*		*12/08/2017 05:32*	WG1050994
(S) 4-Bromofluorobenzene	*98.5*		*80.0-120*		*12/09/2017 06:41*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	491		50.0	50	12/09/2017 07:00	WG1050994
Toluene	1050		50.0	50	12/09/2017 07:00	WG1050994
Ethylbenzene	56.0		50.0	50	12/09/2017 07:00	WG1050994
Total Xylenes	408		150	50	12/09/2017 07:00	WG1050994
Methyl tert-butyl ether	117		1.00	1	12/08/2017 05:52	WG1050994
Naphthalene	35.4		5.00	1	12/08/2017 05:52	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 05:52	WG1050994
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 05:52*	WG1050994
(S) Toluene-d8	*97.0*		*80.0-120*		*12/09/2017 07:00*	WG1050994
(S) Dibromofluoromethane	*104*		*76.0-123*		*12/08/2017 05:52*	WG1050994
(S) Dibromofluoromethane	*98.8*		*76.0-123*		*12/09/2017 07:00*	WG1050994
(S) 4-Bromofluorobenzene	*98.8*		*80.0-120*		*12/08/2017 05:52*	WG1050994
(S) 4-Bromofluorobenzene	*97.6*		*80.0-120*		*12/09/2017 07:00*	WG1050994

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/11/2017 14:30	WG1050810

Sample Narrative:
L955704-15 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/11/2017 14:30	WG1050810

Sample Narrative:
L955704-15 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	670		100	1	12/08/2017 09:09	WG1051268
Sulfate	ND		5000	1	12/08/2017 09:09	WG1051268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/11/2017 11:10	WG1052064
Ethane	ND		13.0	1	12/11/2017 11:10	WG1052064
Ethene	ND		13.0	1	12/11/2017 11:10	WG1052064

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 07:19	WG1050994
Toluene	1.60		1.00	1	12/09/2017 07:19	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 06:12	WG1050994
Total Xylenes	4.64		3.00	1	12/09/2017 07:19	WG1050994
Methyl tert-butyl ether	140		1.00	1	12/08/2017 06:12	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 06:12	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 06:12	WG1050994
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 06:12*	WG1050994
(S) Toluene-d8	*96.8*		*80.0-120*		*12/09/2017 07:19*	WG1050994
(S) Dibromofluoromethane	*94.8*		*76.0-123*		*12/08/2017 06:12*	WG1050994
(S) Dibromofluoromethane	*97.8*		*76.0-123*		*12/09/2017 07:19*	WG1050994
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*12/09/2017 07:19*	WG1050994
(S) 4-Bromofluorobenzene	*99.5*		*80.0-120*		*12/08/2017 06:12*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	169		10.0	10	12/08/2017 06:31	WG1050994
Toluene	29.7		10.0	10	12/08/2017 06:31	WG1050994
Ethylbenzene	ND		10.0	10	12/08/2017 06:31	WG1050994
Total Xylenes	69.9		30.0	10	12/08/2017 06:31	WG1050994
Methyl tert-butyl ether	218		10.0	10	12/08/2017 06:31	WG1050994
Naphthalene	ND		50.0	10	12/08/2017 06:31	WG1050994
1,2-Dichloroethane	ND		10.0	10	12/08/2017 06:31	WG1050994
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2017 06:31*	WG1050994
(S) Dibromofluoromethane	*95.5*		*76.0-123*		*12/08/2017 06:31*	WG1050994
(S) 4-Bromofluorobenzene	*99.3*		*80.0-120*		*12/08/2017 06:31*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	345		50.0	50	12/08/2017 06:51	WG1050994
Toluene	68.5		50.0	50	12/08/2017 06:51	WG1050994
Ethylbenzene	ND		50.0	50	12/08/2017 06:51	WG1050994
Total Xylenes	150		150	50	12/08/2017 06:51	WG1050994
Methyl tert-butyl ether	355		50.0	50	12/08/2017 06:51	WG1050994
Naphthalene	ND		250	50	12/08/2017 06:51	WG1050994
1,2-Dichloroethane	ND		50.0	50	12/08/2017 06:51	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 06:51*	WG1050994
(S) Dibromofluoromethane	*94.6*		*76.0-123*		*12/08/2017 06:51*	WG1050994
(S) 4-Bromofluorobenzene	*99.8*		*80.0-120*		*12/08/2017 06:51*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	286		10.0	10	12/09/2017 07:39	WG1050994
Toluene	31.3		1.00	1	12/08/2017 07:11	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 07:11	WG1050994
Total Xylenes	131		3.00	1	12/08/2017 07:11	WG1050994
Methyl tert-butyl ether	353		10.0	10	12/09/2017 07:39	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 07:11	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 07:11	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 07:11*	WG1050994
(S) Toluene-d8	*94.1*		*80.0-120*		*12/09/2017 07:39*	WG1050994
(S) Dibromofluoromethane	*96.2*		*76.0-123*		*12/08/2017 07:11*	WG1050994
(S) Dibromofluoromethane	*96.7*		*76.0-123*		*12/09/2017 07:39*	WG1050994
(S) 4-Bromofluorobenzene	*97.7*		*80.0-120*		*12/09/2017 07:39*	WG1050994
(S) 4-Bromofluorobenzene	*99.5*		*80.0-120*		*12/08/2017 07:11*	WG1050994

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	25500		20000	1	12/11/2017 14:36	WG1050810

Sample Narrative:
L955704-19 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Free Carbon Dioxide	22100	T8	20000	1	12/11/2017 14:36	WG1050810

Sample Narrative:
L955704-19 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	ND		100	1	12/07/2017 16:36	WG1050751
Sulfate	ND		5000	1	12/07/2017 16:36	WG1050751

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	65.2		10.0	1	12/11/2017 11:13	WG1052064
Ethane	ND		13.0	1	12/11/2017 11:13	WG1052064
Ethene	ND		13.0	1	12/11/2017 11:13	WG1052064

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	14300		1000	1000	12/08/2017 07:30	WG1050994
Toluene	22300		1000	1000	12/08/2017 07:30	WG1050994
Ethylbenzene	ND		1000	1000	12/08/2017 07:30	WG1050994
Total Xylenes	10100		3000	1000	12/08/2017 07:30	WG1050994
Methyl tert-butyl ether	ND		1000	1000	12/08/2017 07:30	WG1050994
Naphthalene	ND		5000	1000	12/08/2017 07:30	WG1050994
1,2-Dichloroethane	ND		1000	1000	12/08/2017 07:30	WG1050994
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 07:30*	WG1050994
(S) Dibromofluoromethane	*98.6*		*76.0-123*		*12/08/2017 07:30*	WG1050994
(S) 4-Bromofluorobenzene	*97.3*		*80.0-120*		*12/08/2017 07:30*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	27.6		1.00	1	12/08/2017 07:50	WG1050994
Toluene	ND		1.00	1	12/08/2017 07:50	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 07:50	WG1050994
Total Xylenes	11.1		3.00	1	12/08/2017 07:50	WG1050994
Methyl tert-butyl ether	1.62		1.00	1	12/08/2017 07:50	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 07:50	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 07:50	WG1050994
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2017 07:50*	WG1050994
(S) Dibromofluoromethane	*94.8*		*76.0-123*		*12/08/2017 07:50*	WG1050994
(S) 4-Bromofluorobenzene	*98.8*		*80.0-120*		*12/08/2017 07:50*	WG1050994

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 08:10	WG1050994
Toluene	ND		1.00	1	12/08/2017 08:10	WG1050994
Ethylbenzene	ND		1.00	1	12/08/2017 08:10	WG1050994
Total Xylenes	ND		3.00	1	12/08/2017 08:10	WG1050994
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 08:10	WG1050994
Naphthalene	ND		5.00	1	12/08/2017 08:10	WG1050994
1,2-Dichloroethane	ND		1.00	1	12/08/2017 08:10	WG1050994
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 08:10*	WG1050994
(S) Dibromofluoromethane	*97.7*		*76.0-123*		*12/08/2017 08:10*	WG1050994
(S) 4-Bromofluorobenzene	*95.8*		*80.0-120*		*12/08/2017 08:10*	WG1050994

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/11/2017 14:41	WG1050810

Sample Narrative:
L955704-22 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	20400	T8	20000	1	12/11/2017 14:41	WG1050810

Sample Narrative:
L955704-22 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2017 16:50	WG1050751
Sulfate	ND		5000	1	12/07/2017 16:50	WG1050751

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	42.2		10.0	1	12/11/2017 11:20	WG1052064
Ethane	ND		13.0	1	12/11/2017 11:20	WG1052064
Ethene	ND		13.0	1	12/11/2017 11:20	WG1052064

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	23.8		1.00	1	12/07/2017 22:02	WG1050996
Toluene	ND		1.00	1	12/07/2017 22:02	WG1050996
Ethylbenzene	1.84		1.00	1	12/07/2017 22:02	WG1050996
Total Xylenes	60.5		3.00	1	12/07/2017 22:02	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/07/2017 22:02	WG1050996
Naphthalene	ND		5.00	1	12/07/2017 22:02	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/07/2017 22:02	WG1050996
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2017 22:02*	WG1050996
(S) Dibromofluoromethane	*109*		*76.0-123*		*12/07/2017 22:02*	WG1050996
(S) 4-Bromofluorobenzene	*87.0*		*80.0-120*		*12/07/2017 22:02*	WG1050996

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/11/2017 14:47	WG1050810

Sample Narrative:
L955704-23 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	24200	T8	20000	1	12/11/2017 14:47	WG1050810

Sample Narrative:
L955704-23 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	382		100	1	12/07/2017 17:58	WG1050751
Sulfate	ND		5000	1	12/07/2017 17:58	WG1050751

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/11/2017 13:31	WG1052064
Ethane	ND		13.0	1	12/11/2017 13:31	WG1052064
Ethene	ND		13.0	1	12/11/2017 13:31	WG1052064

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 22:22	WG1050996
Toluene	ND		1.00	1	12/07/2017 22:22	WG1050996
Ethylbenzene	ND		1.00	1	12/07/2017 22:22	WG1050996
Total Xylenes	ND		3.00	1	12/07/2017 22:22	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/07/2017 22:22	WG1050996
Naphthalene	ND		5.00	1	12/07/2017 22:22	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/07/2017 22:22	WG1050996
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2017 22:22*	WG1050996
(S) Dibromofluoromethane	*109*		*76.0-123*		*12/07/2017 22:22*	WG1050996
(S) 4-Bromofluorobenzene	*87.5*		*80.0-120*		*12/07/2017 22:22*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/07/2017 22:41	WG1050996
Toluene	ND		1.00	1	12/07/2017 22:41	WG1050996
Ethylbenzene	ND		1.00	1	12/07/2017 22:41	WG1050996
Total Xylenes	ND		3.00	1	12/07/2017 22:41	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/07/2017 22:41	WG1050996
Naphthalene	ND		5.00	1	12/07/2017 22:41	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/07/2017 22:41	WG1050996
(S) Toluene-d8	*104*		*80.0-120*		*12/07/2017 22:41*	WG1050996
(S) Dibromofluoromethane	*110*		*76.0-123*		*12/07/2017 22:41*	WG1050996
(S) 4-Bromofluorobenzene	*87.4*		*80.0-120*		*12/07/2017 22:41*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.01		1.00	1	12/07/2017 23:01	WG1050996
Toluene	ND		1.00	1	12/07/2017 23:01	WG1050996
Ethylbenzene	ND		1.00	1	12/07/2017 23:01	WG1050996
Total Xylenes	ND		3.00	1	12/07/2017 23:01	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/07/2017 23:01	WG1050996
Naphthalene	ND		5.00	1	12/07/2017 23:01	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/07/2017 23:01	WG1050996
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2017 23:01*	WG1050996
(S) Dibromofluoromethane	*111*		*76.0-123*		*12/07/2017 23:01*	WG1050996
(S) 4-Bromofluorobenzene	*88.9*		*80.0-120*		*12/07/2017 23:01*	WG1050996

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	31600		20000	1	12/11/2017 14:53	WG1050810

Sample Narrative:
L955704-26 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/11/2017 14:53	WG1050810

Sample Narrative:
L955704-26 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2017 18:12	WG1050751
Sulfate	ND		5000	1	12/07/2017 18:12	WG1050751

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/11/2017 13:36	WG1052064
Ethane	ND		13.0	1	12/11/2017 13:36	WG1052064
Ethene	ND		13.0	1	12/11/2017 13:36	WG1052064

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	367		10.0	10	12/07/2017 23:20	WG1050996
Toluene	1540		10.0	10	12/07/2017 23:20	WG1050996
Ethylbenzene	137		10.0	10	12/07/2017 23:20	WG1050996
Total Xylenes	4660		30.0	10	12/07/2017 23:20	WG1050996
Methyl tert-butyl ether	ND		10.0	10	12/07/2017 23:20	WG1050996
Naphthalene	54.4		50.0	10	12/07/2017 23:20	WG1050996
1,2-Dichloroethane	ND		10.0	10	12/07/2017 23:20	WG1050996
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2017 23:20*	WG1050996
(S) Dibromofluoromethane	*108*		*76.0-123*		*12/07/2017 23:20*	WG1050996
(S) 4-Bromofluorobenzene	*87.3*		*80.0-120*		*12/07/2017 23:20*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 23:40	WG1050996
Toluene	ND		1.00	1	12/07/2017 23:40	WG1050996
Ethylbenzene	ND		1.00	1	12/07/2017 23:40	WG1050996
Total Xylenes	ND		3.00	1	12/07/2017 23:40	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/07/2017 23:40	WG1050996
Naphthalene	ND		5.00	1	12/07/2017 23:40	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/07/2017 23:40	WG1050996
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2017 23:40*	WG1050996
(S) Dibromofluoromethane	*109*		*76.0-123*		*12/07/2017 23:40*	WG1050996
(S) 4-Bromofluorobenzene	*89.1*		*80.0-120*		*12/07/2017 23:40*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	8.82		1.00	1	12/08/2017 00:00	WG1050996
Toluene	ND		1.00	1	12/08/2017 00:00	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 00:00	WG1050996
Total Xylenes	6.91		3.00	1	12/08/2017 00:00	WG1050996
Methyl tert-butyl ether	24.4		1.00	1	12/08/2017 00:00	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 00:00	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 00:00	WG1050996
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2017 00:00*	WG1050996
(S) Dibromofluoromethane	*81.1*		*76.0-123*		*12/08/2017 00:00*	WG1050996
(S) 4-Bromofluorobenzene	*91.1*		*80.0-120*		*12/08/2017 00:00*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	269		10.0	10	12/11/2017 16:58	WG1050996
Toluene	24.4		1.00	1	12/08/2017 00:19	WG1050996
Ethylbenzene	3.97		1.00	1	12/08/2017 00:19	WG1050996
Total Xylenes	100		3.00	1	12/08/2017 00:19	WG1050996
Methyl tert-butyl ether	140		1.00	1	12/08/2017 00:19	WG1050996
Naphthalene	8.83		5.00	1	12/08/2017 00:19	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 00:19	WG1050996
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 00:19*	WG1050996
(S) Toluene-d8	*98.3*		*80.0-120*		*12/11/2017 16:58*	WG1050996
(S) Dibromofluoromethane	*94.4*		*76.0-123*		*12/11/2017 16:58*	WG1050996
(S) Dibromofluoromethane	*92.2*		*76.0-123*		*12/08/2017 00:19*	WG1050996
(S) 4-Bromofluorobenzene	*89.8*		*80.0-120*		*12/08/2017 00:19*	WG1050996
(S) 4-Bromofluorobenzene	*98.7*		*80.0-120*		*12/11/2017 16:58*	WG1050996

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/11/2017 14:59	WG1050810

Sample Narrative:
L955704-30 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	32500	T8	20000	1	12/11/2017 14:59	WG1050810

Sample Narrative:
L955704-30 WG1050810: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2017 18:25	WG1050751
Sulfate	ND		5000	1	12/07/2017 18:25	WG1050751

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	37.1		10.0	1	12/11/2017 11:50	WG1052064
Ethane	ND		13.0	1	12/11/2017 11:50	WG1052064
Ethene	ND		13.0	1	12/11/2017 11:50	WG1052064

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	9.82		1.00	1	12/08/2017 00:38	WG1050996
Toluene	ND		1.00	1	12/08/2017 00:38	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 00:38	WG1050996
Total Xylenes	45.0		3.00	1	12/08/2017 00:38	WG1050996
Methyl tert-butyl ether	1.24		1.00	1	12/08/2017 00:38	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 00:38	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 00:38	WG1050996
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 00:38*	WG1050996
(S) Dibromofluoromethane	*109*		*76.0-123*		*12/08/2017 00:38*	WG1050996
(S) 4-Bromofluorobenzene	*89.5*		*80.0-120*		*12/08/2017 00:38*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.37		1.00	1	12/08/2017 00:58	WG1050996
Toluene	ND		1.00	1	12/08/2017 00:58	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 00:58	WG1050996
Total Xylenes	ND		3.00	1	12/08/2017 00:58	WG1050996
Methyl tert-butyl ether	35.5		1.00	1	12/08/2017 00:58	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 00:58	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 00:58	WG1050996
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 00:58*	WG1050996
(S) Dibromofluoromethane	*111*		*76.0-123*		*12/08/2017 00:58*	WG1050996
(S) 4-Bromofluorobenzene	*87.9*		*80.0-120*		*12/08/2017 00:58*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/08/2017 01:17	WG1050996
Toluene	ND		1.00	1	12/08/2017 01:17	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 01:17	WG1050996
Total Xylenes	ND		3.00	1	12/08/2017 01:17	WG1050996
Methyl tert-butyl ether	2.92		1.00	1	12/08/2017 01:17	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 01:17	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 01:17	WG1050996
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2017 01:17*	WG1050996
(S) Dibromofluoromethane	*110*		*76.0-123*		*12/08/2017 01:17*	WG1050996
(S) 4-Bromofluorobenzene	*87.2*		*80.0-120*		*12/08/2017 01:17*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 01:37	WG1050996
Toluene	ND		1.00	1	12/08/2017 01:37	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 01:37	WG1050996
Total Xylenes	ND		3.00	1	12/08/2017 01:37	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 01:37	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 01:37	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 01:37	WG1050996
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 01:37*	WG1050996
(S) Dibromofluoromethane	*110*		*76.0-123*		*12/08/2017 01:37*	WG1050996
(S) 4-Bromofluorobenzene	*90.2*		*80.0-120*		*12/08/2017 01:37*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/08/2017 01:57	WG1050996
Toluene	ND		1.00	1	12/08/2017 01:57	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 01:57	WG1050996
Total Xylenes	ND		3.00	1	12/08/2017 01:57	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 01:57	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 01:57	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 01:57	WG1050996
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2017 01:57*	WG1050996
(S) Dibromofluoromethane	*108*		*76.0-123*		*12/08/2017 01:57*	WG1050996
(S) 4-Bromofluorobenzene	*87.4*		*80.0-120*		*12/08/2017 01:57*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 02:16	WG1050996
Toluene	ND		1.00	1	12/08/2017 02:16	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 02:16	WG1050996
Total Xylenes	ND		3.00	1	12/08/2017 02:16	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 02:16	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 02:16	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 02:16	WG1050996
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 02:16*	WG1050996
(S) Dibromofluoromethane	*111*		*76.0-123*		*12/08/2017 02:16*	WG1050996
(S) 4-Bromofluorobenzene	*86.7*		*80.0-120*		*12/08/2017 02:16*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2017 02:36	WG1050996
Toluene	ND		1.00	1	12/08/2017 02:36	WG1050996
Ethylbenzene	ND		1.00	1	12/08/2017 02:36	WG1050996
Total Xylenes	ND		3.00	1	12/08/2017 02:36	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/08/2017 02:36	WG1050996
Naphthalene	ND		5.00	1	12/08/2017 02:36	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/08/2017 02:36	WG1050996
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2017 02:36*	WG1050996
(S) Dibromofluoromethane	*111*		*76.0-123*		*12/08/2017 02:36*	WG1050996
(S) 4-Bromofluorobenzene	*86.0*		*80.0-120*		*12/08/2017 02:36*	WG1050996

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2017 19:44	WG1050996
Toluene	ND		1.00	1	12/07/2017 19:44	WG1050996
Ethylbenzene	ND		1.00	1	12/07/2017 19:44	WG1050996
Total Xylenes	ND		3.00	1	12/07/2017 19:44	WG1050996
Methyl tert-butyl ether	ND		1.00	1	12/07/2017 19:44	WG1050996
Naphthalene	ND		5.00	1	12/07/2017 19:44	WG1050996
1,2-Dichloroethane	ND		1.00	1	12/07/2017 19:44	WG1050996
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2017 19:44*	WG1050996
(S) Dibromofluoromethane	*110*		*76.0-123*		*12/07/2017 19:44*	WG1050996
(S) 4-Bromofluorobenzene	*87.7*		*80.0-120*		*12/07/2017 19:44*	WG1050996

L955794-01 Original Sample (OS) • Duplicate (DUP)

(OS) L955794-01 12/11/17 12:22 • (DUP) R3272014-1 12/11/17 12:29

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	352000	360000	1	2.20		20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

L956434-01 Original Sample (OS) • Duplicate (DUP)

(OS) L956434-01 12/11/17 14:15 • (DUP) R3272014-5 12/11/17 14:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	286000	290000	1	1.42		20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3272014-2 12/11/17 12:35 • (LCSD) R3272014-3 12/11/17 13:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Alkalinity	100000	105000	107000	105	107	85.0-115			2.14	20

Sample Narrative:
LCS: Endpoint pH 4.5
LCSD: Endpoint pH 4.5

L955794-01 Original Sample (OS) • Duplicate (DUP)

(OS) L955794-01 12/11/17 12:22 • (DUP) R3272014-6 12/11/17 12:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	38000	26100	1	37.1	P1	20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3271443-1 12/07/17 11:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

L955704-22 Original Sample (OS) • Duplicate (DUP)

(OS) L955704-22 12/07/17 16:50 • (DUP) R3271443-4 12/07/17 17:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	ND	0.000	1	0		15
Sulfate	ND	366	1	0		15

L955838-03 Original Sample (OS) • Duplicate (DUP)

(OS) L955838-03 12/07/17 20:41 • (DUP) R3271443-6 12/07/17 20:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	736	756	1	2.71		15
Sulfate	6020	5820	1	3.31		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271443-2 12/07/17 11:46 • (LCSD) R3271443-3 12/07/17 11:59

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Nitrate	8000	8240	8230	103	103	80-120			0.209	15
Sulfate	40000	40100	39900	100	99.7	80-120			0.524	15

L955704-22 Original Sample (OS) • Matrix Spike (MS)

(OS) L955704-22 12/07/17 16:50 • (MS) R3271443-5 12/07/17 17:17

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Nitrate	5000	ND	4730	94.6	1	80-120	
Sulfate	50000	ND	50700	100	1	80-120	

L955838-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L955838-07 12/08/17 00:06 • (MS) R3271443-7 12/08/17 00:19 • (MSD) R3271443-8 12/08/17 00:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5000	82.0	5040	5050	99.2	99.3	1	80-120			0.0674	15

Method Blank (MB)

(MB) R3271611-1 12/08/17 07:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

L956118-03 Original Sample (OS) • Duplicate (DUP)

(OS) L956118-03 12/08/17 16:05 • (DUP) R3271611-4 12/08/17 16:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	U	0.000	1	0		15
Sulfate	1430	1420	1	1	J	15

L956125-01 Original Sample (OS) • Duplicate (DUP)

(OS) L956125-01 12/08/17 17:44 • (DUP) R3271611-6 12/08/17 17:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	111	205	1	59	P1	15
Sulfate	ND	228	1	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271611-2 12/08/17 07:15 • (LCSD) R3271611-3 12/08/17 07:29

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Nitrate	8000	8430	8380	105	105	80-120			1	15
Sulfate	40000	40800	40400	102	101	80-120			1	15

L956118-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L956118-03 12/08/17 16:05 • (MS) R3271611-5 12/08/17 17:02

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Nitrate	5000	U	3110	62	1	80-120	J6
Sulfate	50000	1430	33500	64	1	80-120	J6

L956125-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L956125-01 12/08/17 17:44 • (MS) R3271611-7 12/08/17 18:12 • (MSD) R3271611-8 12/08/17 18:26

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5000	111	5070	5280	99	103	1	80-120			4	15
Sulfate	50000	ND	54100	53700	108	107	1	80-120			1	15

Method Blank (MB)

(MB) R3271906-1 12/11/17 09:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L955704-15 Original Sample (OS) • Duplicate (DUP)

(OS) L955704-15 12/11/17 11:10 • (DUP) R3271906-2 12/11/17 11:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L956083-09 Original Sample (OS) • Duplicate (DUP)

(OS) L956083-09 12/11/17 13:06 • (DUP) R3271906-3 12/11/17 13:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	65.0	67.4	1	3.59		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271906-4 12/11/17 13:51 • (LCSD) R3271906-5 12/11/17 14:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	73.0	77.4	108	114	85.0-115			5.87	20
Ethane	129	111	114	86.0	88.3	85.0-115			2.63	20
Ethene	127	112	117	88.6	91.7	85.0-115			3.52	20

Method Blank (MB)

(MB) R3271497-2 12/07/17 11:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*89.7*			*76.0-123*
(S) 4-Bromofluorobenzene	*118*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3271497-1 12/07/17 10:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	25.8	103	70.0-130	
1,2-Dichloroethane	25.0	25.2	101	70.0-130	
Ethylbenzene	25.0	30.0	120	70.0-130	
Methyl tert-butyl ether	25.0	25.3	101	70.0-130	
Naphthalene	25.0	20.9	83.4	70.0-130	
Toluene	25.0	29.7	119	70.0-130	
Xylenes, Total	75.0	89.8	120	70.0-130	
(S) Toluene-d8			*109*	*80.0-120*	
(S) Dibromofluoromethane			*89.5*	*76.0-123*	
(S) 4-Bromofluorobenzene			*118*	*80.0-120*	

Method Blank (MB)

(MB) R3271516-2 12/07/17 21:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*93.6*			*76.0-123*
(S) 4-Bromofluorobenzene	*103*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271516-1 12/07/17 19:17 • (LCSD) R3271516-3 12/07/17 21:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	25.3	25.1	101	100	70.0-130			0.989	20
1,2-Dichloroethane	25.0	24.8	24.7	99.1	98.8	70.0-130			0.327	20
Ethylbenzene	25.0	26.7	26.1	107	104	70.0-130			2.44	20
Methyl tert-butyl ether	25.0	23.5	24.0	93.9	95.9	70.0-130			2.08	20
Naphthalene	25.0	24.7	25.3	98.6	101	70.0-130			2.46	20
Toluene	25.0	26.5	25.6	106	102	70.0-130			3.57	20
Xylenes, Total	75.0	79.9	76.8	107	102	70.0-130			3.96	20
(S) Toluene-d8				*103*	*101*	*80.0-120*				
(S) Dibromofluoromethane				*94.3*	*97.3*	*76.0-123*				
(S) 4-Bromofluorobenzene				*99.3*	*99.6*	*80.0-120*				

Method Blank (MB)

(MB) R3272020-2 12/07/17 19:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) Dibromofluoromethane	*110*			*76.0-123*
(S) 4-Bromofluorobenzene	*89.6*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3272020-1 12/07/17 18:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	26.3	105	70.0-130	
1,2-Dichloroethane	25.0	26.6	107	70.0-130	
Ethylbenzene	25.0	24.8	99.3	70.0-130	
Methyl tert-butyl ether	25.0	26.5	106	70.0-130	
Naphthalene	25.0	27.2	109	70.0-130	
Toluene	25.0	23.7	94.6	70.0-130	
Xylenes, Total	75.0	75.5	101	70.0-130	
(S) Toluene-d8			*102*	*80.0-120*	
(S) Dibromofluoromethane			*106*	*76.0-123*	
(S) 4-Bromofluorobenzene			*89.2*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

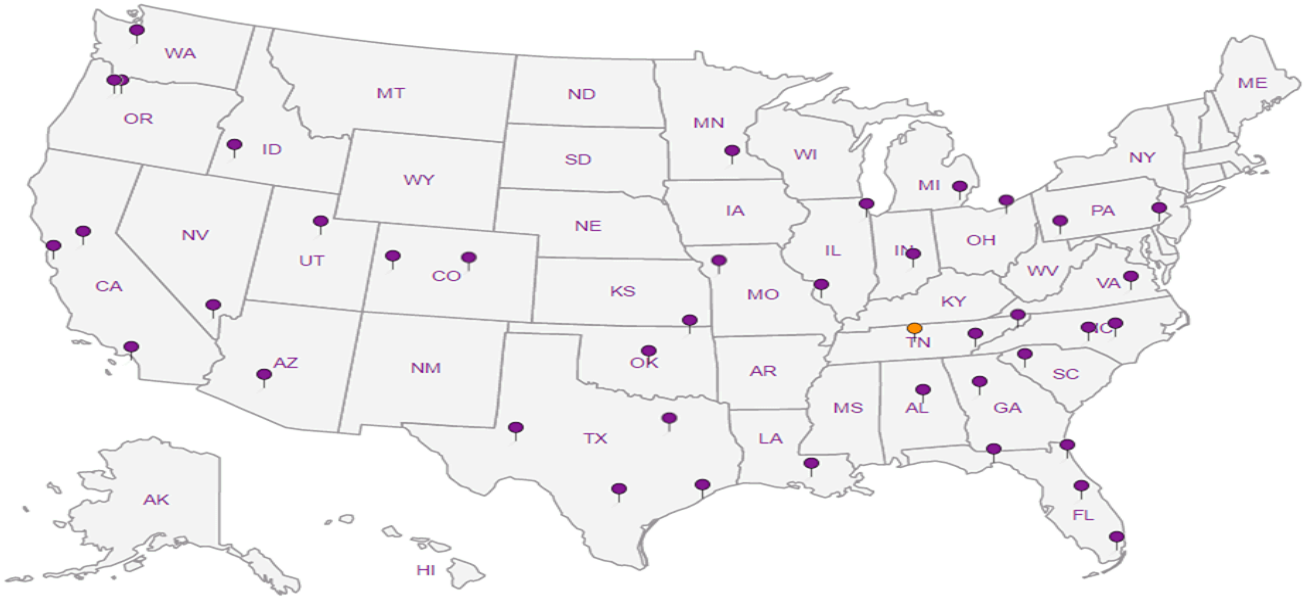
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): M. WARREN

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature): Melissa Warren

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW-26-120617	GRAB	GW	N/A	12/06/17	0740	3				X		X	X	X	X		-01
MW-26B-120617		GW			0750	3				X		X	X	X	X		02
MW-23-120617		GW			0800	3				X		X	X	X	X		03
MW-23B-120617		GW			0805	3				X		X	X	X	X		04
MW-46-120617		GW			0820	3				X		X	X	X	X		05
MW-29-120617		GW			0835	3				X		X	X	X	X		06
MW-43B-120617		GW			0905	3				X		X	X	X	X		07
MW-43-120617		GW			0910	3				X		X	X	X	X		08
MW-24-120617		GW			0915	3				X		X	X	X	X		09
MW-24B-120617		GW			0925	3				X		X	X	X	X		10

Analysis / Container / Preservative

Chain of Custody Page 1 of 4

ESC LABORATORIES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L955704

G024

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P627788
TSR: 526 - Chris McCord
PB: 11-22-17B
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 4142522 2786

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Melissa Warren	12/06/17	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No (HCL) MeoH TBR
1

Temp: 2.1 °C Bottles Received: 133

Date: 12-07-17 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREL

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature):

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 2 of 4

ESC LABORATORIES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L955704

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P627788
TSR: 526 - Chris McCord
PB: 11-22-17

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW-37-120617	GRAB	GW	N/A	12/06/17	0935	3				X		X	X	X	X		-11
MW-38-120617		GW			0940	3				X		X	X	X	X		12
MW-15B-120617		GW			0950	3				X		X	X	X	X		13
MW-15B-D-120617		GW			0955	3				X		X	X	X	X		14
MW-15-120617		GW			1005	7	X	X	X	X		X	X	X	X		15
MW-34-120617		GW			1020	3				X		X	X	X	X		16
MW-39-120617		GW			1025	3				X		X	X	X	X		17
MW-39-D-120617		GW			1030	3				X		X	X	X	X		18
MW-40-120617		GW			1040	7	X	X	X	X		X	X	X	X		19
MW-41-120617		GW			1215	3				X		X	X	X	X		20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 414252212786

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/06/17	12/06/17	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.1 °C Bottles Received: 133

Date: 12-07-17 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910, LD. MR, GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): M. WARREN

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature):
Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 3 of 4

ESC LABORATORIES — a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L955704

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P627788
TSR: 526 - Chris McCord
PB: 11-22-17

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW-25B-120617	GRAB	GW	N/A	12/06/17	1240	3				X		X	X	X	X		-21
MW-25-120617		GW			1245	7	X	X	X	X		X	X	X	X		22
MW-35-120617		GW			1305	7	X	X	X	X		X	X	X	X		23
MW-49-120617		GW			1320	3				X		X	X	X	X		24
MW-12B-120617		GW			1335	3				X		X	X	X	X		25
MW-12-120617		GW			1345	7	X	X	X	X		X	X	X	X		26
MW-14-120617		GW			1425	3				X		X	X	X	X		27
MW-14B-120617		GW			1430	3				X		X	X	X	X		28
MW-13B-120617		GW			1440	3				X		X	X	X	X		29
MW-42-120617		GW			1230	7	X	X	X	X		X	X	X	X		30

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 414252212786

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: X Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/06/17	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
1 HCl / MeoH TBR

Temp: 2.1 °C Bottles Received: 133

Date: 12-07-17 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature):
Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 4 of 4

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L955764

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P627788
TSR: 526 - Chris McCord
PB: 11-22-17G

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW-50B-120617	GRAB	GW	N/A	12/06/17	1500	3				X		X	X	X	X		31
MW-48B-120617		GW			1510	3				X		X	X	X	X		32
MW-47-120617		GW			1545	3				X		X	X	X	X		33
MW-31-120617		GW			1550	3				X		X	X	X	X		34
MW-33T-120617		GW			1600	3				X		X	X	X	X		35
FB01-120617		GW			1605	3					X	X	X	X	X		36
TB01-120617	V	GW	V	V	1505	1					X						
		GW															

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 414252212786

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: X Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
Melissa Warren	12/06/17	1730		1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.1 °C Bottles Received: 13
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12-07-17 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

December 14, 2017

CH2M Hill- Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L956125
Samples Received:	12/08/2017
Project Number:	684910.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DR.
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-10-120717 L956125-01 GW

Collected by: M. Warren | Collected date/time: 12/07/17 08:15 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1051410	1	12/12/17 07:45	12/12/17 07:45	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1051410	1	12/12/17 07:45	12/12/17 07:45	MCG
Wet Chemistry by Method 9056A	WG1051268	1	12/08/17 17:44	12/08/17 17:44	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052227	1	12/12/17 10:55	12/12/17 10:55	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 01:15	12/09/17 01:15	LRL

MW-02B-120717 L956125-02 GW

Collected by: M. Warren | Collected date/time: 12/07/17 08:30 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 01:35	12/09/17 01:35	LRL

MW-02-120717 L956125-03 GW

Collected by: M. Warren | Collected date/time: 12/07/17 08:35 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1051410	1	12/12/17 07:52	12/12/17 07:52	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1051410	1	12/12/17 07:52	12/12/17 07:52	MCG
Wet Chemistry by Method 9056A	WG1051268	1	12/08/17 18:41	12/08/17 18:41	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052227	1	12/12/17 11:02	12/12/17 11:02	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 01:54	12/09/17 01:54	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	10	12/09/17 22:42	12/09/17 22:42	BMB

MW-32-120717 L956125-04 GW

Collected by: M. Warren | Collected date/time: 12/07/17 08:50 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1051410	1	12/12/17 07:58	12/12/17 07:58	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1051410	1	12/12/17 07:58	12/12/17 07:58	MCG
Wet Chemistry by Method 9056A	WG1051268	1	12/08/17 18:55	12/08/17 18:55	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052227	1	12/12/17 11:12	12/12/17 11:12	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 02:13	12/09/17 02:13	LRL

MW-04-120717 L956125-05 GW

Collected by: M. Warren | Collected date/time: 12/07/17 09:05 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 02:32	12/09/17 02:32	LRL

MW-05-120717 L956125-06 GW

Collected by: M. Warren | Collected date/time: 12/07/17 09:15 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 02:51	12/09/17 02:51	LRL

MW-06-120717 L956125-07 GW

Collected by: M. Warren | Collected date/time: 12/07/17 09:25 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 03:11	12/09/17 03:11	LRL

MW-06B-D-120717 L956125-08 GW

Collected by: M. Warren | Collected date/time: 12/07/17 09:30 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 03:30	12/09/17 03:30	LRL

MW-06B-120717 L956125-09 GW

Collected by: M. Warren | Collected date/time: 12/07/17 09:40 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 03:49	12/09/17 03:49	LRL

MW-09B-120717 L956125-10 GW

Collected by: M. Warren | Collected date/time: 12/07/17 10:05 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 04:08	12/09/17 04:08	LRL

MW-09-120717 L956125-11 GW

Collected by: M. Warren | Collected date/time: 12/07/17 10:15 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1051410	1	12/12/17 08:03	12/12/17 08:03	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1051410	1	12/12/17 08:03	12/12/17 08:03	MCG
Wet Chemistry by Method 9056A	WG1051268	1	12/08/17 19:09	12/08/17 19:09	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052227	1	12/12/17 11:16	12/12/17 11:16	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 04:27	12/09/17 04:27	LRL

MW-08-120717 L956125-12 GW

Collected by: M. Warren | Collected date/time: 12/07/17 10:25 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1051410	1	12/12/17 08:09	12/12/17 08:09	MCG
Wet Chemistry by Method 4500CO2 D-2011	WG1051410	1	12/12/17 08:09	12/12/17 08:09	MCG
Wet Chemistry by Method 9056A	WG1051268	1	12/08/17 19:51	12/08/17 19:51	KCF
Volatile Organic Compounds (GC) by Method RSK175	WG1052227	1	12/12/17 11:18	12/12/17 11:18	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 04:46	12/09/17 04:46	LRL

MW-45B-120717 L956125-13 GW

Collected by: M. Warren | Collected date/time: 12/07/17 11:00 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 05:05	12/09/17 05:05	LRL

MW-21-120717 L956125-14 GW

Collected by: M. Warren | Collected date/time: 12/07/17 11:05 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 05:24	12/09/17 05:24	LRL

MW-17B-120717 L956125-15 GW

Collected by: M. Warren | Collected date/time: 12/07/17 11:15 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	10	12/09/17 05:44	12/09/17 05:44	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	100	12/09/17 23:02	12/09/17 23:02	BMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	500	12/12/17 19:10	12/12/17 19:10	BMB

MW-36-120717 L956125-16 GW

Collected by: M. Warren | Collected date/time: 12/07/17 11:35 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 06:03	12/09/17 06:03	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 23:22	12/09/17 23:22	BMB

MW-36B-120717 L956125-17 GW

Collected by: M. Warren | Collected date/time: 12/07/17 11:45 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 06:22	12/09/17 06:22	LRL

FB01-120717 L956125-18 GW

Collected by: M. Warren | Collected date/time: 12/07/17 12:10 | Received date/time: 12/08/17 08:45

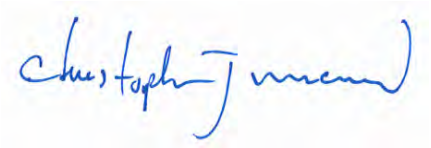
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 00:56	12/09/17 00:56	LRL

TB01-120717 L956125-19 GW

Collected by: M. Warren | Collected date/time: 12/07/17 12:15 | Received date/time: 12/08/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1051388	1	12/09/17 00:37	12/09/17 00:37	LRL

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



Chris McCord
Technical Service Representative

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/12/2017 07:45	WG1051410

Sample Narrative:
L956125-01 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	20400	T8	20000	1	12/12/2017 07:45	WG1051410

Sample Narrative:
L956125-01 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	111	P1	100	1	12/08/2017 17:44	WG1051268
Sulfate	ND		5000	1	12/08/2017 17:44	WG1051268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/12/2017 10:55	WG1052227
Ethane	ND		13.0	1	12/12/2017 10:55	WG1052227
Ethene	ND		13.0	1	12/12/2017 10:55	WG1052227

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 01:15	WG1051388
Toluene	ND		1.00	1	12/09/2017 01:15	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 01:15	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 01:15	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 01:15	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 01:15	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 01:15	WG1051388
(S) Toluene-d8	*97.7*		*80.0-120*		*12/09/2017 01:15*	WG1051388
(S) Dibromofluoromethane	*101*		*76.0-123*		*12/09/2017 01:15*	WG1051388
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*12/09/2017 01:15*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 01:35	WG1051388
Toluene	1.11		1.00	1	12/09/2017 01:35	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 01:35	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 01:35	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 01:35	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 01:35	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 01:35	WG1051388
(S) Toluene-d8	*92.8*		*80.0-120*		*12/09/2017 01:35*	WG1051388
(S) Dibromofluoromethane	*101*		*76.0-123*		*12/09/2017 01:35*	WG1051388
(S) 4-Bromofluorobenzene	*98.9*		*80.0-120*		*12/09/2017 01:35*	WG1051388

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	23000		20000	1	12/12/2017 07:52	WG1051410

Sample Narrative:
L956125-03 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/12/2017 07:52	WG1051410

Sample Narrative:
L956125-03 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/08/2017 18:41	WG1051268
Sulfate	ND		5000	1	12/08/2017 18:41	WG1051268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	25.8		10.0	1	12/12/2017 11:02	WG1052227
Ethane	ND		13.0	1	12/12/2017 11:02	WG1052227
Ethene	ND		13.0	1	12/12/2017 11:02	WG1052227

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	153		1.00	1	12/09/2017 01:54	WG1051388
Toluene	313		10.0	10	12/09/2017 22:42	WG1051388
Ethylbenzene	15.1		1.00	1	12/09/2017 01:54	WG1051388
Total Xylenes	441		30.0	10	12/09/2017 22:42	WG1051388
Methyl tert-butyl ether	70.9		1.00	1	12/09/2017 01:54	WG1051388
Naphthalene	12.8		5.00	1	12/09/2017 01:54	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 01:54	WG1051388
(S) Toluene-d8	*94.9*		*80.0-120*		*12/09/2017 01:54*	WG1051388
(S) Toluene-d8	*107*		*80.0-120*		*12/09/2017 22:42*	WG1051388
(S) Dibromofluoromethane	*99.6*		*76.0-123*		*12/09/2017 01:54*	WG1051388
(S) Dibromofluoromethane	*95.7*		*76.0-123*		*12/09/2017 22:42*	WG1051388
(S) 4-Bromofluorobenzene	*97.7*		*80.0-120*		*12/09/2017 01:54*	WG1051388
(S) 4-Bromofluorobenzene	*99.6*		*80.0-120*		*12/09/2017 22:42*	WG1051388

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/12/2017 07:58	WG1051410

Sample Narrative:
L956125-04 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/12/2017 07:58	WG1051410

Sample Narrative:
L956125-04 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	1620		100	1	12/08/2017 18:55	WG1051268
Sulfate	ND		5000	1	12/08/2017 18:55	WG1051268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/12/2017 11:12	WG1052227
Ethane	ND		13.0	1	12/12/2017 11:12	WG1052227
Ethene	ND		13.0	1	12/12/2017 11:12	WG1052227

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 02:13	WG1051388
Toluene	ND		1.00	1	12/09/2017 02:13	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 02:13	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 02:13	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 02:13	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 02:13	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 02:13	WG1051388
(S) Toluene-d8	*96.9*		*80.0-120*		*12/09/2017 02:13*	WG1051388
(S) Dibromofluoromethane	*96.1*		*76.0-123*		*12/09/2017 02:13*	WG1051388
(S) 4-Bromofluorobenzene	*98.5*		*80.0-120*		*12/09/2017 02:13*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 02:32	WG1051388
Toluene	ND		1.00	1	12/09/2017 02:32	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 02:32	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 02:32	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 02:32	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 02:32	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 02:32	WG1051388
(S) Toluene-d8	*95.3*		*80.0-120*		*12/09/2017 02:32*	WG1051388
(S) Dibromofluoromethane	*99.3*		*76.0-123*		*12/09/2017 02:32*	WG1051388
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*12/09/2017 02:32*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 02:51	WG1051388
Toluene	ND		1.00	1	12/09/2017 02:51	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 02:51	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 02:51	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 02:51	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 02:51	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 02:51	WG1051388
(S) Toluene-d8	*93.8*		*80.0-120*		*12/09/2017 02:51*	WG1051388
(S) Dibromofluoromethane	*99.4*		*76.0-123*		*12/09/2017 02:51*	WG1051388
(S) 4-Bromofluorobenzene	*99.4*		*80.0-120*		*12/09/2017 02:51*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 03:11	WG1051388
Toluene	ND		1.00	1	12/09/2017 03:11	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 03:11	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 03:11	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 03:11	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 03:11	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 03:11	WG1051388
(S) Toluene-d8	*96.3*		*80.0-120*		*12/09/2017 03:11*	WG1051388
(S) Dibromofluoromethane	*100*		*76.0-123*		*12/09/2017 03:11*	WG1051388
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*12/09/2017 03:11*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 03:30	WG1051388
Toluene	1.82		1.00	1	12/09/2017 03:30	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 03:30	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 03:30	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 03:30	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 03:30	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 03:30	WG1051388
(S) Toluene-d8	*94.2*		*80.0-120*		*12/09/2017 03:30*	WG1051388
(S) Dibromofluoromethane	*99.2*		*76.0-123*		*12/09/2017 03:30*	WG1051388
(S) 4-Bromofluorobenzene	*99.9*		*80.0-120*		*12/09/2017 03:30*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/09/2017 03:49	WG1051388
Toluene	ND		1.00	1	12/09/2017 03:49	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 03:49	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 03:49	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 03:49	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 03:49	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 03:49	WG1051388
(S) Toluene-d8	*119*		*80.0-120*		*12/09/2017 03:49*	WG1051388
(S) Dibromofluoromethane	*92.1*		*76.0-123*		*12/09/2017 03:49*	WG1051388
(S) 4-Bromofluorobenzene	*246*	J1	*80.0-120*		*12/09/2017 03:49*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	21.8		1.00	1	12/09/2017 04:08	WG1051388
Toluene	82.1		1.00	1	12/09/2017 04:08	WG1051388
Ethylbenzene	24.7		1.00	1	12/09/2017 04:08	WG1051388
Total Xylenes	179		3.00	1	12/09/2017 04:08	WG1051388
Methyl tert-butyl ether	4.72		1.00	1	12/09/2017 04:08	WG1051388
Naphthalene	11.9		5.00	1	12/09/2017 04:08	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 04:08	WG1051388
(S) Toluene-d8	*97.0*		*80.0-120*		*12/09/2017 04:08*	WG1051388
(S) Dibromofluoromethane	*76.0*		*76.0-123*		*12/09/2017 04:08*	WG1051388
(S) 4-Bromofluorobenzene	*94.7*		*80.0-120*		*12/09/2017 04:08*	WG1051388

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	31600		20000	1	12/12/2017 08:03	WG1051410

Sample Narrative:
L956125-11 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/12/2017 08:03	WG1051410

Sample Narrative:
L956125-11 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/08/2017 19:09	WG1051268
Sulfate	ND		5000	1	12/08/2017 19:09	WG1051268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	41.4		10.0	1	12/12/2017 11:16	WG1052227
Ethane	ND		13.0	1	12/12/2017 11:16	WG1052227
Ethene	ND		13.0	1	12/12/2017 11:16	WG1052227

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	54.3		1.00	1	12/09/2017 04:27	WG1051388
Toluene	19.6		1.00	1	12/09/2017 04:27	WG1051388
Ethylbenzene	3.44		1.00	1	12/09/2017 04:27	WG1051388
Total Xylenes	64.8		3.00	1	12/09/2017 04:27	WG1051388
Methyl tert-butyl ether	27.5		1.00	1	12/09/2017 04:27	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 04:27	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 04:27	WG1051388
(S) Toluene-d8	*95.8*		*80.0-120*		*12/09/2017 04:27*	WG1051388
(S) Dibromofluoromethane	*97.1*		*76.0-123*		*12/09/2017 04:27*	WG1051388
(S) 4-Bromofluorobenzene	*98.5*		*80.0-120*		*12/09/2017 04:27*	WG1051388

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/12/2017 08:09	WG1051410

Sample Narrative:
L956125-12 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/12/2017 08:09	WG1051410

Sample Narrative:
L956125-12 WG1051410: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/08/2017 19:51	WG1051268
Sulfate	ND		5000	1	12/08/2017 19:51	WG1051268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/12/2017 11:18	WG1052227
Ethane	ND		13.0	1	12/12/2017 11:18	WG1052227
Ethene	ND		13.0	1	12/12/2017 11:18	WG1052227

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 04:46	WG1051388
Toluene	ND		1.00	1	12/09/2017 04:46	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 04:46	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 04:46	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 04:46	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 04:46	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 04:46	WG1051388
(S) Toluene-d8	*95.8*		*80.0-120*		*12/09/2017 04:46*	WG1051388
(S) Dibromofluoromethane	*96.4*		*76.0-123*		*12/09/2017 04:46*	WG1051388
(S) 4-Bromofluorobenzene	*98.1*		*80.0-120*		*12/09/2017 04:46*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 05:05	WG1051388
Toluene	3.26		1.00	1	12/09/2017 05:05	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 05:05	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 05:05	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 05:05	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 05:05	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 05:05	WG1051388
(S) Toluene-d8	*96.1*		*80.0-120*		*12/09/2017 05:05*	WG1051388
(S) Dibromofluoromethane	*97.3*		*76.0-123*		*12/09/2017 05:05*	WG1051388
(S) 4-Bromofluorobenzene	*99.0*		*80.0-120*		*12/09/2017 05:05*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 05:24	WG1051388
Toluene	ND		1.00	1	12/09/2017 05:24	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 05:24	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 05:24	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 05:24	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 05:24	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 05:24	WG1051388
(S) Toluene-d8	*96.3*		*80.0-120*		*12/09/2017 05:24*	WG1051388
(S) Dibromofluoromethane	*101*		*76.0-123*		*12/09/2017 05:24*	WG1051388
(S) 4-Bromofluorobenzene	*98.7*		*80.0-120*		*12/09/2017 05:24*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	10600		100	100	12/09/2017 23:02	WG1051388
Toluene	14900		500	500	12/12/2017 19:10	WG1051388
Ethylbenzene	1060		10.0	10	12/09/2017 05:44	WG1051388
Total Xylenes	9210		300	100	12/09/2017 23:02	WG1051388
Methyl tert-butyl ether	1140		10.0	10	12/09/2017 05:44	WG1051388
Naphthalene	178		50.0	10	12/09/2017 05:44	WG1051388
1,2-Dichloroethane	ND		10.0	10	12/09/2017 05:44	WG1051388
(S) Toluene-d8	*93.5*		*80.0-120*		*12/09/2017 05:44*	WG1051388
(S) Toluene-d8	*106*		*80.0-120*		*12/09/2017 23:02*	WG1051388
(S) Toluene-d8	*104*		*80.0-120*		*12/12/2017 19:10*	WG1051388
(S) Dibromofluoromethane	*105*		*76.0-123*		*12/12/2017 19:10*	WG1051388
(S) Dibromofluoromethane	*99.9*		*76.0-123*		*12/09/2017 05:44*	WG1051388
(S) Dibromofluoromethane	*94.8*		*76.0-123*		*12/09/2017 23:02*	WG1051388
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*12/12/2017 19:10*	WG1051388
(S) 4-Bromofluorobenzene	*96.8*		*80.0-120*		*12/09/2017 05:44*	WG1051388
(S) 4-Bromofluorobenzene	*99.8*		*80.0-120*		*12/09/2017 23:02*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	17.5		1.00	1	12/09/2017 23:22	WG1051388
Toluene	30.2		1.00	1	12/09/2017 23:22	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 06:03	WG1051388
Total Xylenes	14.4		3.00	1	12/09/2017 23:22	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 06:03	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 06:03	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 06:03	WG1051388
(S) Toluene-d8	*95.4*		*80.0-120*		*12/09/2017 06:03*	WG1051388
(S) Toluene-d8	*106*		*80.0-120*		*12/09/2017 23:22*	WG1051388
(S) Dibromofluoromethane	*93.5*		*76.0-123*		*12/09/2017 23:22*	WG1051388
(S) Dibromofluoromethane	*96.3*		*76.0-123*		*12/09/2017 06:03*	WG1051388
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*12/09/2017 06:03*	WG1051388
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*12/09/2017 23:22*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/09/2017 06:22	WG1051388
Toluene	ND		1.00	1	12/09/2017 06:22	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 06:22	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 06:22	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 06:22	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 06:22	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 06:22	WG1051388
(S) Toluene-d8	*95.3*		*80.0-120*		*12/09/2017 06:22*	WG1051388
(S) Dibromofluoromethane	*98.5*		*76.0-123*		*12/09/2017 06:22*	WG1051388
(S) 4-Bromofluorobenzene	*100*		*80.0-120*		*12/09/2017 06:22*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 00:56	WG1051388
Toluene	ND		1.00	1	12/09/2017 00:56	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 00:56	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 00:56	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 00:56	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 00:56	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 00:56	WG1051388
(S) Toluene-d8	*93.7*		*80.0-120*		*12/09/2017 00:56*	WG1051388
(S) Dibromofluoromethane	*103*		*76.0-123*		*12/09/2017 00:56*	WG1051388
(S) 4-Bromofluorobenzene	*98.0*		*80.0-120*		*12/09/2017 00:56*	WG1051388

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2017 00:37	WG1051388
Toluene	ND		1.00	1	12/09/2017 00:37	WG1051388
Ethylbenzene	ND		1.00	1	12/09/2017 00:37	WG1051388
Total Xylenes	ND		3.00	1	12/09/2017 00:37	WG1051388
Methyl tert-butyl ether	ND		1.00	1	12/09/2017 00:37	WG1051388
Naphthalene	ND		5.00	1	12/09/2017 00:37	WG1051388
1,2-Dichloroethane	ND		1.00	1	12/09/2017 00:37	WG1051388
(S) Toluene-d8	*93.9*		*80.0-120*		*12/09/2017 00:37*	WG1051388
(S) Dibromofluoromethane	*103*		*76.0-123*		*12/09/2017 00:37*	WG1051388
(S) 4-Bromofluorobenzene	*98.2*		*80.0-120*		*12/09/2017 00:37*	WG1051388

L956126-01 Original Sample (OS) • Duplicate (DUP)

(OS) L956126-01 12/11/17 19:49 • (DUP) R3272155-1 12/11/17 19:56

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	164000	158000	1	3.68		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

L955570-01 Original Sample (OS) • Duplicate (DUP)

(OS) L955570-01 12/12/17 08:31 • (DUP) R3272155-5 12/12/17 08:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	137000	139000	1	1.30		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3272155-2 12/11/17 20:02 • (LCSD) R3272155-3 12/12/17 07:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Alkalinity	100000	103000	105000	103	105	85.0-115			2.74	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

L956126-01 Original Sample (OS) • Duplicate (DUP)

(OS) L956126-01 12/11/17 19:49 • (DUP) R3272155-6 12/11/17 19:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	U	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3271611-1 12/08/17 07:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

L956118-03 Original Sample (OS) • Duplicate (DUP)

(OS) L956118-03 12/08/17 16:05 • (DUP) R3271611-4 12/08/17 16:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	U	0.000	1	0		15
Sulfate	1430	1420	1	1	J	15

L956125-01 Original Sample (OS) • Duplicate (DUP)

(OS) L956125-01 12/08/17 17:44 • (DUP) R3271611-6 12/08/17 17:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	111	205	1	59	P1	15
Sulfate	ND	228	1	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3271611-2 12/08/17 07:15 • (LCSD) R3271611-3 12/08/17 07:29

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Nitrate	8000	8430	8380	105	105	80-120			1	15
Sulfate	40000	40800	40400	102	101	80-120			1	15

L956118-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L956118-03 12/08/17 16:05 • (MS) R3271611-5 12/08/17 17:02

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Nitrate	5000	U	3110	62	1	80-120	J6
Sulfate	50000	1430	33500	64	1	80-120	J6

L956125-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L956125-01 12/08/17 17:44 • (MS) R3271611-7 12/08/17 18:12 • (MSD) R3271611-8 12/08/17 18:26

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5000	111	5070	5280	99	103	1	80-120			4	15
Sulfate	50000	ND	54100	53700	108	107	1	80-120			1	15

Method Blank (MB)

(MB) R3272222-1 12/12/17 08:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L956095-01 Original Sample (OS) • Duplicate (DUP)

(OS) L956095-01 12/12/17 10:01 • (DUP) R3272222-2 12/12/17 11:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	5090	5020	1	1.45		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L956278-03 Original Sample (OS) • Duplicate (DUP)

(OS) L956278-03 12/12/17 11:27 • (DUP) R3272222-3 12/12/17 11:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3272222-4 12/12/17 11:54 • (LCSD) R3272222-5 12/12/17 12:17

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	71.5	72.8	105	107	85.0-115			1.80	20
Ethane	129	112	112	87.0	86.6	85.0-115			0.519	20
Ethene	127	114	113	90.0	89.4	85.0-115			0.677	20

Method Blank (MB)

(MB) R3271630-2 12/09/17 00:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*97.1*			*80.0-120*
(S) Dibromofluoromethane	*103*			*76.0-123*
(S) 4-Bromofluorobenzene	*101*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3271630-1 12/08/17 23:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	23.5	93.9	70.0-130	
1,2-Dichloroethane	25.0	25.4	102	70.0-130	
Ethylbenzene	25.0	24.3	97.1	70.0-130	
Methyl tert-butyl ether	25.0	24.2	96.9	70.0-130	
Naphthalene	25.0	21.8	87.0	70.0-130	
Toluene	25.0	22.1	88.4	70.0-130	
Xylenes, Total	75.0	71.1	94.8	70.0-130	
(S) Toluene-d8			*96.7*	*80.0-120*	
(S) Dibromofluoromethane			*100*	*76.0-123*	
(S) 4-Bromofluorobenzene			*97.8*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

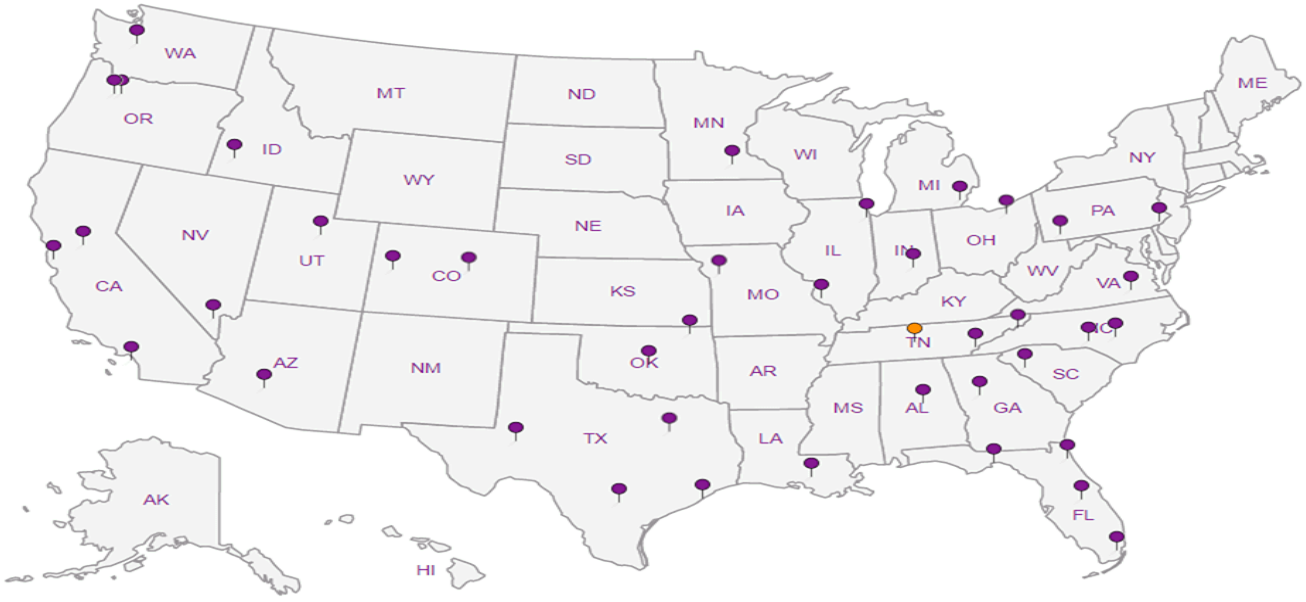
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): M. WARREN

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N X Y ___

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA		Remarks	Sample # (lab only)
MW-10-120717	GRAB	GW	N/A	12/07/17	0815	7		X	X	X	X		X	X	X	X			01
MW-02B-120717		GW			0830	3					X		X	X	X	X			02
MW-02-120717		GW			0835	7		X	X	X	X		X	X	X	X			03
MW-32-120717		GW			0850	7		X	X	X	X		X	X	X	X			04
MW-04-120717		GW			0905	3					X		X	X	X	X			05
MW-05-120717		GW			0915	3													06
MW-06-120717		GW			0925	3													07
MW-06B-D-120717		GW			0930	3													08
MW-06B-120717		GW			0940	3													09
MW-09B-120717		GW			1005	3													10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 4142 5221 2797

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 956125

H060

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P627788
TSR: 526 - Chris McCord
PB: 11-22-17G

Shipped Via: FedEX Ground

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/07/17	1330	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No HCL / MeoH TBR

Temp: 1.4 °C Bottles Received: 74

Date: 12-8-17 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

2082

CH2M Hill- Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 684910.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARLEN

Site/Facility ID # LEWIS DR.

P.O. #

Collected by (signature):

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260BTEXMNSC 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA			Remarks	Sample # (lab only)
MW-09-120717	GRAB	GW	N/A	12/07/17	1015	7	X	X	X	X		X	X	X	X				-11
MW-08-120717		GW			1025	7	X	X	X	X		X	X	X	X				-12
MW-45B-120717		GW			1100	3				X		X	X	X	X				-13
MW-21-120717		GW			1105	3				X		X	X	X	X				-14
MW-17B-120717		GW			1115	3				X		X	X	X	X				-15
MW-36-120717		GW			1135	3				X		X	X	X	X				-16
MW-36B-120717		GW			1145	3				X		X	X	X	X				-17
FB01-120717		GW			~~1207~~ 1210	3					X	X	X	X	X				-18
TB01-120717		GW			1215	1					X								-19
		GW																	

Chain of Custody Page ___ of ___

ESC LABORATORIES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 456125

Table #

Acctnum: KINCH2MGA

Template: T130277

Prelogin: P627788

TSR: 526 - Chris McCord

PB: 11-22-17G

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS X FedEx __ Courier __ _____

Tracking # 4142 5221 2797

Sample Receipt Checklist
COC Seal Present/Intact: NP / Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/07/17	1330	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			12-8-17 8:45

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.4°C Bottles Received: 74

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Attachment C
Operation and Maintenance Logs

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
10/4/2017 1100	Scott Shiloh	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No	—	Calhoun Rd, Hayfield + Brown's Creek
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		OK
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		OK
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		check filtered water at drain, OK
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		OK
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	(Yes) / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	(Yes) / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	(Yes) / No	Yes / No		
Calibrate EAD	Annually	(Yes) / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: Air Monitoring Calhoun Rd Sparge Area:
1025, before flow increases - 0% LEL 0.0-5.0 ppm. Detections near RW-11 and AW20. Minor odors. 1220, after flow increases 0.0-5.0 ppm. Detections in same areas and odors minor. 1615, 0% LEL and 0.0 ppm

2/Hour after restarting @ 0.07 scfm Hg.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/9/2017 1100 1250 1545	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	3530:24	3535:00
Air Compressor 1 Load Time	(hours)	NA	NA	1584:54	1586:04
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	184	187
Air Compressor 1 Pressure	(psig)	90 - 110	100	103	111
Air Compressor 2 Run Time	(hours)	NA	NA	1453:08 - not operating	✓
Air Compressor 2 Load Time	(hours)	NA	NA	944:17 - not operating	✓
Air Compressor 2 Temp	(F)	60 - 100	110	—	✓
Air Compressor 2 Pressure	(psig)	90 - 110	100	—	✓
Receiver Tank Pressure	(psig)	90 - 110	100	103	113
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	94	110
Manifold Temperature	(F)	60 - 100	110	71	83
Manifold Flow Rate	(scfm)	TBD	TBD	62.79	222.9
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	Not Operating 37.5	37.5
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	-monitoring well 49.7	32.6
HAS-1 Valve Position	(%)	TBD	TBD	flushed 14.3	5.0
HAS-1 Pressure	(psig)	10 - 20	30	20	19
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	36.0	36.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	38.9	35.1
HAS-2 Valve Position	(%)	TBD	TBD	5.1	5.0
HAS-2 Pressure	(psig)	10 - 20	30	19	18
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	19.0	19.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	19.6	18.5
HAS-3 Valve Position	(%)	TBD	TBD	0.2	0.5
HAS-3 Pressure	(psig)	10 - 20	30	15	19

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

All on manual, ~ 1 hour after increasing flows

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/9/2017 1100 1550 1515	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival		Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	5.0	5.2	Not operating
VAS-01 Pressure	(psig)	10 - 20	30	16	16	
VAS-02 Flow Rate	(scfm)	TBD	TBD	4.2	5.5	
VAS-02 Pressure	(psig)	10 - 20	30	16	16	
VAS-03 Flow Rate	(scfm)	TBD	TBD	4.3	5.1	
VAS-03 Pressure	(psig)	10 - 20	30	1	1	
VAS-04 Flow Rate	(scfm)	TBD	TBD	0.1	1.1	
VAS-04 Pressure	(psig)	10 - 20	30	0	0	
VAS-05 Flow Rate	(scfm)	TBD	TBD	2.3	3.8	
VAS-05 Pressure	(psig)	10 - 20	30	0	0	
VAS-06 Flow Rate	(scfm)	TBD	TBD	3.5	4.8	
VAS-06 Pressure	(psig)	10 - 20	30	1	2	
VAS-07 Flow Rate	(scfm)	TBD	TBD	3.8	5.0	
VAS-07 Pressure	(psig)	10 - 20	30	6	7	
VAS-08 Flow Rate	(scfm)	TBD	TBD	3.9	5.3	
VAS-08 Pressure	(psig)	10 - 20	30	6	10	
VAS-09 Flow Rate	(scfm)	TBD	TBD	4.1	6.0	
VAS-09 Pressure	(psig)	10 - 20	30	0	2	
VAS-10 Flow Rate	(scfm)	TBD	TBD	5.1	5.0	
VAS-10 Pressure	(psig)	10 - 20	30	5	5	
VAS-11 Flow Rate	(scfm)	TBD	TBD	Not operating	5.2	5.2
VAS-11 Pressure	(psig)	10 - 20	30		10	8
VAS-12 Flow Rate	(scfm)	TBD	TBD		5.3	5.2
VAS-12 Pressure	(psig)	10 - 20	30		7	6
VAS-13 Flow Rate	(scfm)	TBD	TBD		5.3	5.2
VAS-13 Pressure	(psig)	10 - 20	30		7	5
VAS-14 Flow Rate	(scfm)	TBD	TBD		5.0	5.1
VAS-14 Pressure	(psig)	10 - 20	30		4	3
VAS-15 Flow Rate	(scfm)	TBD	TBD		5.2	5.1
VAS-15 Pressure	(psig)	10 - 20	30		4	3
VAS-16 Flow Rate	(scfm)	TBD	TBD		4.9	4.9
VAS-16 Pressure	(psig)	10 - 20	30		8	5
VAS-17 Flow Rate	(scfm)	TBD	TBD		4.9	5.0
VAS-17 Pressure	(psig)	10 - 20	30		7	3

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/9/2017 1100 1250 1545	Scott Smida	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	6.0 5.6	Not Operating
VAS-18 Pressure	(psig)	10 - 20	30	0 0	—
VAS-19 Flow Rate	(scfm)	TBD	TBD	Not Operating 5.7	6.1
VAS-19 Pressure	(psig)	10 - 20	30	11	10
VAS-20 Flow Rate	(scfm)	TBD	TBD		5.6
VAS-20 Pressure	(psig)	10 - 20	30		15
VAS-21 Flow Rate	(scfm)	TBD	TBD		4.8
VAS-21 Pressure	(psig)	10 - 20	30		19
VAS-22 Flow Rate	(scfm)	TBD	TBD		6.0
VAS-22 Pressure	(psig)	10 - 20	30		22
VAS-23 Flow Rate	(scfm)	TBD	TBD		5.7
VAS-23 Pressure	(psig)	10 - 20	30		20
VAS-24 Flow Rate	(scfm)	TBD	TBD		6.4
VAS-24 Pressure	(psig)	10 - 20	30		27
VAS-25 Flow Rate	(scfm)	TBD	TBD		5.2
VAS-25 Pressure	(psig)	10 - 20	30		22
VAS-26 Flow Rate	(scfm)	TBD	TBD		3.9
VAS-26 Pressure	(psig)	10 - 20	30		24
VAS-27 Flow Rate	(scfm)	TBD	TBD		4.3
VAS-27 Pressure	(psig)	10 - 20	30		29
VAS-28 Flow Rate	(scfm)	TBD	TBD		3.6
VAS-28 Pressure	(psig)	10 - 20	30		8
VAS-29 Flow Rate	(scfm)	TBD	TBD		5.0
VAS-29 Pressure	(psig)	10 - 20	30		8
VAS-30 Flow Rate	(scfm)	TBD	TBD		3.9
VAS-30 Pressure	(psig)	10 - 20	30		0
VAS-31 Flow Rate	(scfm)	TBD	TBD		3.9
VAS-31 Pressure	(psig)	10 - 20	30		20
VAS-32 Flow Rate	(scfm)	TBD	TBD		Not Operating
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD		
VAS-33 Pressure	(psig)	10 - 20	30		
VAS-34 Flow Rate	(scfm)	TBD	TBD		
VAS-34 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/9/2017 1100 1545	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	Not Operating	
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	5.5	
VAS-41 Pressure	(psig)	20-Oct	30	3	
VAS-42 Flow Rate	(scfm)	TBD	TBD	Not Operating	
VAS-42 Pressure	(psig)	10 - 20	30		
VAS-43 Flow Rate	(scfm)	TBD	TBD	1.6	
VAS-43 Pressure	(psig)	10 - 20	30	33	
VAS-44 Flow Rate	(scfm)	TBD	TBD	5.7	
VAS-44 Pressure	(psig)	10 - 20	30	32	
VAS-45 Flow Rate	(scfm)	TBD	TBD	4.3	
VAS-45 Pressure	(psig)	10 - 20	30	4	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	4.9	4.4
BCA-01 Pressure	(psig)	0 - 5	5	5	5
BCA-02 Flow Rate	(scfm)	TBD	TBD	5.3	4.8
BCA-02 Pressure	(psig)	0 - 5	5	5	5
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Not Operating

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
10/18/2017 0915 1615	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		2.0 ppm (near MW28) 0.6% LEL
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No	cathcart creek area	6.0 ppm between RW12 + MW20. 0.0% LEL
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No	Ok	
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: RED ink = Not Operating

solenoid valves found sticking open. Tap on valve body closes them. Will continue to monitor. Disassemble and clean if found to be persistent issue.

Not Operating - Red Ink

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/18/2017 0915 1615	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	3744:34	3745:49
Air Compressor 1 Load Time	(hours)	NA	NA	1634:50	1635:18
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	186	—
Air Compressor 1 Pressure	(psig)	90 - 110	100	112	—
Air Compressor 2 Run Time	(hours)	NA	NA	1453:08	1458:49
Air Compressor 2 Load Time	(hours)	NA	NA	844:17	846:56
Air Compressor 2 Temp	(F)	60 - 100	110	—	184
Air Compressor 2 Pressure	(psig)	90 - 110	100	—	112
Receiver Tank Pressure	(psig)	90 - 110	100	114	115
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	100	110
Manifold Temperature	(F)	60 - 100	110	58	71
Manifold Flow Rate	(scfm)	TBD	TBD	321.6	470.3
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	37.5	112.5
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	37.8	115.1
HAS-1 Valve Position	(%)	TBD	TBD	2.5	10.7
HAS-1 Pressure	(psig)	10 - 20	30	16	19
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	36.0	107.5
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	32.3	104.8
HAS-2 Valve Position	(%)	TBD	TBD	5.0	10.5
HAS-2 Pressure	(psig)	10 - 20	30	18	22
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	19.0	56.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	19.1	70.1
HAS-3 Valve Position	(%)	TBD	TBD	3.6	55.3
HAS-3 Pressure	(psig)	10 - 20	30	15	15

Parts Needed:	(8) 4" pipe nipples for Group 7 manifold
Parts Installed:	auxiliary combiner AC#2

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/18/2017 1615	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	4.7	
VAS-01 Pressure	(psig)	10 - 20	30	18.5	
VAS-02 Flow Rate	(scfm)	TBD	TBD	6.1	
VAS-02 Pressure	(psig)	10 - 20	30	9	
VAS-03 Flow Rate	(scfm)	TBD	TBD	5.9	
VAS-03 Pressure	(psig)	10 - 20	30	4	
VAS-04 Flow Rate	(scfm)	TBD	TBD	3.0	
VAS-04 Pressure	(psig)	10 - 20	30	0	
VAS-05 Flow Rate	(scfm)	TBD	TBD	5.9	
VAS-05 Pressure	(psig)	10 - 20	30	2	
VAS-06 Flow Rate	(scfm)	TBD	TBD	5.8	
VAS-06 Pressure	(psig)	10 - 20	30	3	
VAS-07 Flow Rate	(scfm)	TBD	TBD	5.7	
VAS-07 Pressure	(psig)	10 - 20	30	10.5	
VAS-08 Flow Rate	(scfm)	TBD	TBD	6.0	
VAS-08 Pressure	(psig)	10 - 20	30	11	
VAS-09 Flow Rate	(scfm)	TBD	TBD	5.3	
VAS-09 Pressure	(psig)	10 - 20	30	3	
VAS-10 Flow Rate	(scfm)	TBD	TBD	5.5	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD		5.9
VAS-11 Pressure	(psig)	10 - 20	30		10
VAS-12 Flow Rate	(scfm)	TBD	TBD		5.8
VAS-12 Pressure	(psig)	10 - 20	30		8
VAS-13 Flow Rate	(scfm)	TBD	TBD		6.2
VAS-13 Pressure	(psig)	10 - 20	30		8
VAS-14 Flow Rate	(scfm)	TBD	TBD		6.2
VAS-14 Pressure	(psig)	10 - 20	30		5
VAS-15 Flow Rate	(scfm)	TBD	TBD		6.1
VAS-15 Pressure	(psig)	10 - 20	30		3
VAS-16 Flow Rate	(scfm)	TBD	TBD		6.0
VAS-16 Pressure	(psig)	10 - 20	30		7
VAS-17 Flow Rate	(scfm)	TBD	TBD		6.0
VAS-17 Pressure	(psig)	10 - 20	30		6

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/18/2017 0915 1615	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	6.0	
VAS-18 Pressure	(psig)	10 - 20	30	9	
VAS-19 Flow Rate	(scfm)	TBD	TBD		6.4
VAS-19 Pressure	(psig)	10 - 20	30		10
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD		
VAS-22 Pressure	(psig)	10 - 20	30		
VAS-23 Flow Rate	(scfm)	TBD	TBD		
VAS-23 Pressure	(psig)	10 - 20	30		
VAS-24 Flow Rate	(scfm)	TBD	TBD		
VAS-24 Pressure	(psig)	10 - 20	30		
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	4.1	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	5.5	
VAS-33 Pressure	(psig)	10 - 20	30	25	
VAS-34 Flow Rate	(scfm)	TBD	TBD	5.8	
VAS-34 Pressure	(psig)	10 - 20	30	24	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/18/2017 0915 1615	Scott Shiloh	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	5.0	
VAS-35 Pressure	(psig)	10 - 20	30	18	
VAS-36 Flow Rate	(scfm)	TBD	TBD	6.3	
VAS-36 Pressure	(psig)	10 - 20	30	13	
VAS-37 Flow Rate	(scfm)	TBD	TBD	5.9	
VAS-37 Pressure	(psig)	10 - 20	30	5	
VAS-38 Flow Rate	(scfm)	TBD	TBD	4.8	
VAS-38 Pressure	(psig)	10 - 20	30	6	
VAS-39 Flow Rate	(scfm)	TBD	TBD	6.0	
VAS-39 Pressure	(psig)	10 - 20	30	12	
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.5	
VAS-40 Pressure	(psig)	10 - 20	30	23	
VAS-41 Flow Rate	(scfm)	TBD	TBD		6.0
VAS-41 Pressure	(psig)	20-Oct	30		3
VAS-42 Flow Rate	(scfm)	TBD	TBD	5.4	
VAS-42 Pressure	(psig)	10 - 20	30	9.5	
VAS-43 Flow Rate	(scfm)	TBD	TBD		3.7
VAS-43 Pressure	(psig)	10 - 20	30		34
VAS-44 Flow Rate	(scfm)	TBD	TBD		6.2
VAS-44 Pressure	(psig)	10 - 20	30		32
VAS-45 Flow Rate	(scfm)	TBD	TBD		5.9
VAS-45 Pressure	(psig)	10 - 20	30		5
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	4.9	6.2
BCA-01 Pressure	(psig)	0 - 5	5	7	6
BCA-02 Flow Rate	(scfm)	TBD	TBD	4.1	5.9
BCA-02 Pressure	(psig)	0 - 5	5	6	6
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
10/24/2017 0915	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No	+ Air Monitoring for Lewis	See field book
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		Insulated outdoor drain lines.
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: 0

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/24/2017 0915 1600	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA		3750:20
Air Compressor 1 Load Time	(hours)	NA	NA		1638:50
Air Compressor 1 Discharge Temp	(F)	60 - 100	110		187
Air Compressor 1 Pressure	(psig)	90 - 110	100		111
Air Compressor 2 Run Time	(hours)	NA	NA	1595:53	1598:09
Air Compressor 2 Load Time	(hours)	NA	NA	954:00	956:16
Air Compressor 2 Temp	(F)	60 - 100	110	179	—
Air Compressor 2 Pressure	(psig)	90 - 110	100	25	—
Receiver Tank Pressure	(psig)	90 - 110	100	32	115
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	25	111
Manifold Temperature	(F)	60 - 100	110	62	80
Manifold Flow Rate	(scfm)	TBD	TBD	499.2	559.7
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	112.5	150.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	112.2	154.1
HAS-1 Valve Position	(%)	TBD	TBD	7.7	11.5
HAS-1 Pressure	(psig)	10 - 20	30	17	18
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	167.5	143.5
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	167.4	145.8
HAS-2 Valve Position	(%)	TBD	TBD	11.0	11.4
HAS-2 Pressure	(psig)	10 - 20	30	20	22
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	56.5	75.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	57.4	50.6
HAS-3 Valve Position	(%)	TBD	TBD	6.8	27.6
HAS-3 Pressure	(psig)	10 - 20	30	15	16

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Red, not operating at time of data collection.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/24/2017 0915 1600	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	6.4	
VAS-01 Pressure	(psig)	10 - 20	30	16	
VAS-02 Flow Rate	(scfm)	TBD	TBD	3.3	
VAS-02 Pressure	(psig)	10 - 20	30	13	
VAS-03 Flow Rate	(scfm)	TBD	TBD	6.1	
VAS-03 Pressure	(psig)	10 - 20	30	2	
VAS-04 Flow Rate	(scfm)	TBD	TBD	4.2	
VAS-04 Pressure	(psig)	10 - 20	30	1	
VAS-05 Flow Rate	(scfm)	TBD	TBD	5.0	
VAS-05 Pressure	(psig)	10 - 20	30	1	
VAS-06 Flow Rate	(scfm)	TBD	TBD	6.7	
VAS-06 Pressure	(psig)	10 - 20	30	4	
VAS-07 Flow Rate	(scfm)	TBD	TBD	6.2	
VAS-07 Pressure	(psig)	10 - 20	30	1	
VAS-08 Flow Rate	(scfm)	TBD	TBD	6.2	
VAS-08 Pressure	(psig)	10 - 20	30	10	
VAS-09 Flow Rate	(scfm)	TBD	TBD	6.0	
VAS-09 Pressure	(psig)	10 - 20	30	2	
VAS-10 Flow Rate	(scfm)	TBD	TBD	7.3	
VAS-10 Pressure	(psig)	10 - 20	30	7	
VAS-11 Flow Rate	(scfm)	TBD	TBD		6.9
VAS-11 Pressure	(psig)	10 - 20	30		10
VAS-12 Flow Rate	(scfm)	TBD	TBD		7.3
VAS-12 Pressure	(psig)	10 - 20	30		9
VAS-13 Flow Rate	(scfm)	TBD	TBD		7.4
VAS-13 Pressure	(psig)	10 - 20	30		10
VAS-14 Flow Rate	(scfm)	TBD	TBD		6.7
VAS-14 Pressure	(psig)	10 - 20	30		5
VAS-15 Flow Rate	(scfm)	TBD	TBD		6.5
VAS-15 Pressure	(psig)	10 - 20	30		5
VAS-16 Flow Rate	(scfm)	TBD	TBD		7.4
VAS-16 Pressure	(psig)	10 - 20	30		9
VAS-17 Flow Rate	(scfm)	TBD	TBD		7.2
VAS-17 Pressure	(psig)	10 - 20	30		8

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/29/2017 0915 1600	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	7.4	↓
VAS-18 Pressure	(psig)	10 - 20	30	0	↓
VAS-19 Flow Rate	(scfm)	TBD	TBD	↓	8.1
VAS-19 Pressure	(psig)	10 - 20	30	↓	11
VAS-20 Flow Rate	(scfm)	TBD	TBD	5.0	↓
VAS-20 Pressure	(psig)	10 - 20	30	18	↓
VAS-21 Flow Rate	(scfm)	TBD	TBD	5.7	↓
VAS-21 Pressure	(psig)	10 - 20	30	19	↓
VAS-22 Flow Rate	(scfm)	TBD	TBD	3.4	↓
VAS-22 Pressure	(psig)	10 - 20	30	23	↓
VAS-23 Flow Rate	(scfm)	TBD	TBD	5.5	↓
VAS-23 Pressure	(psig)	10 - 20	30	22	↓
VAS-24 Flow Rate	(scfm)	TBD	TBD	2.9	↓
VAS-24 Pressure	(psig)	10 - 20	30	26	↓
VAS-25 Flow Rate	(scfm)	TBD	TBD	5.7	↓
VAS-25 Pressure	(psig)	10 - 20	30	21	↓
VAS-26 Flow Rate	(scfm)	TBD	TBD	4.3	↓
VAS-26 Pressure	(psig)	10 - 20	30	28	↓
VAS-27 Flow Rate	(scfm)	TBD	TBD	6.9	↓
VAS-27 Pressure	(psig)	10 - 20	30	28	↓
VAS-28 Flow Rate	(scfm)	TBD	TBD	5.0	↓
VAS-28 Pressure	(psig)	10 - 20	30	10	↓
VAS-29 Flow Rate	(scfm)	TBD	TBD	6.0	↓
VAS-29 Pressure	(psig)	10 - 20	30	9	↓
VAS-30 Flow Rate	(scfm)	TBD	TBD	6.8	↓
VAS-30 Pressure	(psig)	10 - 20	30	4	↓
VAS-31 Flow Rate	(scfm)	TBD	TBD	3.1	↓
VAS-31 Pressure	(psig)	10 - 20	30	26	↓
VAS-32 Flow Rate	(scfm)	TBD	TBD	6.6	7.4
VAS-32 Pressure	(psig)	10 - 20	30	16	13
VAS-33 Flow Rate	(scfm)	TBD	TBD	↓	8.9
VAS-33 Pressure	(psig)	10 - 20	30	↓	24
VAS-34 Flow Rate	(scfm)	TBD	TBD	↓	7.3
VAS-34 Pressure	(psig)	10 - 20	30	↓	23

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
10/24/2017 0915 1600	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		6.9
VAS-35 Pressure	(psig)	10 - 20	30		19
VAS-36 Flow Rate	(scfm)	TBD	TBD		6.6
VAS-36 Pressure	(psig)	10 - 20	30		11
VAS-37 Flow Rate	(scfm)	TBD	TBD		6.5
VAS-37 Pressure	(psig)	10 - 20	30		5
VAS-38 Flow Rate	(scfm)	TBD	TBD		7.5
VAS-38 Pressure	(psig)	10 - 20	30		6
VAS-39 Flow Rate	(scfm)	TBD	TBD		7.0
VAS-39 Pressure	(psig)	10 - 20	30		11
VAS-40 Flow Rate	(scfm)	TBD	TBD		8.4
VAS-40 Pressure	(psig)	10 - 20	30		23
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD		7.4
VAS-42 Pressure	(psig)	10 - 20	30		9
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	6.1	7.4
BCA-01 Pressure	(psig)	0 - 5	5	7	8
BCA-02 Flow Rate	(scfm)	TBD	TBD	5.8	7.3
BCA-02 Pressure	(psig)	0 - 5	5	7	7
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
11/2/2017 1015 1245	Scott Shipp	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No	- See field book	for air monitoring
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No	details	
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / (No)	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: Red Ink = not operating

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/2/2017 1015 1245	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	3960:38	3963:02
Air Compressor 1 Load Time	(hours)	NA	NA	1770:02	1772:11
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	189	193
Air Compressor 1 Pressure	(psig)	90 - 110	100	111	111
Air Compressor 2 Run Time	(hours)	NA	NA	1598:09	—
Air Compressor 2 Load Time	(hours)	NA	NA	956:10	—
Air Compressor 2 Temp	(F)	60 - 100	110	—	—
Air Compressor 2 Pressure	(psig)	90 - 110	100	—	—
Receiver Tank Pressure	(psig)	90 - 110	100	113	112
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	110
Manifold Temperature	(F)	60 - 100	110	81	88
Manifold Flow Rate	(scfm)	TBD	TBD	574.0	671.4
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	150.0	187.5
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	172.1	200.2
HAS-1 Valve Position	(%)	TBD	TBD	9.8	11.2
HAS-1 Pressure	(psig)	10 - 20	30	18	18
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	143.5	180.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	143.4	179.0
HAS-2 Valve Position	(%)	TBD	TBD	10.6	14.9
HAS-2 Pressure	(psig)	10 - 20	30	20	20
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	75.0	94.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	81.4	85.7
HAS-3 Valve Position	(%)	TBD	TBD	29.8	36.5
HAS-3 Pressure	(psig)	10 - 20	30	15	15

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/2/2017 1015 1245	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	2.7	8.4
VAS-01 Pressure	(psig)	10 - 20	30	12	11
VAS-02 Flow Rate	(scfm)	TBD	TBD	11.6	8.1
VAS-02 Pressure	(psig)	10 - 20	30	8	6
VAS-03 Flow Rate	(scfm)	TBD	TBD	6.9	7.7
VAS-03 Pressure	(psig)	10 - 20	30	1	2
VAS-04 Flow Rate	(scfm)	TBD	TBD	7.5	8.0
VAS-04 Pressure	(psig)	10 - 20	30	1	1
VAS-05 Flow Rate	(scfm)	TBD	TBD	8.8	8.3
VAS-05 Pressure	(psig)	10 - 20	30	2	1
VAS-06 Flow Rate	(scfm)	TBD	TBD	8.4	7.8
VAS-06 Pressure	(psig)	10 - 20	30	4	3
VAS-07 Flow Rate	(scfm)	TBD	TBD	6.2	8.0
VAS-07 Pressure	(psig)	10 - 20	30	11	11
VAS-08 Flow Rate	(scfm)	TBD	TBD	6.0	8.2
VAS-08 Pressure	(psig)	10 - 20	30	9.5	10.5
VAS-09 Flow Rate	(scfm)	TBD	TBD	6.4	8.0
VAS-09 Pressure	(psig)	10 - 20	30	2	2
VAS-10 Flow Rate	(scfm)	TBD	TBD	7.1	8.0
VAS-10 Pressure	(psig)	10 - 20	30	6	7
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD		
VAS-13 Pressure	(psig)	10 - 20	30		
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD		
VAS-16 Pressure	(psig)	10 - 20	30		
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/27/2017 1015 1295	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	6.5	8.2
VAS-18 Pressure	(psig)	10 - 20	30	2	2
VAS-19 Flow Rate	(scfm)	TBD	TBD		
VAS-19 Pressure	(psig)	10 - 20	30		
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD		
VAS-22 Pressure	(psig)	10 - 20	30		
VAS-23 Flow Rate	(scfm)	TBD	TBD		
VAS-23 Pressure	(psig)	10 - 20	30		
VAS-24 Flow Rate	(scfm)	TBD	TBD		
VAS-24 Pressure	(psig)	10 - 20	30		
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD		
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD		
VAS-33 Pressure	(psig)	10 - 20	30		
VAS-34 Flow Rate	(scfm)	TBD	TBD		
VAS-34 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/2/2017 1015 1245	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	7.1	8.1
VAS-41 Pressure	(psig)	20-Oct	30	4	5
VAS-42 Flow Rate	(scfm)	TBD	TBD		
VAS-42 Pressure	(psig)	10 - 20	30		
VAS-43 Flow Rate	(scfm)	TBD	TBD	6.1	8.6
VAS-43 Pressure	(psig)	10 - 20	30	38	39
VAS-44 Flow Rate	(scfm)	TBD	TBD	5.3	7.9
VAS-44 Pressure	(psig)	10 - 20	30	34	36
VAS-45 Flow Rate	(scfm)	TBD	TBD	7.3	8.0
VAS-45 Pressure	(psig)	10 - 20	30	7	7
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	7.3	8.3
BCA-01 Pressure	(psig)	0 - 5	5	8	9
BCA-02 Flow Rate	(scfm)	TBD	TBD	7.1	8.0
BCA-02 Pressure	(psig)	0 - 5	5	8	8
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
11/7/2017 0900	Scott Smida	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	Yes / No	Yes / No	—	Completed air monitoring,
Perform air monitoring near Cupboard Creek.	Each visit	Yes / No	Yes / No		refer to log book
Activate and inspect condition of receiver auto drain.	Each visit	Yes / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	Yes / No	Yes / No	-	Insulated drain lines
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	Yes / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No	—	Airite repaired AC#2,
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		loading issue, see
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		field book
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: Red = Not Operating

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/7/2017 0900 1530	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	4080:31	4083:34
Air Compressor 1 Load Time	(hours)	NA	NA	1865:23	1868:23
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	191	—
Air Compressor 1 Pressure	(psig)	90 - 110	100	110	—
Air Compressor 2 Run Time	(hours)	NA	NA	1598:09	1599:39
Air Compressor 2 Load Time	(hours)	NA	NA	956:10	957:35
Air Compressor 2 Temp	(F)	60 - 100	110	—	110
Air Compressor 2 Pressure	(psig)	90 - 110	100	—	187
Receiver Tank Pressure	(psig)	90 - 110	100	110	110
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	110
Manifold Temperature	(F)	60 - 100	110	81	87
Manifold Flow Rate	(scfm)	TBD	TBD	768.7	994.6
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	187.5	225.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	200.1	213.2
HAS-1 Valve Position	(%)	TBD	TBD	10.7	23.9
HAS-1 Pressure	(psig)	10 - 20	30	19	20
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	180.0	215.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	179.6	207.5
HAS-2 Valve Position	(%)	TBD	TBD	15.3	18.8
HAS-2 Pressure	(psig)	10 - 20	30	22	22
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	94.0	112.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	83.6	105.4
HAS-3 Valve Position	(%)	TBD	TBD	21.1	99.8
HAS-3 Pressure	(psig)	10 - 20	30	16	16

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/7/2017 0900 1530	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-01 Pressure	(psig)	10 - 20	30	18	
VAS-02 Flow Rate	(scfm)	TBD	TBD	7.9	
VAS-02 Pressure	(psig)	10 - 20	30	7	
VAS-03 Flow Rate	(scfm)	TBD	TBD	8.2	
VAS-03 Pressure	(psig)	10 - 20	30	2	
VAS-04 Flow Rate	(scfm)	TBD	TBD	8.3	
VAS-04 Pressure	(psig)	10 - 20	30	1	
VAS-05 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-05 Pressure	(psig)	10 - 20	30	2	
VAS-06 Flow Rate	(scfm)	TBD	TBD	8.1	
VAS-06 Pressure	(psig)	10 - 20	30	3	
VAS-07 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-07 Pressure	(psig)	10 - 20	30	12	
VAS-08 Flow Rate	(scfm)	TBD	TBD	8.4	
VAS-08 Pressure	(psig)	10 - 20	30	11	
VAS-09 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-09 Pressure	(psig)	10 - 20	30	2	
VAS-10 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD		9.8
VAS-11 Pressure	(psig)	10 - 20	30		10
VAS-12 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-12 Pressure	(psig)	10 - 20	30		9
VAS-13 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-13 Pressure	(psig)	10 - 20	30		10
VAS-14 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-14 Pressure	(psig)	10 - 20	30		6
VAS-15 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-15 Pressure	(psig)	10 - 20	30		5
VAS-16 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-16 Pressure	(psig)	10 - 20	30		10
VAS-17 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-17 Pressure	(psig)	10 - 20	30		9.5

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/7/2017 0900 K30	Scott Smida	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	8.5	↓
VAS-18 Pressure	(psig)	10 - 20	30	1	↓
VAS-19 Flow Rate	(scfm)	TBD	TBD	↓	9.3
VAS-19 Pressure	(psig)	10 - 20	30	↓	13
VAS-20 Flow Rate	(scfm)	TBD	TBD	8.7	↓
VAS-20 Pressure	(psig)	10 - 20	30	21	↓
VAS-21 Flow Rate	(scfm)	TBD	TBD	10.9	↓
VAS-21 Pressure	(psig)	10 - 20	30	22	↓
VAS-22 Flow Rate	(scfm)	TBD	TBD	8.8	↓
VAS-22 Pressure	(psig)	10 - 20	30	25	↓
VAS-23 Flow Rate	(scfm)	TBD	TBD	8.7	↓
VAS-23 Pressure	(psig)	10 - 20	30	23	↓
VAS-24 Flow Rate	(scfm)	TBD	TBD	8.1	↓
VAS-24 Pressure	(psig)	10 - 20	30	31	↓
VAS-25 Flow Rate	(scfm)	TBD	TBD	7.8	↓
VAS-25 Pressure	(psig)	10 - 20	30	23	↓
VAS-26 Flow Rate	(scfm)	TBD	TBD	9.8	↓
VAS-26 Pressure	(psig)	10 - 20	30	36	↓
VAS-27 Flow Rate	(scfm)	TBD	TBD	10.8	↓
VAS-27 Pressure	(psig)	10 - 20	30	35	↓
VAS-28 Flow Rate	(scfm)	TBD	TBD	7.5	↓
VAS-28 Pressure	(psig)	10 - 20	30	10	↓
VAS-29 Flow Rate	(scfm)	TBD	TBD	8.5	↓
VAS-29 Pressure	(psig)	10 - 20	30	11	↓
VAS-30 Flow Rate	(scfm)	TBD	TBD	8.0	↓
VAS-30 Pressure	(psig)	10 - 20	30	5	↓
VAS-31 Flow Rate	(scfm)	TBD	TBD	8.6	↓
VAS-31 Pressure	(psig)	10 - 20	30	31	↓
VAS-32 Flow Rate	(scfm)	TBD	TBD	↓	9.3
VAS-32 Pressure	(psig)	10 - 20	30	↓	18
VAS-33 Flow Rate	(scfm)	TBD	TBD	↓	9.5
VAS-33 Pressure	(psig)	10 - 20	30	↓	23
VAS-34 Flow Rate	(scfm)	TBD	TBD	↓	9.5
VAS-34 Pressure	(psig)	10 - 20	30	↓	23

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/7/2017 0900 1530	SCOTT SMITH		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-35 Pressure	(psig)	10 - 20	30		19
VAS-36 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-36 Pressure	(psig)	10 - 20	30		12
VAS-37 Flow Rate	(scfm)	TBD	TBD		8.2
VAS-37 Pressure	(psig)	10 - 20	30		5
VAS-38 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-38 Pressure	(psig)	10 - 20	30		8
VAS-39 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-39 Pressure	(psig)	10 - 20	30		17
VAS-40 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-40 Pressure	(psig)	10 - 20	30		22
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-42 Pressure	(psig)	10 - 20	30		10
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	8.7	9.3
BCA-01 Pressure	(psig)	0 - 5	5	10	10
BCA-02 Flow Rate	(scfm)	TBD	TBD	8.2	7.2
BCA-02 Pressure	(psig)	0 - 5	5	8	10
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
11/14/2017 1015 1400	Scott Shiba	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No	- refer to field book for air monitoring records	
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: Red = not operating

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/14/2017 1015 1400	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	4083:34	4085:42
Air Compressor 1 Load Time	(hours)	NA	NA	1868:23	1869:34
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	—	—
Air Compressor 1 Pressure	(psig)	90 - 110	100	—	—
Air Compressor 2 Run Time	(hours)	NA	NA	1762:36	1766:18
Air Compressor 2 Load Time	(hours)	NA	NA	1084:15	1086:47
Air Compressor 2 Temp	(F)	60 - 100	110	184	185
Air Compressor 2 Pressure	(psig)	90 - 110	100	110	110
Receiver Tank Pressure	(psig)	90 - 110	100	112	112
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	110
Manifold Temperature	(F)	60 - 100	110	58	64
Manifold Flow Rate	(scfm)	TBD	TBD	944.6	1011
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	225.0	262.5
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	228.8	245.1
HAS-1 Valve Position	(%)	TBD	TBD	22.3	90.9
HAS-1 Pressure	(psig)	10 - 20	30	21	21
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	215.0	251.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	214.6	241.5
HAS-2 Valve Position	(%)	TBD	TBD	18.2	27.4
HAS-2 Pressure	(psig)	10 - 20	30	23	24
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	112.5	131.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	100.4	132.6
HAS-3 Valve Position	(%)	TBD	TBD	32.5	34.2
HAS-3 Pressure	(psig)	10 - 20	30	16	18

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/14/2017 1400 1015	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	7.5	
VAS-01 Pressure	(psig)	10 - 20	30	21	
VAS-02 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-02 Pressure	(psig)	10 - 20	30	9	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-03 Pressure	(psig)	10 - 20	30	5	
VAS-04 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-04 Pressure	(psig)	10 - 20	30	4	
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-05 Pressure	(psig)	10 - 20	30	4	
VAS-06 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-06 Pressure	(psig)	10 - 20	30	5	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-07 Pressure	(psig)	10 - 20	30	14	
VAS-08 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-08 Pressure	(psig)	10 - 20	30	12	
VAS-09 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-09 Pressure	(psig)	10 - 20	30	5	
VAS-10 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-10 Pressure	(psig)	10 - 20	30	9	
VAS-11 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-11 Pressure	(psig)	10 - 20	30		12
VAS-12 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-12 Pressure	(psig)	10 - 20	30		10
VAS-13 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-13 Pressure	(psig)	10 - 20	30		12
VAS-14 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-14 Pressure	(psig)	10 - 20	30		6
VAS-15 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-15 Pressure	(psig)	10 - 20	30		5
VAS-16 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-16 Pressure	(psig)	10 - 20	30		12
VAS-17 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-17 Pressure	(psig)	10 - 20	30		11

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/14/17 1015 1400	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	T.O	—
VAS-18 Pressure	(psig)	10 - 20	30	2	—
VAS-19 Flow Rate	(scfm)	TBD	TBD	—	9.8
VAS-19 Pressure	(psig)	10 - 20	30	—	12
VAS-20 Flow Rate	(scfm)	TBD	TBD	9.3	↓
VAS-20 Pressure	(psig)	10 - 20	30	21	
VAS-21 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-21 Pressure	(psig)	10 - 20	30	22	
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-22 Pressure	(psig)	10 - 20	30	26	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-23 Pressure	(psig)	10 - 20	30	24	
VAS-24 Flow Rate	(scfm)	TBD	TBD	T.7	
VAS-24 Pressure	(psig)	10 - 20	30	32	
VAS-25 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-26 Pressure	(psig)	10 - 20	30	31	
VAS-27 Flow Rate	(scfm)	TBD	TBD	8.2	
VAS-27 Pressure	(psig)	10 - 20	30	33	
VAS-28 Flow Rate	(scfm)	TBD	TBD	12.4	
VAS-28 Pressure	(psig)	10 - 20	30	13	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-29 Pressure	(psig)	10 - 20	30	13	
VAS-30 Flow Rate	(scfm)	TBD	TBD	11.6	
VAS-30 Pressure	(psig)	10 - 20	30	9	
VAS-31 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-31 Pressure	(psig)	10 - 20	30	33	↓
VAS-32 Flow Rate	(scfm)	TBD	TBD	↓	10.3
VAS-32 Pressure	(psig)	10 - 20	30		18
VAS-33 Flow Rate	(scfm)	TBD	TBD		8.4
VAS-33 Pressure	(psig)	10 - 20	30		31
VAS-34 Flow Rate	(scfm)	TBD	TBD		8.9
VAS-34 Pressure	(psig)	10 - 20	30		28

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/14/17 1015 1400	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-35 Pressure	(psig)	10 - 20	30		10
VAS-36 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-36 Pressure	(psig)	10 - 20	30		12
VAS-37 Flow Rate	(scfm)	TBD	TBD		9.8
VAS-37 Pressure	(psig)	10 - 20	30		8
VAS-38 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-38 Pressure	(psig)	10 - 20	30		9
VAS-39 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-39 Pressure	(psig)	10 - 20	30		13
VAS-40 Flow Rate	(scfm)	TBD	TBD		7.9
VAS-40 Pressure	(psig)	10 - 20	30		24
VAS-41 Flow Rate	(scfm)	TBD	TBD		—
VAS-41 Pressure	(psig)	20-Oct	30		—
VAS-42 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-42 Pressure	(psig)	10 - 20	30		12
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	9.6	9.9
BCA-01 Pressure	(psig)	0 - 5	5	12	12
BCA-02 Flow Rate	(scfm)	TBD	TBD	8.8	10.1
BCA-02 Pressure	(psig)	0 - 5	5	11	12
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
11/21/2017 1000	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	Yes / No	Yes / No	→ See separate log book for creek monitoring details	
Perform air monitoring near Cupboard Creek.	Each visit	Yes / No	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	Yes / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	Yes / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	Yes / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No	Service by both ACU 1 & ACU 2 scheduled for 11/27/2017	
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No	—	
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No	—	
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No	—	
Calibrate EAD	Annually	Yes / No	Yes / No	—	

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: 0

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/21/2017 1000 1230	Scott Smith	✓	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	4685:42	4686:42
Air Compressor 1 Load Time	(hours)	NA	NA	1869:34	1870:05
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	—	187
Air Compressor 1 Pressure	(psig)	90 - 110	100	—	112
Air Compressor 2 Run Time	(hours)	NA	NA	1930:12	1932:41
Air Compressor 2 Load Time	(hours)	NA	NA	1230:38	1237:35
Air Compressor 2 Temp	(F)	60 - 100	110	185	186
Air Compressor 2 Pressure	(psig)	90 - 110	100	110	112
Receiver Tank Pressure	(psig)	90 - 110	100	112	114
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	100	110
Manifold Temperature	(F)	60 - 100	110	68	75
Manifold Flow Rate	(scfm)	TBD	TBD	1054	1196
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	262.5	300
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	261.0	293.4
HAS-1 Valve Position	(%)	TBD	TBD	15.1	20.5
HAS-1 Pressure	(psig)	10 - 20	30	20	22
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	251.0	287
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	248.6	286.5
HAS-2 Valve Position	(%)	TBD	TBD	24.4	32.2
HAS-2 Pressure	(psig)	10 - 20	30	24	25
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	131.0	150
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	121.9	166.1
HAS-3 Valve Position	(%)	TBD	TBD	33.1	34.3
HAS-3 Pressure	(psig)	10 - 20	30	17	18

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Red = not operating

→ adjust all VAS flows to 10 SCFM after collecting data.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/21/2017 1600 1230	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-01 Pressure	(psig)	10 - 20	30	23	
VAS-02 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-02 Pressure	(psig)	10 - 20	30	8	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-03 Pressure	(psig)	10 - 20	30	4	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-04 Pressure	(psig)	10 - 20	30	2	
VAS-05 Flow Rate	(scfm)	TBD	TBD	9.0	
VAS-05 Pressure	(psig)	10 - 20	30	2	
VAS-06 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-06 Pressure	(psig)	10 - 20	30	2	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-07 Pressure	(psig)	10 - 20	30	12.5	
VAS-08 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-08 Pressure	(psig)	10 - 20	30	11	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-09 Pressure	(psig)	10 - 20	30	8	
VAS-10 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-10 Pressure	(psig)	10 - 20	30	5	
VAS-11 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-11 Pressure	(psig)	10 - 20	30		13
VAS-12 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-12 Pressure	(psig)	10 - 20	30		10
VAS-13 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-13 Pressure	(psig)	10 - 20	30		12
VAS-14 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-14 Pressure	(psig)	10 - 20	30		5
VAS-15 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-15 Pressure	(psig)	10 - 20	30		6
VAS-16 Flow Rate	(scfm)	TBD	TBD		8.5
VAS-16 Pressure	(psig)	10 - 20	30		12
VAS-17 Flow Rate	(scfm)	TBD	TBD		8.2
VAS-17 Pressure	(psig)	10 - 20	30		12

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/16/2017 1000 1230	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	10.1	—
VAS-18 Pressure	(psig)	10 - 20	30	1	—
VAS-19 Flow Rate	(scfm)	TBD	TBD	—	6.4
VAS-19 Pressure	(psig)	10 - 20	30	—	14
VAS-20 Flow Rate	(scfm)	TBD	TBD	9.1	—
VAS-20 Pressure	(psig)	10 - 20	30	21	
VAS-21 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-21 Pressure	(psig)	10 - 20	30	21	
VAS-22 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-22 Pressure	(psig)	10 - 20	30	27	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-23 Pressure	(psig)	10 - 20	30	24	
VAS-24 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-24 Pressure	(psig)	10 - 20	30	31	
VAS-25 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	8.2	
VAS-26 Pressure	(psig)	10 - 20	30	28	
VAS-27 Flow Rate	(scfm)	TBD	TBD	8.3	
VAS-27 Pressure	(psig)	10 - 20	30	33	
VAS-28 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-28 Pressure	(psig)	10 - 20	30	11	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-29 Pressure	(psig)	10 - 20	30	12	
VAS-30 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-30 Pressure	(psig)	10 - 20	30	5	
VAS-31 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-31 Pressure	(psig)	10 - 20	30	32	
VAS-32 Flow Rate	(scfm)	TBD	TBD	—	8.9
VAS-32 Pressure	(psig)	10 - 20	30		18
VAS-33 Flow Rate	(scfm)	TBD	TBD		3.5
VAS-33 Pressure	(psig)	10 - 20	30		30
VAS-34 Flow Rate	(scfm)	TBD	TBD		5.7
VAS-34 Pressure	(psig)	10 - 20	30		29

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/21/2017 1060 1230	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		6.2
VAS-35 Pressure	(psig)	10 - 20	30		20
VAS-36 Flow Rate	(scfm)	TBD	TBD		9.26
VAS-36 Pressure	(psig)	10 - 20	30		13
VAS-37 Flow Rate	(scfm)	TBD	TBD		9.2
VAS-37 Pressure	(psig)	10 - 20	30		7
VAS-38 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-38 Pressure	(psig)	10 - 20	30		8
VAS-39 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-39 Pressure	(psig)	10 - 20	30		12
VAS-40 Flow Rate	(scfm)	TBD	TBD		4.0
VAS-40 Pressure	(psig)	10 - 20	30		27
VAS-41 Flow Rate	(scfm)	TBD	TBD		—
VAS-41 Pressure	(psig)	20-Oct	30		—
VAS-42 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-42 Pressure	(psig)	10 - 20	30		11
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	9.8	9.6
BCA-01 Pressure	(psig)	0 - 5	5	12	11
BCA-02 Flow Rate	(scfm)	TBD	TBD	9.8	9.3
BCA-02 Pressure	(psig)	0 - 5	5	11	11
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
11/27/2017 1000	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No	→ see field book for air monitoring data	
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / No	Completed Today	
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: Red = not operating

→ Air flows adjusted to 10 scfm following data collection.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/27/2017 1000 1245	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	4228:13	4230:42
Air Compressor 1 Load Time	(hours)	NA	NA	1950:23	1952:23
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	187	182
Air Compressor 1 Pressure	(psig)	90 - 110	100	101	110
Air Compressor 2 Run Time	(hours)	NA	NA	2074:11	2076:17
Air Compressor 2 Load Time	(hours)	NA	NA	1310:26	1311:57
Air Compressor 2 Temp	(F)	60 - 100	110	182	181
Air Compressor 2 Pressure	(psig)	90 - 110	100	100	110
Receiver Tank Pressure	(psig)	90 - 110	100	108	110
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	100	110
Manifold Temperature	(F)	60 - 100	110	70	71
Manifold Flow Rate	(scfm)	TBD	TBD	1110	1250
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	300	330.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	303.7	331.1
HAS-1 Valve Position	(%)	TBD	TBD	18.1	36.1
HAS-1 Pressure	(psig)	10 - 20	30	22	22
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	287	315.5
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	288.2	368.7
HAS-2 Valve Position	(%)	TBD	TBD	29.1	34.4
HAS-2 Pressure	(psig)	10 - 20	30	25	24
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	150	165.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	157.0	154.9
HAS-3 Valve Position	(%)	TBD	TBD	33.2	37.7
HAS-3 Pressure	(psig)	10 - 20	30	17	18

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/27/17 1245 1000	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-01 Pressure	(psig)	10 - 20	30	23	
VAS-02 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-02 Pressure	(psig)	10 - 20	30	8	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-03 Pressure	(psig)	10 - 20	30	4	
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-04 Pressure	(psig)	10 - 20	30	2	
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-05 Pressure	(psig)	10 - 20	30	3	
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-06 Pressure	(psig)	10 - 20	30	4	
VAS-07 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-07 Pressure	(psig)	10 - 20	30	12	
VAS-08 Flow Rate	(scfm)	TBD	TBD	11.6	
VAS-08 Pressure	(psig)	10 - 20	30	12	
VAS-09 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-09 Pressure	(psig)	10 - 20	30	5	
VAS-10 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-10 Pressure	(psig)	10 - 20	30	9	
VAS-11 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-11 Pressure	(psig)	10 - 20	30		12
VAS-12 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-12 Pressure	(psig)	10 - 20	30		11
VAS-13 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-13 Pressure	(psig)	10 - 20	30		12
VAS-14 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-14 Pressure	(psig)	10 - 20	30		5
VAS-15 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-15 Pressure	(psig)	10 - 20	30		5
VAS-16 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-16 Pressure	(psig)	10 - 20	30		13
VAS-17 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-17 Pressure	(psig)	10 - 20	30		12

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/27/2017 1000 1245	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	10.3	—
VAS-18 Pressure	(psig)	10 - 20	30	1	—
VAS-19 Flow Rate	(scfm)	TBD	TBD	—	11.1
VAS-19 Pressure	(psig)	10 - 20	30		14
VAS-20 Flow Rate	(scfm)	TBD	TBD		7.3
VAS-20 Pressure	(psig)	10 - 20	30		23
VAS-21 Flow Rate	(scfm)	TBD	TBD		6.0
VAS-21 Pressure	(psig)	10 - 20	30		22
VAS-22 Flow Rate	(scfm)	TBD	TBD		6.5
VAS-22 Pressure	(psig)	10 - 20	30		28
VAS-23 Flow Rate	(scfm)	TBD	TBD		7.9
VAS-23 Pressure	(psig)	10 - 20	30		24
VAS-24 Flow Rate	(scfm)	TBD	TBD		5.2
VAS-24 Pressure	(psig)	10 - 20	30		33
VAS-25 Flow Rate	(scfm)	TBD	TBD		9.2
VAS-25 Pressure	(psig)	10 - 20	30		23
VAS-26 Flow Rate	(scfm)	TBD	TBD		6.6
VAS-26 Pressure	(psig)	10 - 20	30		31
VAS-27 Flow Rate	(scfm)	TBD	TBD		4.1
VAS-27 Pressure	(psig)	10 - 20	30		36
VAS-28 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-28 Pressure	(psig)	10 - 20	30		12
VAS-29 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-29 Pressure	(psig)	10 - 20	30		12
VAS-30 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-30 Pressure	(psig)	10 - 20	30		6
VAS-31 Flow Rate	(scfm)	TBD	TBD		11.5
VAS-31 Pressure	(psig)	10 - 20	30		36
VAS-32 Flow Rate	(scfm)	TBD	TBD		—
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD		
VAS-33 Pressure	(psig)	10 - 20	30		
VAS-34 Flow Rate	(scfm)	TBD	TBD		
VAS-34 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
11/27/2017 1000 1245	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-41 Pressure	(psig)	20-Oct	30	7	
VAS-42 Flow Rate	(scfm)	TBD	TBD		
VAS-42 Pressure	(psig)	10 - 20	30		
VAS-43 Flow Rate	(scfm)	TBD	TBD	13.0	
VAS-43 Pressure	(psig)	10 - 20	30	38	
VAS-44 Flow Rate	(scfm)	TBD	TBD	7.5	
VAS-44 Pressure	(psig)	10 - 20	30	37	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-45 Pressure	(psig)	10 - 20	30	9	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	16.0	16.2
BCA-01 Pressure	(psig)	0 - 5	5	12	12
BCA-02 Flow Rate	(scfm)	TBD	TBD	16.2	16.4
BCA-02 Pressure	(psig)	0 - 5	5	12	12
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
12/4/2017 1000	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No	→ See Separate notes for air monitoring details.	
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / (No)	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / (No)	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / (No)	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / (No)	Yes / No		
Calibrate EAD	Annually	Yes / (No)	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: red = not operating.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/4/2017 1000 1230	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	yes	yes
Air Compressor 1 Run Time	(hours)	NA	NA	4395:53	4398:29
Air Compressor 1 Load Time	(hours)	NA	NA	2072:46	2074:10
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	187	186
Air Compressor 1 Pressure	(psig)	90 - 110	100	111	111
Air Compressor 2 Run Time	(hours)	NA	NA	2241:27	2244:04
Air Compressor 2 Load Time	(hours)	NA	NA	1465:13	1466:42
Air Compressor 2 Temp	(F)	60 - 100	110	182	188
Air Compressor 2 Pressure	(psig)	90 - 110	100	111	111
Receiver Tank Pressure	(psig)	90 - 110	100	112	112
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	110
Manifold Temperature	(F)	60 - 100	110	68	80
Manifold Flow Rate	(scfm)	TBD	TBD	1272	1342
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	330.0	360
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	329.6	368.7
HAS-1 Valve Position	(%)	TBD	TBD	23.6	25.4
HAS-1 Pressure	(psig)	10 - 20	30	22	23
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	315.5	344
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	311.9	343.2
HAS-2 Valve Position	(%)	TBD	TBD	31.1	37.0
HAS-2 Pressure	(psig)	10 - 20	30	25	25
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	165.0	180
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	144.1	172.1
HAS-3 Valve Position	(%)	TBD	TBD	36.8	33.9
HAS-3 Pressure	(psig)	10 - 20	30	17	18

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

→ all flows adjusted to or as close to their targets of 10 SCFM following data collection.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/4/2017 1000 1230	Scott Smida	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-01 Pressure	(psig)	10 - 20	30	23	
VAS-02 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-02 Pressure	(psig)	10 - 20	30	10	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-03 Pressure	(psig)	10 - 20	30	4	
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-04 Pressure	(psig)	10 - 20	30	3	
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-05 Pressure	(psig)	10 - 20	30	3	
VAS-06 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-06 Pressure	(psig)	10 - 20	30	4	
VAS-07 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-07 Pressure	(psig)	10 - 20	30	12	
VAS-08 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-08 Pressure	(psig)	10 - 20	30	12	
VAS-09 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-09 Pressure	(psig)	10 - 20	30	4	
VAS-10 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-10 Pressure	(psig)	10 - 20	30	9	
VAS-11 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-11 Pressure	(psig)	10 - 20	30		12
VAS-12 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-12 Pressure	(psig)	10 - 20	30		10
VAS-13 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-13 Pressure	(psig)	10 - 20	30		14
VAS-14 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-14 Pressure	(psig)	10 - 20	30		6
VAS-15 Flow Rate	(scfm)	TBD	TBD		8.8
VAS-15 Pressure	(psig)	10 - 20	30		4
VAS-16 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-16 Pressure	(psig)	10 - 20	30		13
VAS-17 Flow Rate	(scfm)	TBD	TBD		9.7
VAS-17 Pressure	(psig)	10 - 20	30		12

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/4/2017 1000 1230	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	10.0	—
VAS-18 Pressure	(psig)	10 - 20	30	1	—
VAS-19 Flow Rate	(scfm)	TBD	TBD		10.0
VAS-19 Pressure	(psig)	10 - 20	30		16
VAS-20 Flow Rate	(scfm)	TBD	TBD		6.7
VAS-20 Pressure	(psig)	10 - 20	30		24
VAS-21 Flow Rate	(scfm)	TBD	TBD		7.2
VAS-21 Pressure	(psig)	10 - 20	30		23
VAS-22 Flow Rate	(scfm)	TBD	TBD		6.1
VAS-22 Pressure	(psig)	10 - 20	30		27
VAS-23 Flow Rate	(scfm)	TBD	TBD		7.8
VAS-23 Pressure	(psig)	10 - 20	30		25
VAS-24 Flow Rate	(scfm)	TBD	TBD		7.7
VAS-24 Pressure	(psig)	10 - 20	30		32
VAS-25 Flow Rate	(scfm)	TBD	TBD		7.7
VAS-25 Pressure	(psig)	10 - 20	30		25
VAS-26 Flow Rate	(scfm)	TBD	TBD		6.5
VAS-26 Pressure	(psig)	10 - 20	30		30
VAS-27 Flow Rate	(scfm)	TBD	TBD		3.8
VAS-27 Pressure	(psig)	10 - 20	30		35
VAS-28 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-28 Pressure	(psig)	10 - 20	30		13
VAS-29 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-29 Pressure	(psig)	10 - 20	30		12
VAS-30 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-30 Pressure	(psig)	10 - 20	30		5
VAS-31 Flow Rate	(scfm)	TBD	TBD		11.3
VAS-31 Pressure	(psig)	10 - 20	30		30
VAS-32 Flow Rate	(scfm)	TBD	TBD		—
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD		
VAS-33 Pressure	(psig)	10 - 20	30		
VAS-34 Flow Rate	(scfm)	TBD	TBD		
VAS-34 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/4/2017 1000 1230	Scott Smida	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	9.1	
VAS-41 Pressure	(psig)	20-Oct	30	6	
VAS-42 Flow Rate	(scfm)	TBD	TBD	—	
VAS-42 Pressure	(psig)	10 - 20	30	—	
VAS-43 Flow Rate	(scfm)	TBD	TBD	11.1	
VAS-43 Pressure	(psig)	10 - 20	30	34	
VAS-44 Flow Rate	(scfm)	TBD	TBD	6.5	
VAS-44 Pressure	(psig)	10 - 20	30	40	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-45 Pressure	(psig)	10 - 20	30	9	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	9.6	9.4
BCA-01 Pressure	(psig)	0 - 5	5	12	11
BCA-02 Flow Rate	(scfm)	TBD	TBD	10.3	10.3
BCA-02 Pressure	(psig)	0 - 5	5	12	12
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
12/11/2017 1035	Scott Smith	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	Yes / No	Yes / No	air monitoring performed see	
Perform air monitoring near Cupboard Creek.	Each visit	Yes / No	Yes / No	Separate log book for details	
Activate and inspect condition of receiver auto drain.	Each visit	Yes / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	Yes / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	Yes / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments: 0

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/11/2017 1035 MJO	Scott Smith	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	4564:25	4566:54
Air Compressor 1 Load Time	(hours)	NA	NA	2206:36	2208:39
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	185	187
Air Compressor 1 Pressure	(psig)	90 - 110	100	112	102
Air Compressor 2 Run Time	(hours)	NA	NA	2410:01	2412:30
Air Compressor 2 Load Time	(hours)	NA	NA	1608:46	1610:50
Air Compressor 2 Temp	(F)	60 - 100	110	182	182
Air Compressor 2 Pressure	(psig)	90 - 110	100	112	102
Receiver Tank Pressure	(psig)	90 - 110	100	115	110
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	112	100
Manifold Temperature	(F)	60 - 100	110	68	71
Manifold Flow Rate	(scfm)	TBD	TBD	1299	1366
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	360.0	397.5
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	350.6	395.7
HAS-1 Valve Position	(%)	TBD	TBD	18.0	26.6
HAS-1 Pressure	(psig)	10 - 20	30	23	24
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	344.0	380.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	350.8	380.0
HAS-2 Valve Position	(%)	TBD	TBD	35.5	29
HAS-2 Pressure	(psig)	10 - 20	30	25	27
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	180.0	199.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	199.5	180.7
HAS-3 Valve Position	(%)	TBD	TBD	33.1	36.4
HAS-3 Pressure	(psig)	10 - 20	30	18	19

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

- Flows adjusted to ~10 scfm on VAS wells after data collected.
- Not operating

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/11/2017 1035 1310	Scott Sanders	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-01 Pressure	(psig)	10 - 20	30	23	
VAS-02 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-02 Pressure	(psig)	10 - 20	30	8	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-03 Pressure	(psig)	10 - 20	30	4	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.0	
VAS-04 Pressure	(psig)	10 - 20	30	2	
VAS-05 Flow Rate	(scfm)	TBD	TBD	8.3	
VAS-05 Pressure	(psig)	10 - 20	30	2	
VAS-06 Flow Rate	(scfm)	TBD	TBD	16.0	
VAS-06 Pressure	(psig)	10 - 20	30	4	
VAS-07 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-07 Pressure	(psig)	10 - 20	30	11	
VAS-08 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-08 Pressure	(psig)	10 - 20	30	11	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-09 Pressure	(psig)	10 - 20	30	5	
VAS-10 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD		9.7
VAS-11 Pressure	(psig)	10 - 20	30		12
VAS-12 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-12 Pressure	(psig)	10 - 20	30		11
VAS-13 Flow Rate	(scfm)	TBD	TBD		8.8
VAS-13 Pressure	(psig)	10 - 20	30		13
VAS-14 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-14 Pressure	(psig)	10 - 20	30		5
VAS-15 Flow Rate	(scfm)	TBD	TBD		8.8
VAS-15 Pressure	(psig)	10 - 20	30		5
VAS-16 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-16 Pressure	(psig)	10 - 20	30		12
VAS-17 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-17 Pressure	(psig)	10 - 20	30		11

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/11/2017 1035	Scott Smith	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	16.0	—
VAS-18 Pressure	(psig)	10 - 20	30	1	—
VAS-19 Flow Rate	(scfm)	TBD	TBD		11.4
VAS-19 Pressure	(psig)	10 - 20	30		14
VAS-20 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-20 Pressure	(psig)	10 - 20	30		26
VAS-21 Flow Rate	(scfm)	TBD	TBD		8.1
VAS-21 Pressure	(psig)	10 - 20	30		23
VAS-22 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-22 Pressure	(psig)	10 - 20	30		30
VAS-23 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-23 Pressure	(psig)	10 - 20	30		24
VAS-24 Flow Rate	(scfm)	TBD	TBD		7.8
VAS-24 Pressure	(psig)	10 - 20	30		32
VAS-25 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-25 Pressure	(psig)	10 - 20	30		33
VAS-26 Flow Rate	(scfm)	TBD	TBD		6.2
VAS-26 Pressure	(psig)	10 - 20	30		31
VAS-27 Flow Rate	(scfm)	TBD	TBD		6.0
VAS-27 Pressure	(psig)	10 - 20	30		36
VAS-28 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-28 Pressure	(psig)	10 - 20	30		11
VAS-29 Flow Rate	(scfm)	TBD	TBD		9.8
VAS-29 Pressure	(psig)	10 - 20	30		11
VAS-30 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-30 Pressure	(psig)	10 - 20	30		6
VAS-31 Flow Rate	(scfm)	TBD	TBD		11.9
VAS-31 Pressure	(psig)	10 - 20	30		30
VAS-32 Flow Rate	(scfm)	TBD	TBD		—
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD		
VAS-33 Pressure	(psig)	10 - 20	30		
VAS-34 Flow Rate	(scfm)	TBD	TBD		
VAS-34 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/11/2017 1035 1310	Scott Smith	Tyler Hall	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-41 Pressure	(psig)	20-Oct	30	8	
VAS-42 Flow Rate	(scfm)	TBD	TBD		
VAS-42 Pressure	(psig)	10 - 20	30		
VAS-43 Flow Rate	(scfm)	TBD	TBD	11.9	
VAS-43 Pressure	(psig)	10 - 20	30	33	
VAS-44 Flow Rate	(scfm)	TBD	TBD	5.9	
VAS-44 Pressure	(psig)	10 - 20	30	36	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-45 Pressure	(psig)	10 - 20	30	10	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	9.4	9.5
BCA-01 Pressure	(psig)	0 - 5	5	12	11
BCA-02 Flow Rate	(scfm)	TBD	TBD	10.1	10.3
BCA-02 Pressure	(psig)	0 - 5	5	12	11
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
12/21/2017 1015	Scott Shiot	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No	see field notes for	air monitoring records
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / No	"	"
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / (No)	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / (No)	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / (No)	Yes / No		
Calibrate EAD	Annually	(Yes) / No	Yes / No	3/2018	

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/21/2017 1015 1330	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	4804:12	4807:00
Air Compressor 1 Load Time	(hours)	NA	NA	2439:25	2441:32
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	186
Air Compressor 1 Pressure	(psig)	90 - 110	100	107	110
Air Compressor 2 Run Time	(hours)	NA	NA	2649:46	2652:51
Air Compressor 2 Load Time	(hours)	NA	NA	1848:05	1850:31
Air Compressor 2 Temp	(F)	60 - 100	110	179	188
Air Compressor 2 Pressure	(psig)	90 - 110	100	105	110
Receiver Tank Pressure	(psig)	90 - 110	100	112	115
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	105	110
Manifold Temperature	(F)	60 - 100	110	65	77
Manifold Flow Rate	(scfm)	TBD	TBD	1326	1504
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	397.5	435.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	394.9	431.4
HAS-1 Valve Position	(%)	TBD	TBD	27.5	27.9
HAS-1 Pressure	(psig)	10 - 20	30	23	25
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	380.0	416.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	380.4	421.8
HAS-2 Valve Position	(%)	TBD	TBD	29.3	29.4
HAS-2 Pressure	(psig)	10 - 20	30	26	27
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	199.0	217.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	208.1	180.2
HAS-3 Valve Position	(%)	TBD	TBD	34.9	37.8
HAS-3 Pressure	(psig)	10 - 20	30	18	18

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

- All operating wells flows adjusted to 10 SCFM (if possible) following data collection
- Aerators adjusted from ~10 to 12.5 SCFM
- HAS wells adjusted from 0.53 to 0.58 SCFM/FT.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/21/2017 1015 1330	Scott Smida		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-01 Pressure	(psig)	10 - 20	30	23	
VAS-02 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-02 Pressure	(psig)	10 - 20	30	9	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-03 Pressure	(psig)	10 - 20	30	4	
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-04 Pressure	(psig)	10 - 20	30	3	
VAS-05 Flow Rate	(scfm)	TBD	TBD	7.5	
VAS-05 Pressure	(psig)	10 - 20	30	2	
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-06 Pressure	(psig)	10 - 20	30	4	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-07 Pressure	(psig)	10 - 20	30	12	
VAS-08 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-08 Pressure	(psig)	10 - 20	30	12	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-09 Pressure	(psig)	10 - 20	30	5	
VAS-10 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-10 Pressure	(psig)	10 - 20	30	9	
VAS-11 Flow Rate	(scfm)	TBD	TBD		9.8
VAS-11 Pressure	(psig)	10 - 20	30		12
VAS-12 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-12 Pressure	(psig)	10 - 20	30		11
VAS-13 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-13 Pressure	(psig)	10 - 20	30		15
VAS-14 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-14 Pressure	(psig)	10 - 20	30		5
VAS-15 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-15 Pressure	(psig)	10 - 20	30		5
VAS-16 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-16 Pressure	(psig)	10 - 20	30		12
VAS-17 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-17 Pressure	(psig)	10 - 20	30		11

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/21/2017 1015 1330	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	11.7	—
VAS-18 Pressure	(psig)	10 - 20	30	2	—
VAS-19 Flow Rate	(scfm)	TBD	TBD		12.0
VAS-19 Pressure	(psig)	10 - 20	30		15
VAS-20 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-20 Pressure	(psig)	10 - 20	30		23
VAS-21 Flow Rate	(scfm)	TBD	TBD		8.5
VAS-21 Pressure	(psig)	10 - 20	30		23
VAS-22 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-22 Pressure	(psig)	10 - 20	30		30
VAS-23 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-23 Pressure	(psig)	10 - 20	30		22
VAS-24 Flow Rate	(scfm)	TBD	TBD		7.4
VAS-24 Pressure	(psig)	10 - 20	30		33
VAS-25 Flow Rate	(scfm)	TBD	TBD		9.5
VAS-25 Pressure	(psig)	10 - 20	30		25
VAS-26 Flow Rate	(scfm)	TBD	TBD		6.5
VAS-26 Pressure	(psig)	10 - 20	30		32
VAS-27 Flow Rate	(scfm)	TBD	TBD		6.2
VAS-27 Pressure	(psig)	10 - 20	30		38
VAS-28 Flow Rate	(scfm)	TBD	TBD		8.7
VAS-28 Pressure	(psig)	10 - 20	30		12
VAS-29 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-29 Pressure	(psig)	10 - 20	30		12
VAS-30 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-30 Pressure	(psig)	10 - 20	30		5
VAS-31 Flow Rate	(scfm)	TBD	TBD		8.9
VAS-31 Pressure	(psig)	10 - 20	30		31
VAS-32 Flow Rate	(scfm)	TBD	TBD		—
VAS-32 Pressure	(psig)	10 - 20	30		
VAS-33 Flow Rate	(scfm)	TBD	TBD		
VAS-33 Pressure	(psig)	10 - 20	30		
VAS-34 Flow Rate	(scfm)	TBD	TBD		
VAS-34 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Chris Shores/RAL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
12/21/2017 1015 1330	Scott Shipp		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-41 Pressure	(psig)	20-Oct	30	7	
VAS-42 Flow Rate	(scfm)	TBD	TBD	—	
VAS-42 Pressure	(psig)	10 - 20	30	—	
VAS-43 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-43 Pressure	(psig)	10 - 20	30	30	
VAS-44 Flow Rate	(scfm)	TBD	TBD	5.7	
VAS-44 Pressure	(psig)	10 - 20	30	38	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-45 Pressure	(psig)	10 - 20	30	10	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	9.6	12.2
BCA-01 Pressure	(psig)	0 - 5	5	12	15
BCA-02 Flow Rate	(scfm)	TBD	TBD	10.2	12.4
BCA-02 Pressure	(psig)	0 - 5	5	12	13
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Attachment D
Soil Boring Logs, Well Completion Diagrams, and Form 1903s

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-02B

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 6/7/15 **COMPLETED** 10/5/17
GROUND ELEVATION 841.18 ft **HOLE SIZE** 13/4 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger/Wire Line/Air Rotary
AT TIME OF DRILLING ---
LOGGED BY M. Karafa/ATL **CHECKED BY**
AT END OF DRILLING 4.59 ft / Elev 836.59 ft btoc
NOTES Well installed 6/7/15 - open hole, 10/5/17 2-inch PVC well
AFTER DRILLING 81.70 ft / Elev 759.48 ft btoc/dry

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0								Casing Top Elev: 841.2 (ft)
	SPT	15	5-3-4-4 (7)	SM		(SM) SILTY SAND; brownish yellow (10YR 6/6), dry, loose, very fine to fine sand, organics.	PID = 3.9	
						3.0 838.2		
						(CL) SANDY CLAY; brownish yellow (10YR 6/6), dry, stiff, very fine to fine sand, trace fine quartz gravel.		
5	SPT	79	1-4-5-6 (9)	CL			PID = 1394	
						9.0 832.2		
10	SPT	46	1-2-2-5 (4)			(SC) SAPROLITE, CLAYEY SAND; dark red (10R 3/6), moist, loose, very fine to medium sand, micaceous, yellowish brown (10YR 5/8) and very pale brown (10YR 8/4) banding.	PID = 1220	6" Steel Casing
15	SPT	71	2-3-6-8 (9)	SC			PID = 28.9	
20	SPT	71	2-4-6-8 (10)			Dark red (2.5Y 3/6) with dark reddish brown (5YR 3/4) and pinkish white (2.5YR 8/2) banding.	PID = 32.8	
25								

(Continued Next Page)

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WELL NUMBER MW-02B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
25	SPT	83	1-4-7-7 (11)	SC		(SC) SAPROLITE, CLAYEY SAND; dark red (10R 3/6), moist, loose, very fine to medium sand, micaceous, yellowish brown (10YR 5/8) and very pale brown (10YR 8/4) banding. *(continued)*	PID = 22.6	
30	SPT	79	4-5-6-8 (11)				PID = 15.8	Portland I/II with 3-5% Bentonite
35	SPT	71	2-4-6-11 (10)				PID = 17.9	
40	SPT	79	4-7-12-14 (19)			Yellowish brown (5YR 4/6) with black (5YR 2.5/1) and white (2.5YR 8/1) banding. Fine quartz gravel lens.	PID = 15.2	
45	SPT	71	2-3-7-8 (10)				PID = 7.3	
50	SPT	71	5-24-14-18 (38)			Dense, grey (10YR 5/1) and white (2.5YR 8/1) banding.	PID = 6.2	

(Continued Next Page)

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WELL NUMBER MW-02B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
55	SPT	21	50-50	SC		(SC) SAPROLITE, CLAYEY SAND; dark red (10R 3/6), moist, loose, very fine to medium sand, micaceous, yellowish brown (10YR 5/8) and very pale brown (10YR 8/4) banding. *(continued)* Very dense.	PID = 6.5	
60	SPT	33	24-50	SW		60.0 781.2 (SW) PARTIALLY WEATHERED BEDROCK; gneissic structure.	PID = 13.2	
65	RC	91 (72)				64.7 776.5 Trace gneiss rock fragments. BEDROCK; biotite gneiss, very strong, light grey (N8), gneissic, medium foliation, fresh to pitted, slightly fractured. FRACTURE; 64.85', foliation plane joint, smooth to rough, very narrow, no infilling, moist, oxidation staining. FRACTURE; 65.25', foliation plane joint, smooth to rough, very narrow, no infilling, moist, oxidation staining. FRACTURE; 67.95', foliation plane joint, rough, narrow, no infilling, moist, oxidation staining.	PID = 0	Baroid Pure Gold Hole Plug 3/8" pellets
70	RC	94 (72)				FRACTURE; 70', foliation plane joint, horizontal, rough, narrow, no infilling, moist, oxidation staining. FRACTURE; 70.4', foliation plane joint, horizontal, rough, narrow, no infilling, moist, oxidation staining. Trace garnets. FRACTURE; 71.53', foliation plane joint, horizontal, rough, narrow, no infilling, moist, oxidation staining. FRACTURE; 73', foliation bedding plane joint, horizontal, rough, narrow, no infilling, moist, oxidation staining.		
75	RC	100 (90)				FRACTURE; 73.65', foliation plane joint, horizontal, rough, narrow, no infilling, moist, oxidation staining. FRACTURE; 74.05', foliation plane joint, horizontal, rough, narrow, no infilling, moist, oxidation staining. Less competent, weathered and pitted.		Filter Media GP#1 Sand 2"-Schedule 40 PVC, 0.010 slot
80		100				FRACTURE; 77.8', foliation plane joint, horizontal, smooth, narrow, no infilling, moist to dry. FRACTURE; 79.05', foliation plane joint, horizontal, smooth, narrow, no infilling, moist to dry. Less foliation, trace quartz crystals.	PID = 0	

(Continued Next Page)

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Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-02B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
85	RC	(72)				BEDROCK; biotite gneiss, very strong, light grey (N8), gneissic, medium foliation, fresh to pitted, slightly fractured. *(continued)* FRACTURE; 83', foliation plane joint, horizontal, smooth, narrow, no infilling, moist to dry. FRACTURE; 83.65', foliation plane joint, smooth, very narrow, non-cohesive, saprolitic infilling, moist. FRACTURE; 84.8', foliation plane joint, horizontal, smooth, narrow, no infilling, moist to dry. Foliated, abundant large quartz crystals. FRACTURE; 86.5', foliation plane joint, horizontal, rough, very narrow, pyrite mineralization, moist.	PID = 0	Filter Media GP#1 Sand
	RC	97 (97)						
					89.5	751.7		

Refusal at 66.5 feet.
Bottom of borehole at 89.5 feet.

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-02B
Well was converted from open hole to a screened well.
Bentonite seal 62.7-67.7' bgs

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-10136

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 10-5-17
81.7 ft. Date Completed: 10-5-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4-inch/2-inch
Type: ☑ PVC ☐ Galvanized ☑ Steel ☐ Other
4 (steel) in. to 70 ft. depth
2 (PVC) in. to 69 ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: PVC Diam.: 2-inch
Slot/Gauge: 0.010-inch Length: 12.7 feet
Set Between: 69 ft. and 81.7 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 67.7 ft. to 81.7 ft.
Effective size #1 Uniformity Coefficient sand

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 62.7 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ (Well Driller) Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-06B

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 9/5/17 **COMPLETED** 10/17/17
GROUND ELEVATION 852.42 ft **HOLE SIZE** 10/3.75 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger/Wire Line/Air Rotary
AT TIME OF DRILLING ---
LOGGED BY M. Karafa/ATL **CHECKED BY**
AT END OF DRILLING ---
NOTES 54 ft bgs switched from HSA to rotary/mobile drill B57
AFTER DRILLING 77.80 ft / Elev 774.62 ft btoc

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0							Casing Type: steel
5	SPT 1	100	2-3-4-5 (7)		SILTY SAND (SM)-brown, moist, dense, very fine sand with silt and few mica 5.0 847.4 6.0 846.4	PID = 0 PID = 0	
10	SPT 2	100	4-3-2-4 (5)		SILTY SAND (SM)- saprolite, silty sand, brown with yellow mottling, moist, loose, very fine to medium grained sand with silt, clay, and mica. @ 9.5'- manganese black mottling 10.0 842.4	PID = 0 PID = 0	6" Steel Casing
15	SPT 3	100	3-2-5-5 (7)		SILTY SAND (SM)- saprolite, silty sand, brown with mica and lense, moist, loose, very fine to medium grain sand with silt and mica 16.0 836.4	PID = 0 PID = 0	
20	SPT 4	100	1-2-3-5 (5)		SILTY SAND (SM)- saprolite, silty sand, brown, wet, very loose, very fine to medium grain sand with silt and mica 21.0 831.4	PID = 0 PID = 0	
25	SPT		4-4-8-11			PID = 0	

(Continued Next Page)

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-06B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
25	5	100	(12)		SILTY SAND (SM)- saprolite, silty sand, brown with yellow and black mottling, wet, loose, very fine to medium grain sand with mica and silt *(continued)*	PID = 0	
					26.0 826.4		
30	SPT 6	100	4-8-10-11 (18)		SILTY SAND (SM)- same as above, more mica (micaceous)	PID = 0 PID = 0	
					31.0 821.4		
35	SPT 7	100	6-6-8-8 (14)		SAND (SP)- poorly graded saprolite, light brown, wet, medium dense, micaceous, fine to medium grain sand with black manganese stain	PID = 0 PID = 0	Portland I/II with 3-5% Bentonite
					36.0 816.4		
40	SPT 8	100	1-2-5-8 (7)		SAND (SP)- same as above	PID = 0 PID = 0	
					41.0 811.4		
45	SPT 9	100	2-5-7-8 (12)		SAND (SP)- saprolite, poorly graded sand, brown, wet, very loose, fine sand with mica	PID = 0 PID = 0	
					SAND (SP)- saprolite, poorly graded sand, greenish gray, wet, loose, completely weathered rock with foliation, mica and black manganese stain		
					46.0 806.4		
50	SPT 10	100	3-3-5-7 (8)		WELL GRADED SAND (SW)- saprolite, well graded sand, greenish gray with black, yellow, and white mottling, loose, completely weathered rock with foliation, mica, fine to coarse grain sand, calcite, biotite, wet	PID = 0 PID = 0	
					51.0 801.4		

(Continued Next Page)

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WELL NUMBER MW-06B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
55	RC 1	100 (84)			BED ROCK- boitite gneiss, black with white and gray, quartz, plagioclase, biotite, mica, medium to fine grain, slightly weathered, strong rock, foliated	PID = 0	
					56.1 796.3		
	RC 2	97 (0)			BED ROCK - biotite gneiss, black with gray, plagioclase, quartz, biotite mica, medium to fine grain, partially weather, highly fractured, oxidized mottling, foliated, strong	PID = 0	
					58.6 793.8		
60	RC 3	100 (89)			BED ROCK- biotite gneiss, black, quartz, biotite mica, plagioclase, amphibolite, medium to fine grain, slightly weathered, very strong, highly foliated	PID = 0	
					60.4 792.0		
	RC 4	100 (94)			BED ROCK- same as above	PID = 0	
65					65.5 786.9		
	AU 1				BED ROCK- biotite gneiss, fresh, powder and dust, dry	PID = 0	
70					70.5 781.9		
	AU 2				BED ROCK- same as above	PID = 0	
75					75.5 776.9		
	AU 3				BED ROCK- same as above	PID = 0	Open Borehole
80					80.5 771.9		
					BED ROCK - white and gray granite chips, fresh, quartz, biotite, fledspar	PID = 0	

(Continued Next Page)

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Atlanta, GA

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WELL NUMBER MW-06B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
85	AU 4				BED ROCK - white and gray granite chips, fresh, quartz, biotite, fledspar *(continued)* 85.5 766.9		

Refusal at 54.0 feet.
Bottom of borehole at 85.5 feet.

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-06B
Open hole well

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-11117

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 85.5 ft. Date Started: 9-5-17 Date Completed: 10-17-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4-inch
Type: ☐ PVC ☐ Galvanized ☑ Steel ☐ Other
4 in. to 65.5 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: No screen Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☐ Yes ☑ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 65.5 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ (Well Driller) Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-09B

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 10/3/17 **COMPLETED** 10/17/17
GROUND ELEVATION 843.71 ft **HOLE SIZE** 10/3.75 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger/Wire Line/Air Rotary
AT TIME OF DRILLING ---
LOGGED BY M. Karafa/ATL **CHECKED BY**
AT END OF DRILLING ---
NOTES 86 ft bgs switched from HSA to rotary/mobile drill B57
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0							
5	SPT 1		2-5-3-7 (8)		SILTY SAND (SM) - brown, moist, loose, very fine sand with silt and clay, odor. 5-6'- saprolite, silty sand, dark brown, very loose, wet, fine to medium grain sand with silt and mica, odr.	PID = 933 PID = 960	
					6.0 / 837.7		
10	SPT 2		3-4-5-6 (9)		CLAYEY SAND (SC)- saprolite, clayey sand, light brown, moist, loose, very fine sand with clay and mica	PID = 66.6	
					9.5 / 834.2		
					10.0 / 833.7 POORLY GRADED SAND (SP)- saprolite, poorly graded sand, reddish brown with yellow mottling, wet, very loose, fine sand with mica and silt	PID = 100	6" Steel Casing
15	SPT 3		2-3-3-5 (6)		POORLY GRADED SAND (SP)- same as above	PID = 146.3 PID = 50.1	
					16.0 / 827.7		
20	SPT 4		2-3-4-4 (7)		POORLY GRADED SAND (SP)- same as above, small micaceous lenses, @ 20.5'- very saturated.	PID = 62.3 PID = 913	
					21.0 / 822.7		
25	SPT		3-4-5-8			PID = 62.2	

(Continued Next Page)

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WELL NUMBER MW-09B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
25	5		(9)		POORLY GRADED SAND (SP)- saprolite, very highly weathered rock structures, reddish brown with white and yellow mottling, wet, very loose, fine sand with mica *(continued)* 26.0 / 817.7	PID = 36	
30	SPT 6		4-7-7-11 (14)		POORLY GRADED SAND (SP)- same as above, small micaceous lenses, medium dense 31.0 / 812.7	PID = 20.1 PID = 7.5	
35	SPT 7		2-4-6-6 (10)		POORLY GRADED SAND (SP)- saprolite, gray, wet, very loose, very micaceous with fine sand, highly weathered rock structure 36.0 / 807.7	PID = 5.6 PID = 0.7	
40	SPT 8		3-9-6-11 (15)		POORLY GRADED SAND (SP)- saprolite, greenish-gray, wet, very loose, micaceous with fine sand and layers of highly weathered rock in 3" bands 41.0 / 802.7	PID = 2.7 PID = 0.7	
45	SPT 9		3-4-6-7 (10)		POORLY GRADED SAND (SP)- same as above, very micaceous 46.0 / 797.7	PID = 0.7 PID = 0.5	
50	SPT 10		3-5-6-9 (11)		POORLY GRADED SNAD (SP)- same as above, lenses of weathered rock structures and yellow mottling at 50.5' 51.0 / 792.7	PID = 0.4 PID = 0.3	

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 12/20/17 09:39 - \\ATLFPP01\PROJ\KINDERMORGAN\654558LEWISDRER\GINT\9-26-17\DATABASE\LEWIS DRIVE ISA BORING LOGS.GPJ

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Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-09B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
55	SPT 11		5-6-9-12 (15)		SILTY SAND (SM)- saprollite, greenish-gray, wet, very loose, micaceous, fine sand with silt and mica, yellow mottling at 54.5'	PID = 0.3 PID = 0.5	
					56.0 787.7		
60	SPT 12		5-6-10-14 (16)		SILTY SAND (SM)- same as above, pieces of weathered rock	PID = 0.2 PID = 0	
					61.0 782.7		
65	SPT 13		4-6-8-11 (14)		SILTY SAND (SM)- saprolite, greenish-gray with yellow mottling, loose, micaceous silty sand with lenses, very highly weathered rock	PID = 0 PID = 0	← Portland I/II with 3-5% Bentonite
					66.0 777.7		
70	SPT 14		9-12-13-21 (25)		SILTY SAND (SM)- same as above	PID = 0	
					70.0 773.7		
					WELL GRADED SAND (SW)- saprolite, greenish-gray with yellow mottling, wet, dense, very highly weathered rock with rock structures, very fine to coarse grained sand and mica	PID = 0	
					71.0 772.7		
75	SPT 15		6-7-15-17 (22)		WELL GRADED SAND (SW)- same as above, more micaceous, highly foliated	PID = 0 PID = 0	
					76.0 767.7		
80	SPT 16		13-20-40-50 (60)		POORLY GRADED SAND (SP)- saprolite, greenish-gray with yellow mottling, very dense, wet, very highly weathered micaceous bed rock with mica, highly foliated	PID = 0 PID = 0	
					81.0 762.7		

(Continued Next Page)

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WELL NUMBER MW-09B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
85	SPT 17		33-50		POORLY GRADED SAND (SP)- same as above	PID = 0	
					86.0	PID = 0	
					757.7		
	SS 1				NO SAMPLING DONE		
90							
	SS 2						
95							
	SS 3						
100							
	SS 4						
105							
	SS 5						
110							

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 12/20/17 09:39 - \\ATLFPP01\PROJ\KINDERMORGAN\654558LEWISDRER\GINT\9-26-17\DATABASE\LEWIS DRIVE ISA BORING LOGS.GPJ

(Continued Next Page)

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WELL NUMBER MW-09B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
115	SS 6				NO SAMPLING DONE *(continued)*		
	SS 7				116.5 727.2		
120	AU 1	111 (78)			BED ROCK- biotite gneiss black with white and gray, quartz and quartz veins, biotite in plagioclase, fine to medium grained, slightly weathered, foliated, blotched to mottled in 116.5-117.5 ft bgs, hard rock, same iron staining on joint surfaces, moderately fractured, quartz blotched	PID = 0	
					121.0 722.7		
125	AU 2	100 (88)			BED ROCK- biotite gneiss, black with white and gray, quartz plagioclase, biotite mica, fine to medium grained, moderately fractured, mottling, some iron staining/oxidation, foliations, hard rock, slight weathering, 124.5-125 ft bgs quartz blotching	PID = 0	
					126.0 717.7		
130	AU 3	100 (95)			BED ROCK- biotite gneiss, black and white with gray, quartz, plagioclase, and biotite mica, fine to medium grained, medium fracturing, mottled, some iron staining/oxidation on fractures, strong rock, foliated	PID = 0	
					131.5 712.2		
135					BED ROCK- biotite gneiss, biotite quartz, powder, dust, dry		
					136.0 707.7		
					BED ROCK- same as above		

(Continued Next Page)

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WELL NUMBER MW-09B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
140					BED ROCK- same as above *(continued)*		
					141.0 702.7		Open Borehole
					BED ROCK- same as above		
145					146.0 697.7		
					BED ROCK- same as above		
150					151.0 692.7		

Refusal at 116.5 feet.
Bottom of borehole at 151.5 feet.

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-09B
Open hole well

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-11117

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 151 ft. Date Started: 10-3-17 Date Completed: 10-17-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4-inch
Type: ☐ PVC ☐ Galvanized ☑ Steel ☐ Other
4 in. to 131 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: No screen Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☐ Yes ☑ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 131 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ (Well Driller) Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

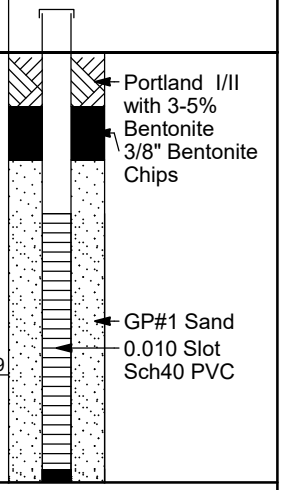
CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-43

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 10/20/17 **COMPLETED** 10/20/17
GROUND ELEVATION 815.92 ft **HOLE SIZE** 8.5/2 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger/Wire Line/Air Rotary
AT TIME OF DRILLING ---
LOGGED BY M. Karafa **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
5	SPT 1	100	2-3-7-6 (10)		SILTY SAND- silty sand (SM), 5Y 8/1 white, 5Y 4/1 dark grey, 2.5Y 7/8 yellow, damp, fine grain, banded, soft	
					6.0 809.9	



Bottom of borehole at 8.0 feet.

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-43
Bentonite seal 1-2' bgs

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-10964

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 10-20-17
7.5 ft. Date Completed: 10-20-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2-inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 2.5 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: PVC Diam.: 2-inch
Slot/Gauge: 0.010-inch Length: 5 feet
Set Between: 2.5 ft. and 7.5 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 2 ft. to 8 ft.
Effective size #1 Uniformity Coefficient sand

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 1 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Well Driller Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-43B

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 10/18/17 **COMPLETED** 10/19/17
GROUND ELEVATION 816.08 ft **HOLE SIZE** 10/3.75 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger/Wire Line/Air Rotary
AT TIME OF DRILLING ---
LOGGED BY M. Karafa **CHECKED BY**
AT END OF DRILLING ---
NOTES 23.5 ft bgs switched from HSA to rotary/mobile drill B57
AFTER DRILLING 44.35 ft / Elev 771.73 ft btoc

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0	SPT 1	100	1-2-1-2 (3)	MW-43B-01-02 at 1-2', for BTEX and NAPH		SILTY SAND- silty sand (SM), 10YR 5/3 brown, dry, soft, fine grain, some micas 2.0 814.1	PID = 0.2	
5	SPT 2	83	2-5-10-6 (15)			SILTY SAND- silty sand (SM), 5Y 8/1 white, 5Y 4/1 dark grey, 2.5Y 7/8 yellow, damp, fine grain, soft, banded, micaceous, saprolite 6.0 810.1	PID = 13.9	
10	SPT 3	67	1-1-2-1 (3)			SILTY SAND- same as above, wet 11.0 805.1	PID = 9.3	4" Steel Casing
15	SPT 4	63	16-9-7-13 (16)			SILTY SAND- same as above, 2.5YR 4/4 brown, 5YR 3/1 dark grey, 7.5YR 5/3 brown, 7.5YR 6/8 reddish yellow 16.0 800.1	PID = 9.1	Portland I/II with 3-5% Bentonite
20	SPT 5	50	5-5-7-9 (12)			SILTY SAND- same as 14'-16', with weathered rock 21.0 795.1	PID = 0	
25						BEDROCK- biotite gneiss, very strong, white with dark grey, fresh, competent, slightly fractured		

(Continued Next Page)

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-43B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	TESTS	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
25						26.1 790.0 BEDROCK- same as above, no natural fractures		
30						31.5 784.6 BEDROCK- granitic chips, quartz, feldspar, dry, powder dust		
35						36.5 779.6 BEDROCK- same as above		
40						41.5 774.6 BEDROCK- same as above		Open Borehole
45						46.0 770.1 BEDROCK- same as above		
50						51.5 764.6		

Refusal at 23.0 feet.
Bottom of borehole at 51.5 feet.

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-43B
Open hole well

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-10964

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 51 ft. Date Started: 10-18-17 Date Completed: 10-19-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4-inch
Type: ☐ PVC ☐ Galvanized ☑ Steel ☐ Other
4 in. to 31 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: No screen Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☐ Yes ☑ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 31 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Well Driller Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

WELL NUMBER MW-46

CH2M HILL
6600 Peachtree Dunwoody Road, 400 Embassy Row, Suite 600
Atlanta, GA 30328

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 9/13/17 **COMPLETED** 9/13/17
GROUND ELEVATION 842.43 ft **HOLE SIZE** 8.5 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Geoprobe 8040DT with 4.25-in ID HSA
AT TIME OF DRILLING ---
LOGGED BY J. McCann **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0								
5	SPT 1	100	10-9-9-8 (18)	SM		(SM) SILTY SAND: yellowish brown, dry, medium dense, non-plastic	PID = 0.7	
						6.0 836.4	PID = 0.4	
10	SPT 2	63	2-2-3-3 (5)	SP		(SP) SAND WITH SILT: white and black with some yellowish brown weathering, wet, loose non-plastic	PID = 0.2	
						11.0 831.4	PID = 0.2	

Portland I/II with 3-5% Bentonite
3/8" Bentonite Chips
GP#1 Sand
0.010 Slot Sch40 PVC
Flat bottom cap

Bottom of borehole at 14.5 feet.

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-46
Bentonite seal 5-7' bgs

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-11117

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 14 ft. Date Started: 9-13-17 Date Completed: 9-13-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2-inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 9 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: PVC Diam.: 2-inch
Slot/Gauge: 0.010-inch Length: 5 feet
Set Between: 9 ft. and 14 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 7 ft. to 14 ft.
Effective size #1 Uniformity Coefficient sand

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 5 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1988 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ (Well Driller) Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

WELL NUMBER MW-47

CH2M HILL
6600 Peachtree Dunwoody Road, 400 Embassy Row, Suite 600
Atlanta, GA 30328

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 9/14/17 **COMPLETED** 9/14/17
GROUND ELEVATION 839.89 ft **HOLE SIZE** 8.5 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Geoprobe 8040DT with 4.25-in ID HSA
AT TIME OF DRILLING ---
LOGGED BY M. Karafa **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0								
5	SPT 1	100	4-6-7-9 (13)		ML		(ML) SILTY CLAY: 2.5Y 4/6 red, dry, fine grained, dense, micaceous, low plasticity	PID = 0.8
							6.5 / 833.4	
10	SPT 2	75	2-2-3-4 (5)	Collected sample MW-47-09-11 for BTEX and Naphthalene	ML		(ML) CLAYEY SILT: 7.5YR 7/8 reddish yellow, 2.5YR 4/6 red, white and black bands, dry, fine grained, moderate dense, banded saprolite	PID = 0.7
							11.5 / 828.4	
15	SPT 3	100	1-1-2-4 (3)		ML		(ML) SILTY CLAY: 7.5 Y 7/8 reddish yellow, wet, fine grained, soft, slightly banded, low plasticity	PID = 1.2
							16.0 / 823.9	
					ML		16.5 / 823.4 (ML) CLAYEY SILT: 2.5 YR 4/6 red, 7.5 YR 5/4 brown, black bands, wet, fine grained, soft, micaceous saprolite	
20	SPT 4	71	3-4-3-5 (7)		SM		(SM) SILTY SAND: white, grey and black bands, wet, fine grained, loose, some weathered rock, fray, micaceous saprolite	PID = 1
							21.2 / 818.7	
					ML		21.5 / 818.4 (ML) SILTY CLAY: 7.5 YR 6/6 reddish yellow, wet, fine grained, soft	
							Bottom of borehole at 21.5 feet.	

WELL DIAGRAM

- Portland I/II with 3-5% Bentonite
- 3/8" Bentonite Chips
- GP#1 Sand
- 0.010 Slot Sch40 PVC
- Flat bottom cap

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 11/9/17 12:48 - \\ATLFPP01\PROJ\KINDERMORGAN\654558LEWISDRER\GINT\9-26-17\DATABASE\LEWIS DRIVE ISA BORING LOGS.GPJ

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-47
Bentonite seal 4-8' bgs

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-11117

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20 ft. Date Started: 9-14-17 Date Completed: 9-14-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2-inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 10 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: PVC Diam.: 2-inch
Slot/Gauge: 0.010-inch Length: 10 feet
Set Between: 10 ft. and 20 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 8 ft. to 20 ft.
Effective size #1 Uniformity Coefficient sand

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 4 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Well Driller Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-48B

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 10/12/17 **COMPLETED** 10/18/17
GROUND ELEVATION 829.53 ft **HOLE SIZE** 10/3.75 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger/Wire Line/Air Rotary
AT TIME OF DRILLING ---
LOGGED BY M. Karafa **CHECKED BY**
AT END OF DRILLING ---
NOTES 63 ft bgs switched from HSA to rotary/mobile drill B57
AFTER DRILLING 23.95 ft / Elev 805.58 ft btoc

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0							
5	SPT 1	100	3-5-7-11 (12)		SILTY SAND- silty sand (SM), 2.5YR 5/8 red, 2.5Y 7/6 yellow, mottled dry, fine grained, dense 6.0 823.5	PID = 0	
10	SPT 2	100	2-5-5-6 (10)		SILTY SAND- silty sand (SM), 2.5YR 5/8 red, 2.5Y 7/6 yellow, 2.5Y 7/1 light grey, mottled, dry, fine grain, dense 11.0 818.5	PID = 0	4" Steel Casing
15	SPT 3	100	2-2-3-6 (5)		SILTY SAND- silty sand (SM), 10YR 7/8 yellow, 10YR 5/6 yellowish brown, 10YR 7/4 pale brown, black, damp, fine grain, soft, banded, micaceous, saprolite 16.0 813.5	PID = 0	
20	SPT 4	100	3-3-4-7 (7)		SILTY SAND- same as above, weathered rock, 20.5'-21' has quartz and feldspar 21.0 808.5	PID = 0	
25	SPT		2-3-4-7		SILTY SAND- same as above		

(Continued Next Page)

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-48B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
25	5	100	(7)		SILTY SAND- same as above *(continued)* 26.0 803.5	PID = 0	
30	SPT 6	67	3-5-8-8 (13)		SILTY SAND- same as above, wet, at 30'10"-31' subangular quartz fragments up to .25" diameter 31.0 798.5	PID = 0.2	
35	SPT 7	100	3-1-2-3 (3)		CLAYEY SAND- clayey sand (SC) with some gravel, 10YR 7/8, black and white, 7.5YR 6/6 reddish yellow, wet, fine grain, soft, strong, banded saprolite 36.0 793.5	PID = 1	Portland I/II with 3-5% Bentonite
40	SPT 8	33	4-5-8-11 (13)		CLAYEY SAND- clayey sand (SC), 7.5YR 6/6 reddish yellow, light grey, 2.5Y 7/6 reddish yellow, black, wet, fine grain, dense, micaceous banding, saprolite last 3" with pea green tint in color 41.0 788.5	PID = 1.7	
45	SPT 9	71	4-7-7-9 (14)		CLAYEY SAND- same as above, no green tint 46.0 783.5	PID = 0	
50	SPT 10	83	2-10-12 (12)		SILTY SAND- silty sand (SM), 2.5Y 5/3 light olive brown, wet, fine grain, soft, banded, micaceous, saprolite, some weathered quartz in top of spoon 51.0 778.5	PID = 2.2	

(Continued Next Page)

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-48B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
55	SPT 11	100	8-10-16-22 (26)		SILTY SAND- silty sand (SM), 2.5Y 5/3 light olive brown, from 54-55'4" 10YR 5/4 yellowish brown, white, 10YR 6/4 light yellowish brown, iron stainng at 55'4" to 56', wet, fine grain, dense, banded micaceous, saprolite 56.0 773.5	PID = 2.5	
60	SPT 12	46	31-32-50 (82)		SILTY SAND- same as 55'4"-56' 61.0 768.5	PID = 2.2	
65	RC 1	100 (89)			BEDROCK- biotite gneiss, very strong, dark grey, light grey foliation, fresh, competent, slightly fractured, 63'2" to 63'5" moderately decomposed, slight disintegrated, iron staining 66.5 763.0	PID = 0	
70	RC 2	100 (85)			BEDROCK- same as above, begin air rotary at 71.5' 71.5 758.0	PID = 0	
75	AU 1				BEDROCK- biotite gneiss, quartz, biotite, dry, dust, powder 76.5 753.0	PID = 0	
80	AU 2				BEDROCK- same as above 81.5 748.0	PID = 0	Open Borehole
					BEDROCK- same as above	PID = 0	

(Continued Next Page)

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-48B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
85	AU 3				BEDROCK- same as above *(continued)*		
					86.5 743.0		
	AU 4				BEDROCK- same as above	PID = 0	
90					91.5 738.0		
					Refusal at 63.0 feet. Bottom of borehole at 91.5 feet.	PID = 0	

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: **COUNTY:** Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-48B
Open hole well

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-11117

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 91 ft. Date Started: 10-12-17 Date Completed: 10-18-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4-inch
Type: ☐ PVC ☐ Galvanized ☑ Steel ☐ Other
4 in. to 71 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: No screen Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☐ Yes ☑ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 71 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Well Driller Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

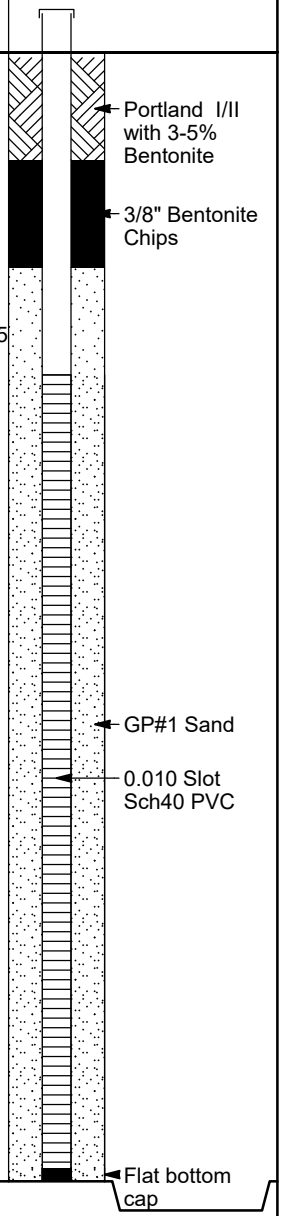
WELL NUMBER MW-49

CH2M HILL
6600 Peachtree Dunwoody Road, 400 Embassy Row, Suite 600
Atlanta, GA 30328

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 9/14/17 **COMPLETED** 9/14/17
GROUND ELEVATION 843.65 ft **HOLE SIZE** 8.5 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Geoprobe 8040DT with 4.25-in ID HSA
AT TIME OF DRILLING ---
LOGGED BY M. Karafa **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0								
5	SPT 1	83	4-4-4-4 (8)	Collected sample MW-49-4-6 and MW-49-4-6-FD for BTEX and Naphthalene	SM		(SM) SILTY SAND (SM), 10YR 6/8 brownish yellow, dry, fine grained, loose, micaceous	PID = 130.5
6.0								837.7
10	SPT 2	75	2-2-3-5 (5)		SM		(SM) SAME AS ABOVE	PID = 13.1
11.0								832.7
15	SPT 3	100	1-3-5-6 (8)		SM		(SM) SAME AS ABOVE: moist to very moist	PID = 4.5
16.0								827.7
20	SPT 4	100	3-4-5-6 (9)		SM		(SM) SAME AS ABOVE: wet	PID = 184
21.0								822.7

Bottom of borehole at 21.0 feet.



D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: COUNTY: Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-49
Bentonite seal 2-4' bgs

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-11117

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 21 ft. Date Started: 9-14-17 Date Completed: 9-14-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2-inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 6 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: PVC Diam.: 2-inch
Slot/Gauge: 0.010-inch Length: 15 feet
Set Between: 6 ft. and 21 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 4 ft. to 21 ft.
Effective size #1 Uniformity Coefficient sand

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 2 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. **CERT. NO.:** 2116
Address: (Print) 30 Grant Park Place, Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ (Well Driller) Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-50B

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 10/5/17 **COMPLETED** 10/17/17
GROUND ELEVATION 847.11 ft **HOLE SIZE** 10/3.75 inches
DRILLING CONTRACTOR AE Drilling, Piedmont, SC
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger/Wire Line/Air Rotary
AT TIME OF DRILLING ---
LOGGED BY M. Karafa **CHECKED BY**
AT END OF DRILLING ---
NOTES 82 ft bgs switched from HSA to rotary/mobile drill B57
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0							
5	SPT 1	100	4-5-7-8 (12)		CLAYEY SAND- (SC), 2.5YR 5/6 red with 10YR8/4 very pale brown, mottled, dry, fine grain, dense, micas 6.0 841.1	PID = 0	
10	SPT 2	100	2-4-5-6 (9)		CLAYEY SAND- same as above, silty sand 11.0 836.1	PID = 0	4" Steel Casing
15	SPT 3	100	3-2-5-5 (7)		SILTY SAND- (SM), 2.5Y 6/6 light red, olive yellow, dry, medium density, fine grain, large banding, micaceous, saprolite 16.0 831.1	PID = 0	
20	SPT 4	88	2-3-3-5 (6)		SILTY SAND- (SM), 2.5Y 6/4 light yellow, light brown, damp, fine grain, medium dense, banded, micaceous 21.0 826.1	PID = 0	
25	SPT		1-1-2-3		SILTY CLAY- (CL), 2.5Y 7/8 yellow, 2.5YR 5/6 red, wet, fine grain, soft, banded	PID = 0	

(Continued Next Page)

CH2M
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-50B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
25	5	100	(3)		SILTY CLAY- (CL), 2.5Y 7/8 yellow, 2.5YR 5/6 red, wet, fine grain, soft, banded *(continued)* 26.0 / 821.1		
30	SPT 6	100	2-2-3-6 (5)		SILTY SAND- (SM), white, 10YR 5/3 brown, wet, fine grain, soft, banded micaceous, weathered quartz grains 31.0 / 816.1	PID = 0	
35	SPT 7	100	2-3-5-8 (8)		SILTY SAND- same as above with 34'7"-35' same as 24'-26' and 35'3"-35'9" same as 19'-21' 36.0 / 811.1	PID = 0	
40	SPT 8	100	2-2-2-5 (4)		SANDY CLAY- (CL), 10YR 6/8 brownish yellow, white, wet, fine grain, mod dense, banded 41.0 / 806.1	PID = 0	
45	SPT 9	88	2-3-6-7 (9)		SANDY CLAY- same as above, some weathered quartz with white bands 46.0 / 801.1	PID = 0.2	
50	SPT 10	100	3-6-6-7 (12)		SANDY CLAY- same as above 51.0 / 796.1	PID = 0.3	Portland I/II with 3-5% Bentonite

(Continued Next Page)

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Fax: 770-604-9183

WELL NUMBER MW-50B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
55	SPT 11	100	3-5-6-7 (11)		SANDY CLAY- same as above, no white bands 56.0 791.1	PID = 0.2	
60	SPT 12	88	6-7-10-13 (17)		CLAYEY SAND- (SC), 10YR 6/8 brownish yellow, wet, fine grain, dense, trace gravel 61.0 786.1	PID = 0	
65	SPT 13	88	3-6-8-9 (14)		CLAYEY SAND- same as above 66.0 781.1	PID = 0	
70	SPT 14	100	5-8-7-8 (15)		CLAYEY SAND- same as above from 69'-70'6". Silty sand (SM) from 70'6"-70'9" with 10YR 6/6, wet, fine to coarse grain quartz gravel. 70'9"-71' is silty sand (SM), 10YR 4/3 brown, wet, fine grain, thin bands, micaceous, saprolite 71.0 776.1	PID = 0	
75	SPT 15	75	4-4-7-11 (11)		SILTY SAND- (SM), 10YR 4/3 brown, 10YR 5/3 yellowish red, wet, fine grain, dense, banded 76.0 771.1	PID = 0	
80	SPT 16	100	8-11-50-50 (61)		SILTY SAND- (SM), 5Y 6/4 pale olive with 2.5Y 5/6 olive brown, damp, fine grain, banded, weathered rock at bottom of spoon 81.0 766.1	PID = 0.2	
						PID = 0	

(Continued Next Page)

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Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-50B

CLIENT Plantation Pipe Line Company **PROJECT NAME** Lewis Drive Remediation

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
85	RC 1	67 (17)			BEDROCK- biotite gneiss, strong, fresh, medium dark, grey and white, some iron straining, foliated, slightly decomposed, fractured intently *(continued)*		
					86.4 760.7		
90	RC 2	100 (100)			BEDROCK- biotite gneiss, strong, very dark grey and white, biotite, quartz, intensely foliated, fresh, unfractured, quartz pegmatite at 88'9"-89'	PID = 0	
					91.4 755.7		
95	RC 3	100			BEDROCK- same as above	PID = 0	
					96.4 750.7		
100	AU 4				BEDROCK- biotite gneiss, biotite, quartz, powder, dry to 102'5", wet 100.5' to 101'	PID = 0	
					101.4 745.7		Open Borehole
105	AU 5				BEDROCK- biotite gneiss, biotite quartz, wet	PID = 0	
					106.4 740.7		

Refusal at 82.0 feet.
Bottom of borehole at 106.4 feet.

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: Plantation Pipeline (last) (first)
Address: 1000 Windward Concourse, Suite 450
City: Alpharetta State: SC Zip: 30005-0000
Telephone: Work: Home:

2. LOCATION OF WELL: COUNTY: Anderson
Name:
Street Address: Lewis Drive
City: Anderson Zip: 29627-0000
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-50B
Open hole well

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: MW-11247

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 106 ft. Date Started: 10-5-17 Date Completed: 10-17-17

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4-inch
Type: ☐ PVC ☐ Galvanized ☑ Steel ☐ Other
4 in. to 96 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☑ No

11. SCREEN:
Type: No screen Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☐ Yes ☑ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From ground surface ft. to 96 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☑
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Terry R. Creasman Jr. CERT. NO.: 2116
Address: (Print) 30 Grant Park Place
Piedmont, SC 29673
Level: A ☐ B ☐ C ☐ D ☑ (circle one)
Telephone No.: 864-288-1986 Fax No.: 864-288-2272

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Well Driller Date: 11/9/17

If D Level Driller, provide supervising driller's name:
William Barnes, #562-A

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

Attachment E
Bills of Lading

A&D Environmental Services

1181446

Bill of Lading / Material Manifest

A&D Job No:	Generator ID Number	Page 1 of	Emergency Response Phone	Tracking Number
219094			800-434-7750	04352

Generator's Name and Mailing Address

Kinder Morgan
112 Lewis Drive
Belton, SC 29627

Generator's site address (if different from mailing address)

Transporter 1 ☐ 2 ☐ Company Name: **A&D Environmental Services, Inc.** — US EPA ID No: **NCD98623222**

Transporter 1 ☐ 2 ☑ Company Name: **A&D Environmental Services (SC), LLC** — US EPA ID No: **SCD987598331**

☑ Designated Facility	☐ Designated Facility	☐ Designated Facility	☐ Designated Facility	☐ Designated Facility
A&D Environmental Services, Inc. 2718 Uwharrie Road Archdale, NC 27263 336-434-7750 NCD986232221	**A&D Environmental Services, Inc.** 3149 Lear Drive Burlington, NC 27215 336-229-0058 NCR000138628	**A&D Environmental Services (SC), LLC** 1915 Brentwood Street High Point, NC 27260 336-882-8000 NCR000002501	**A&D Environmental Services (SC), LLC** 1741 Calks Ferry Road Lexington, SC 29073 803-957-9175 SCD987598331	**A&D Environmental Services (SC), LLC** 305 B South Main Street Mauldin, SC 29662 803-967-3500 SCR000765677

HM	Hazardous Materials Shipping Name and Description (if applicable)	No.	Type	QTY	Wt/Vol	Profile Number
	PCW Ground Water	1	TT	4,959	G	20150163

	Petroleum Products for Recycle		No.	Type	QTY	Wt/Vol	Profile Number
X	NA1993, Diesel fuel, 3, III	ERG# 128					
X	NA1993, Fuel oil (No.1,2,4,5 or 6), 3, III	ERG# 128					
X	UN1203, Gasoline, 3, II	ERG# 128					
X	NA1270, Petroleum Oil, 3, III	ERG# 128					

Universal Waste Lamps, Batteries, Ballasts, and Electronics for Recycle

HM	No.	Type	Est. Wt.	Count	Shipping Name and Description (if applicable)	Common Name	Discrepancy
X					RQ, UN2809, Mercury contained in manufactured articles, 8, III ERG# 172	Mercury Containing Articles	
X					RQ, UN2809, Mercury, 8, III ERG# 172	Mercury	
X					RQ, UN3432, Polychlorinated biphenyls, solid, 9, II ERG# 171	TSCA Exempt PCB Lamp Ballasts	
X					UN2800, Batteries, wet, nonspillable, 8, III ERG# 154	Sealed Lead Acid Batteries	
X					UN2794, Batteries, wet, filled with acid, 8, III ERG# 154	Lead Acid Batteries	
X					UN2795, Batteries, wet, filled with alkali, 8, III ERG# 154	Wet NiCad Batteries	
X					UN3090, Lithium batteries, 9, II ERG# 138	Lithium Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	Alkaline Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III ERG# 154	NiCad Batteries	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Fluorescent lamps 4' or <	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Fluorescent lamps 4' or >	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Circular/U-tube lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Compact Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Shattershield	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	HID/MV/UV Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Incandescent Lamps	
					Non-PCB Light Ballasts for Recycle (Not DOT-Regulated)	Non-PCB Light Ballasts	
					Electronic Equipment for Recycle (Not DOT-Regulated)	Electronics	

Generator's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40CFR Part 261 or any applicable state law, and unless specifically identified above the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

	Printed / Typed Name	Signature	Month	Day	Year
Generator's / Offeror's	Janet Myers on Behalf of CH2M	Janet Myers on Behalf of CH2M	11	1	17
Transporter 1	Malcolm Terry	Malcolm Terry	11	1	17
Transporter 2					

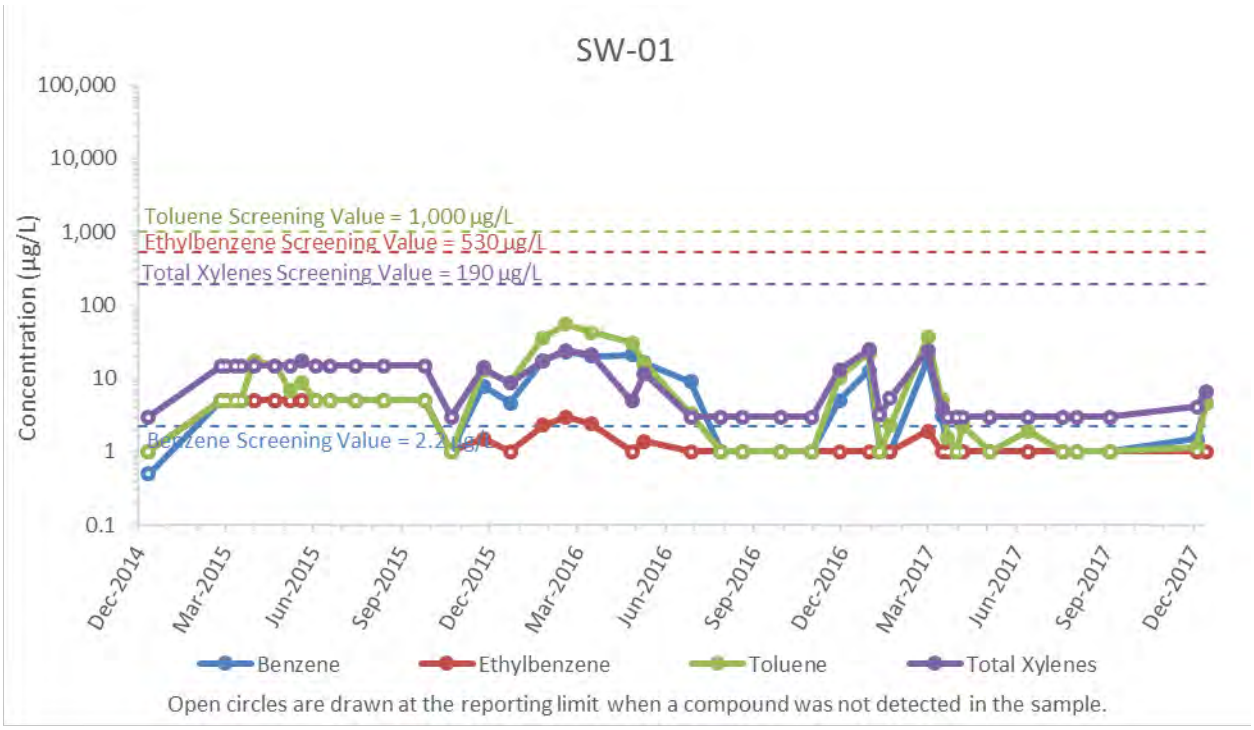
Discrepancy Indication / Additional Information:

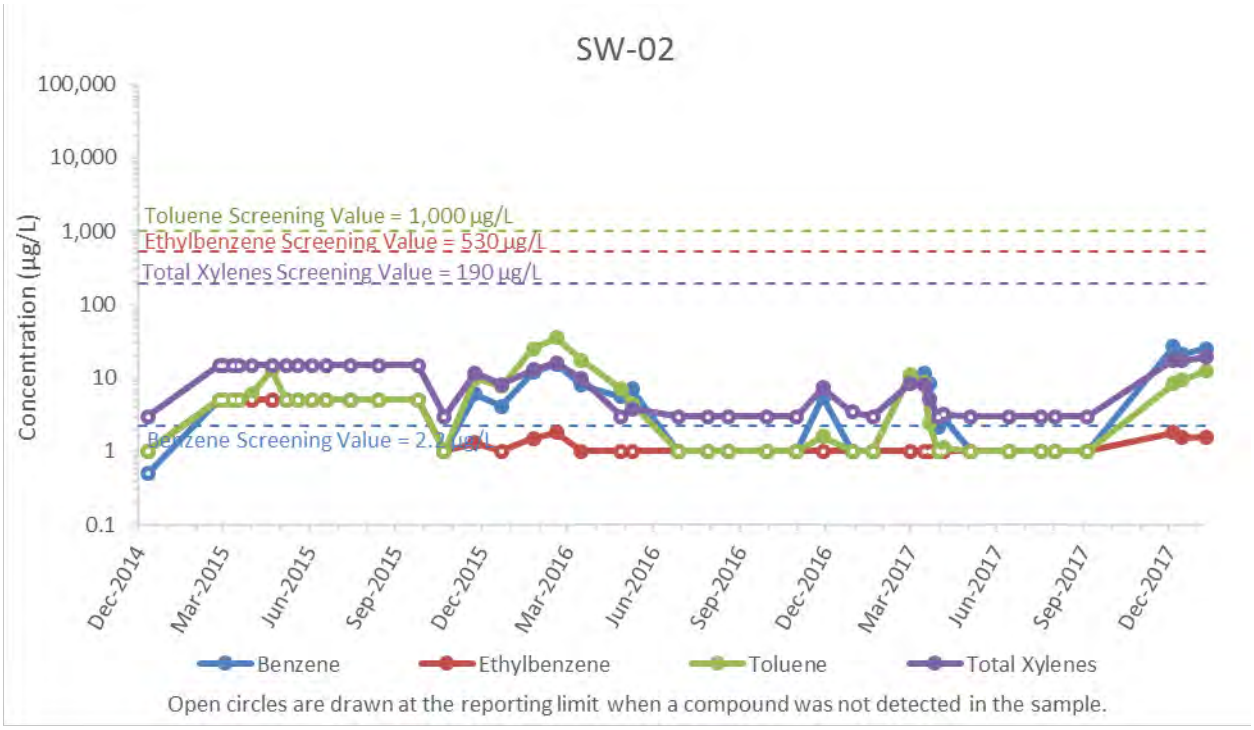
Designated Facility Certification: I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy indicated above.

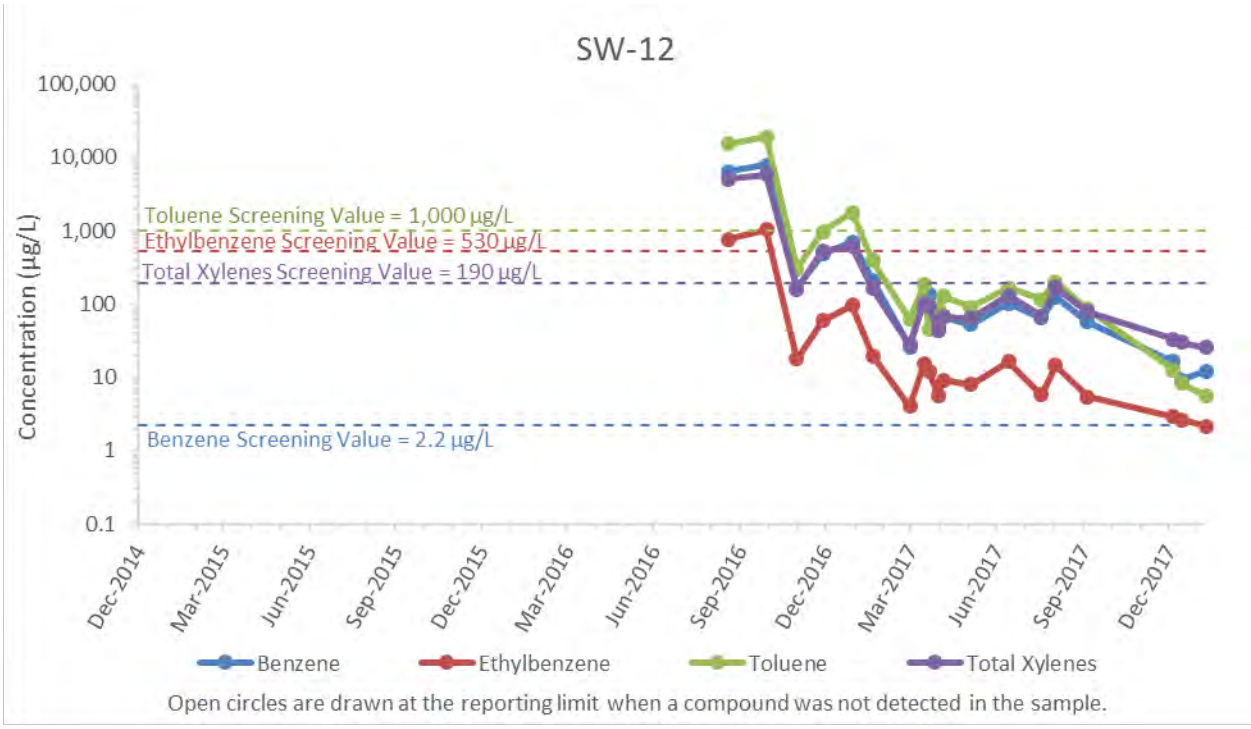
Printed / Typed Name	Signature	Month	Day	Year
Travis Clapp	T Clapp	11	01	17

DESIGNATED FACILITY TO GENERATOR

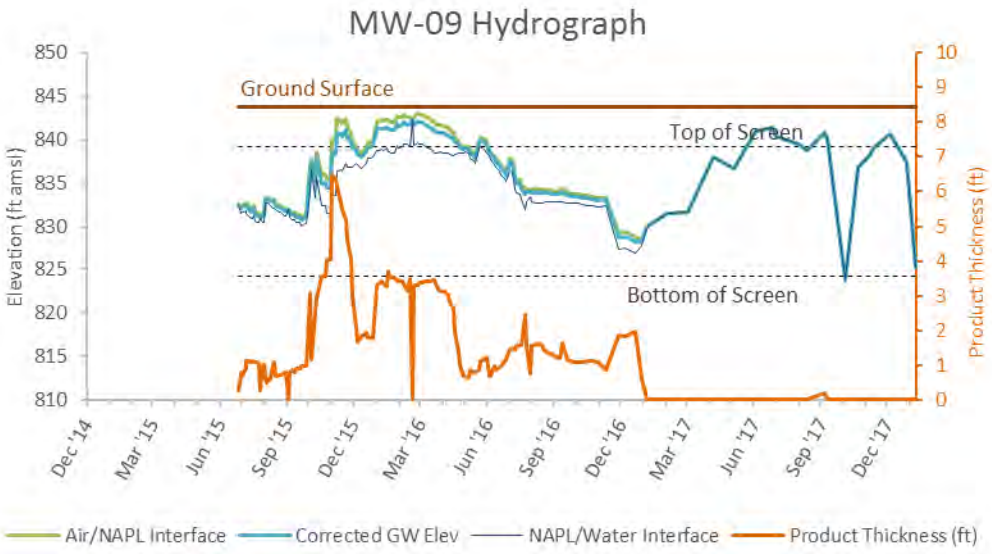
Attachment F
Surface Water Analytical Trends

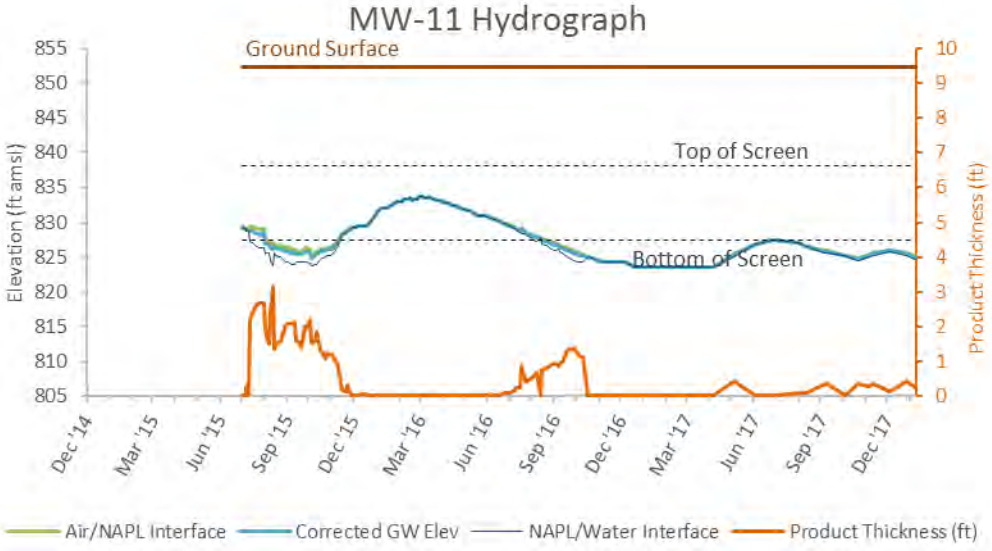

SW-01
100,000
10,000
1,000
100
10
1
0.1
Concentration (µg/L)
Toluene Screening Value = 1,000 µg/L
Ethylbenzene Screening Value = 530 µg/L
Total Xylenes Screening Value = 190 µg/L
Benzene Screening Value = 2.2 µg/L
Dec-2014
Mar-2015
Jun-2015
Sep-2015
Dec-2015
Mar-2016
Jun-2016
Sep-2016
Dec-2016
Mar-2017
Jun-2017
Sep-2017
Dec-2017
Benzene
Ethylbenzene
Toluene
Total Xylenes
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

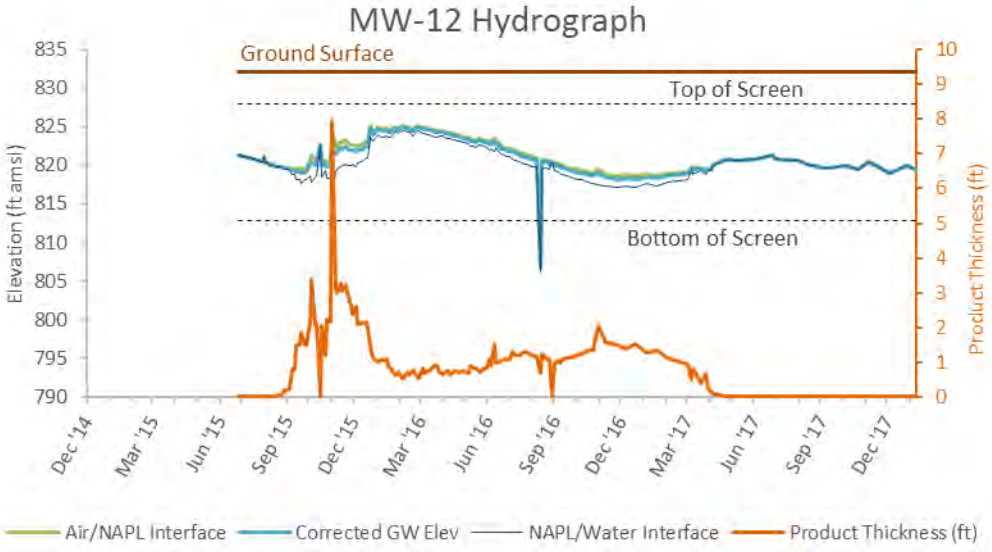

SW-02
100,000
10,000
1,000
100
10
1
0.1
Concentration (µg/L)
Toluene Screening Value = 1,000 µg/L
Ethylbenzene Screening Value = 530 µg/L
Total Xylenes Screening Value = 190 µg/L
Benzene Screening Value = 2.2 µg/L
Dec-2014
Mar-2015
Jun-2015
Sep-2015
Dec-2015
Mar-2016
Jun-2016
Sep-2016
Dec-2016
Mar-2017
Jun-2017
Sep-2017
Dec-2017
Benzene
Ethylbenzene
Toluene
Total Xylenes
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

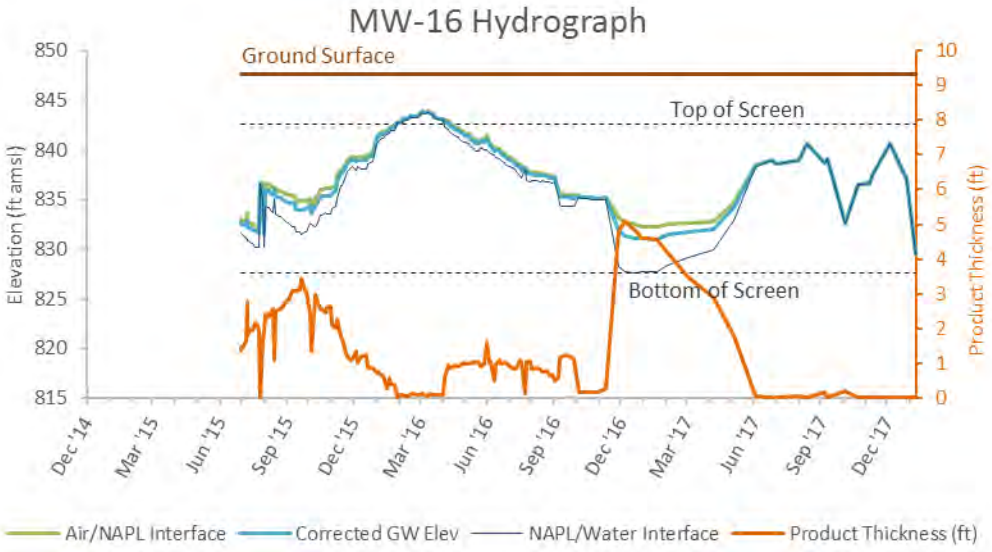

SW-12
100,000
10,000
1,000
100
10
1
0.1
Concentration (µg/L)
Toluene Screening Value = 1,000 µg/L
Ethylbenzene Screening Value = 530 µg/L
Total Xylenes Screening Value = 190 µg/L
Benzene Screening Value = 2.2 µg/L
Dec-2014
Mar-2015
Jun-2015
Sep-2015
Dec-2015
Mar-2016
Jun-2016
Sep-2016
Dec-2016
Mar-2017
Jun-2017
Sep-2017
Dec-2017
Benzene
Ethylbenzene
Toluene
Total Xylenes
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

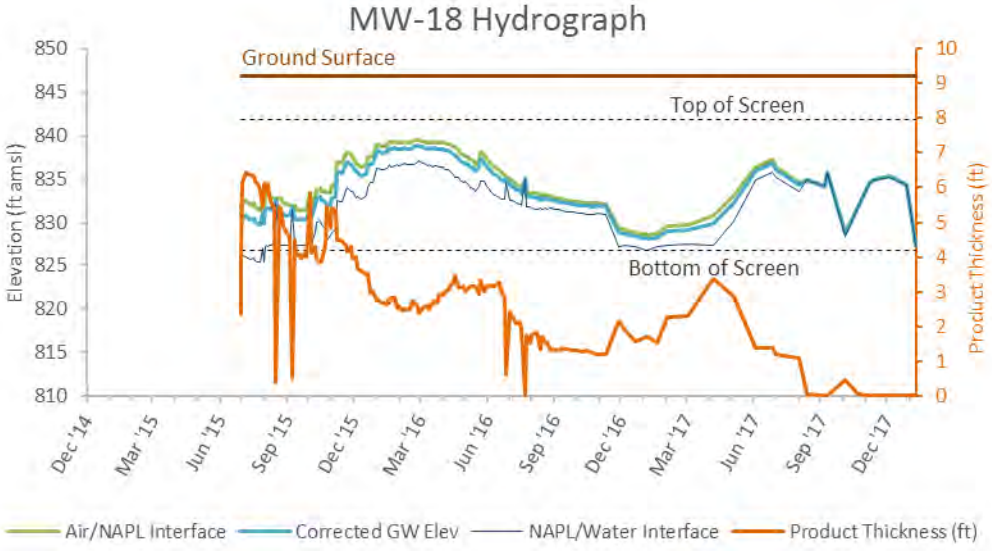
Attachment G
Product Thickness Trends

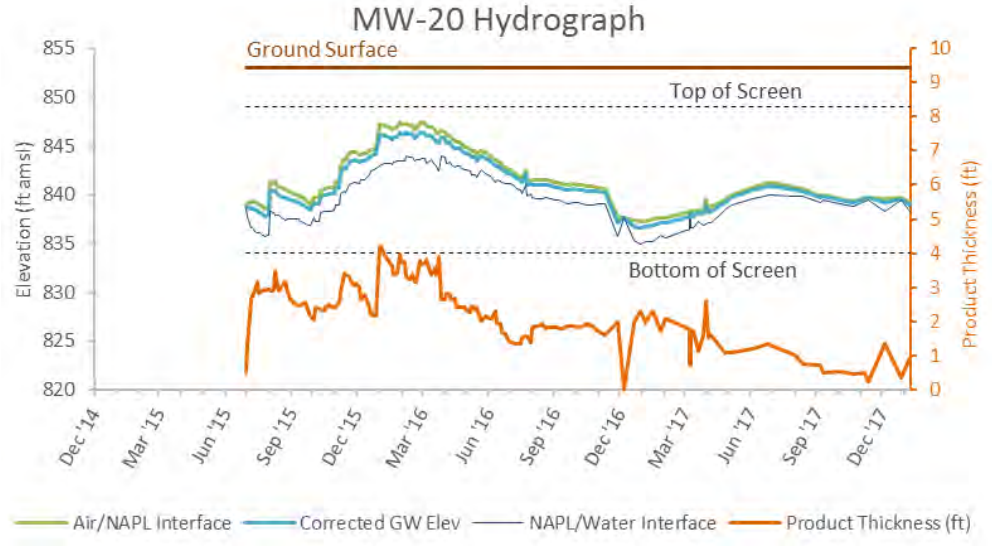

MW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

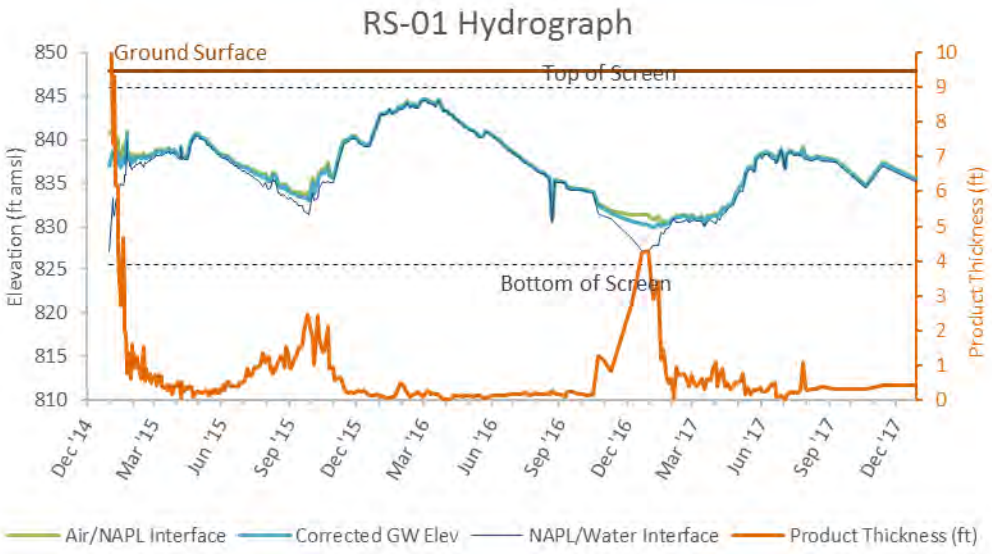

MW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
810
805
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

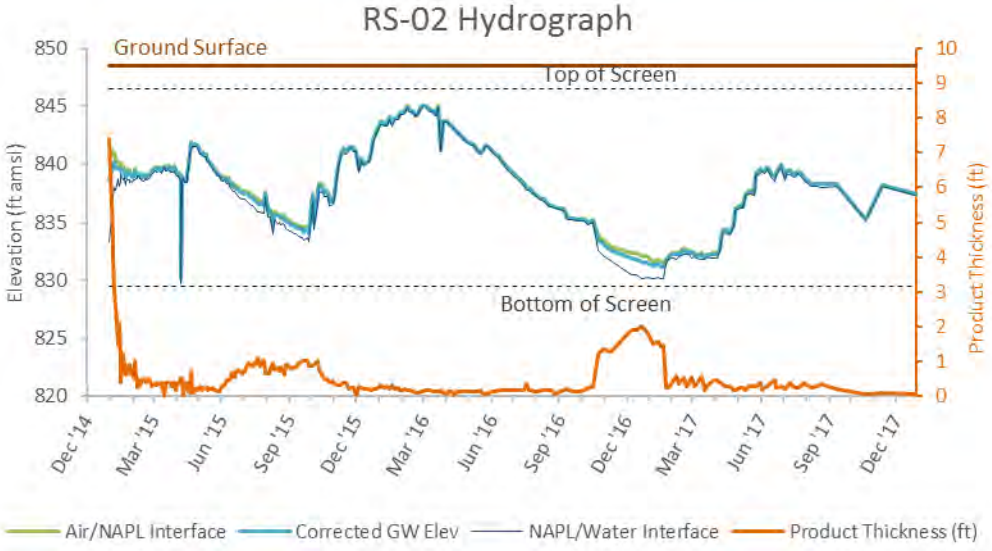

MW-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
835
830
825
820
815
810
805
800
795
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

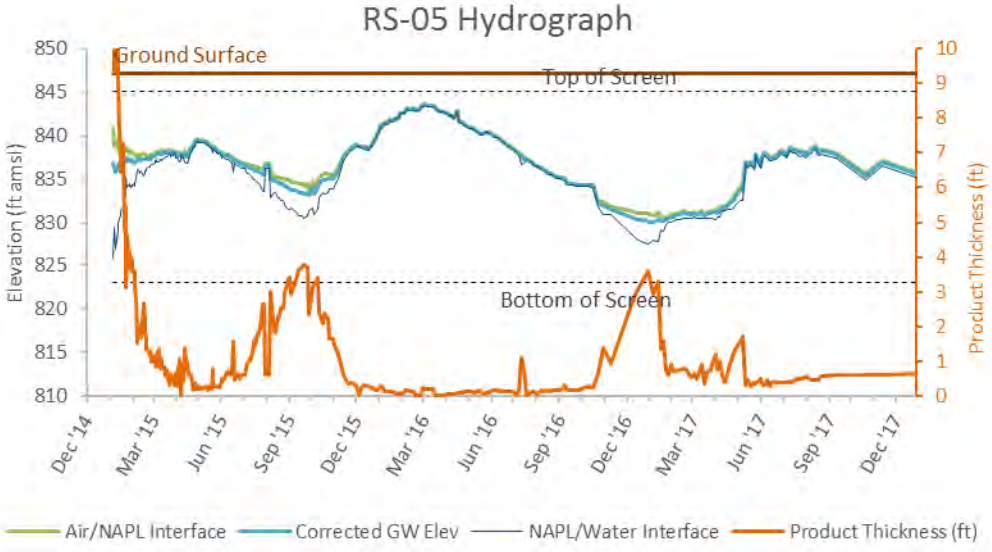

MW-16 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

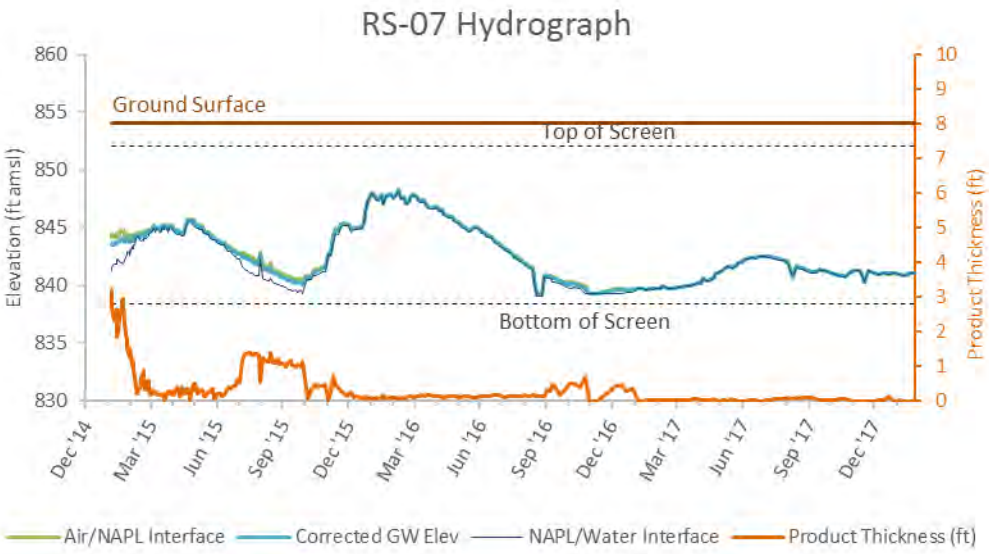

MW-18 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

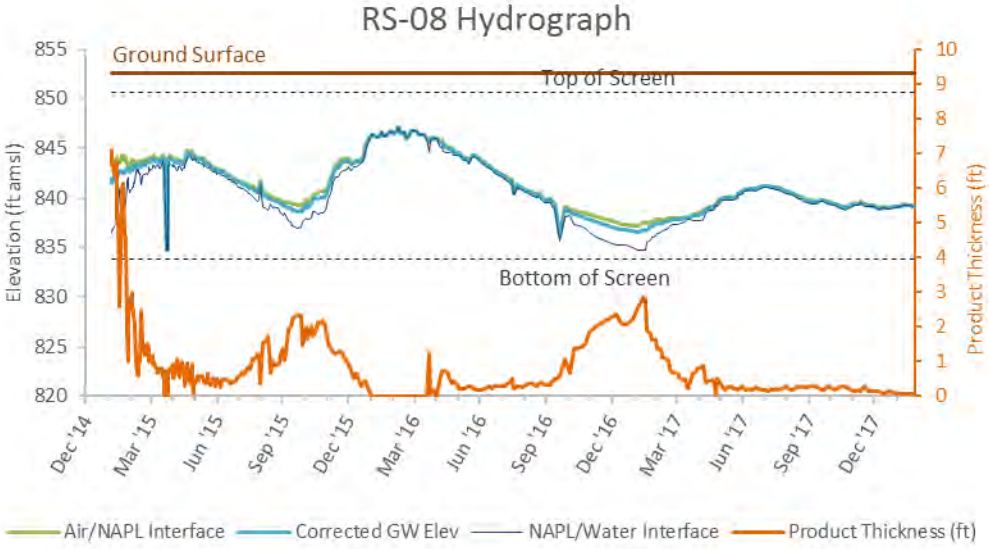

MW-20 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

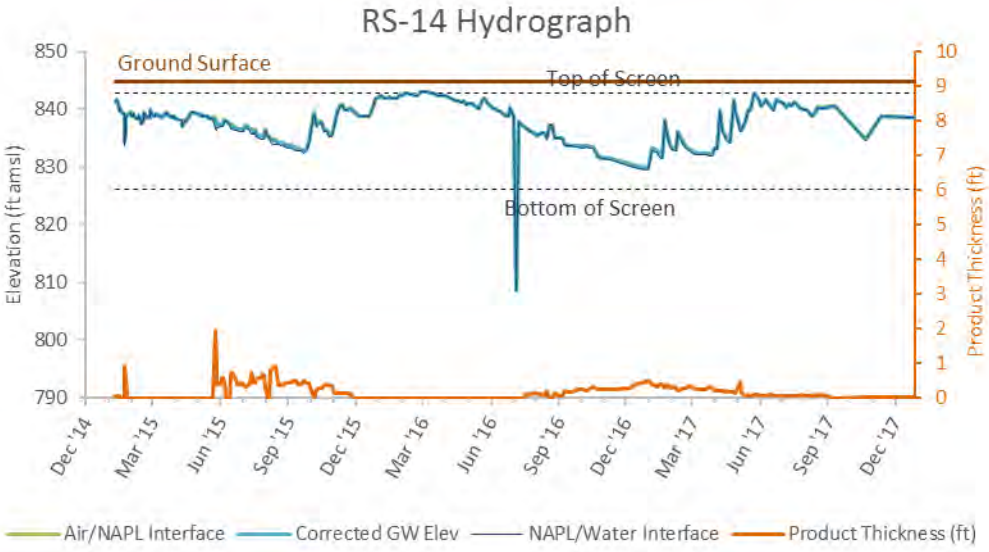

RS-01 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

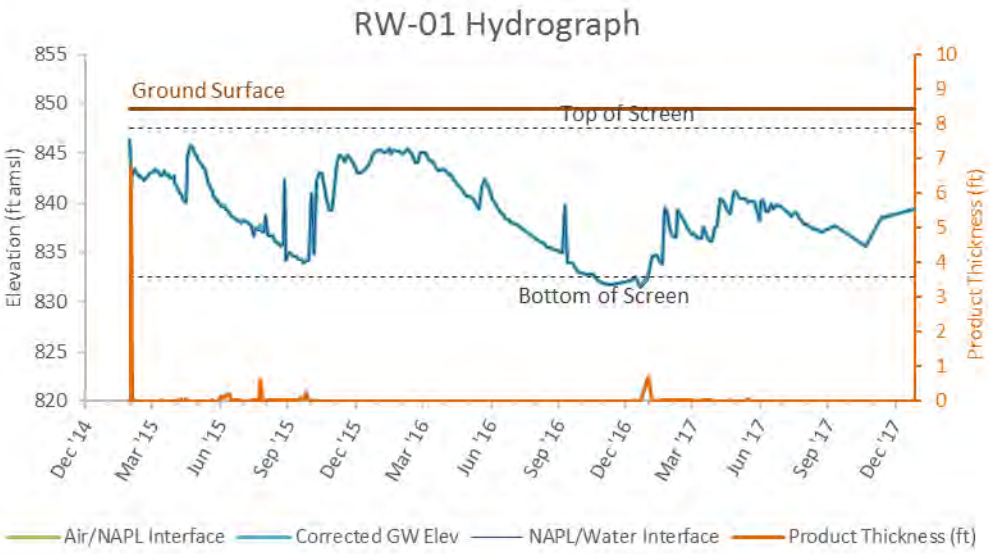

RS-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

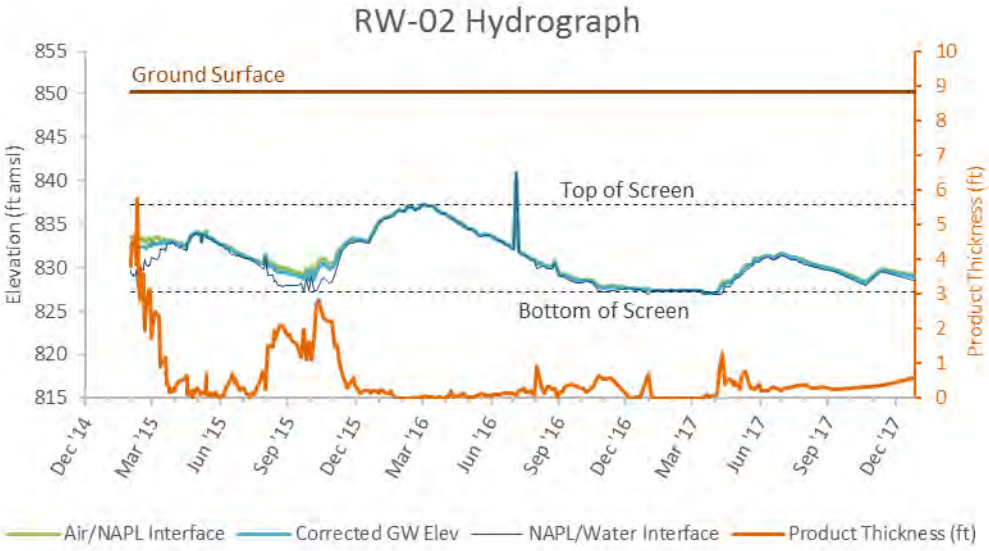

RS-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

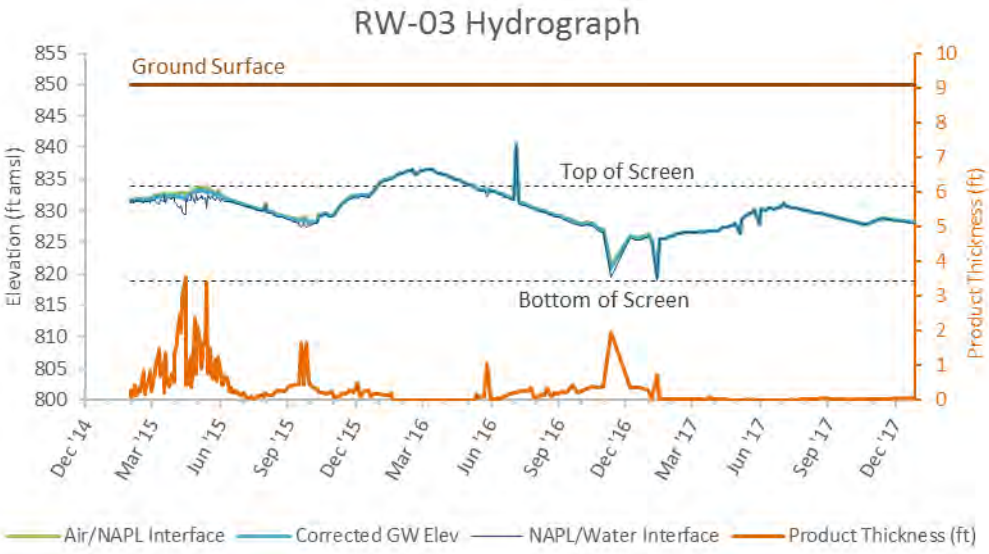

RS-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
855
850
845
840
835
830
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

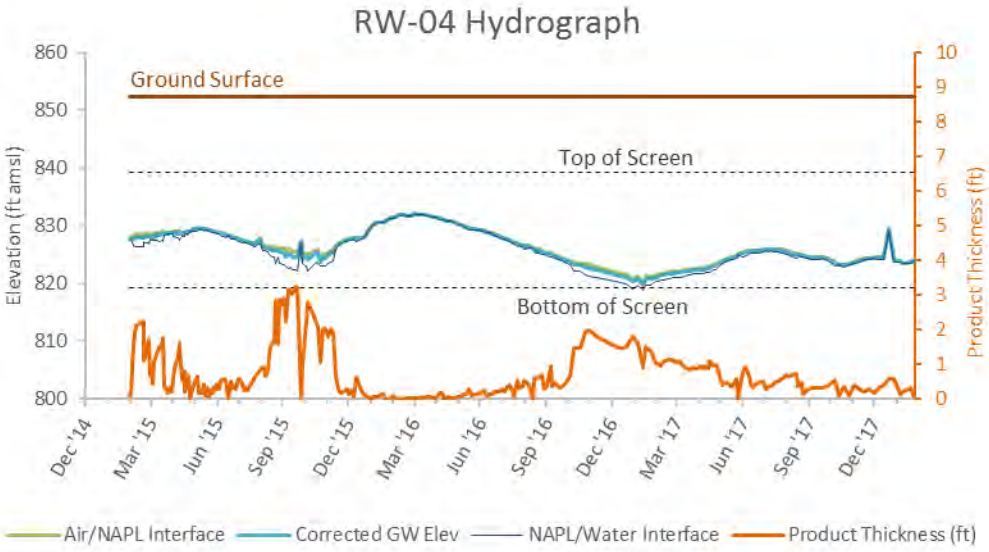

RS-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

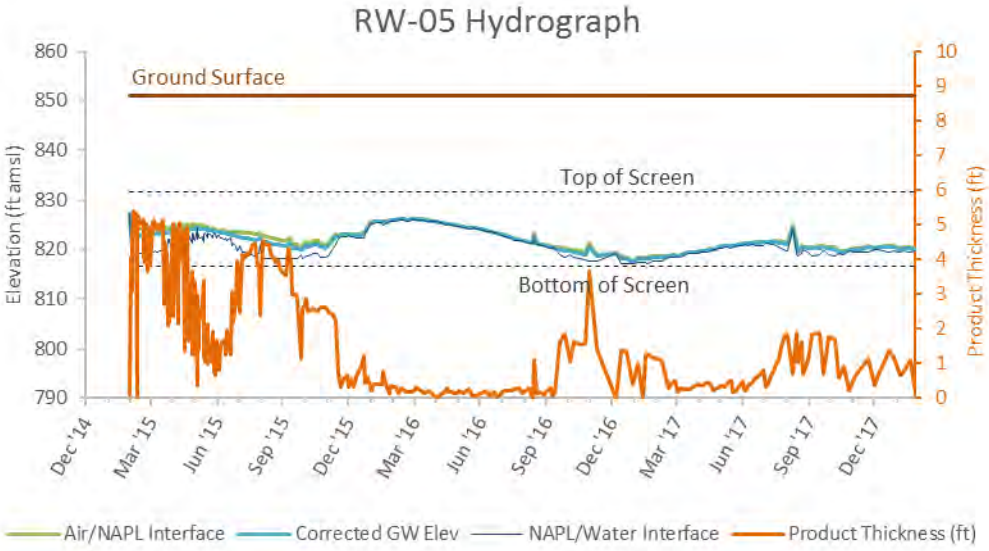

RS-14 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

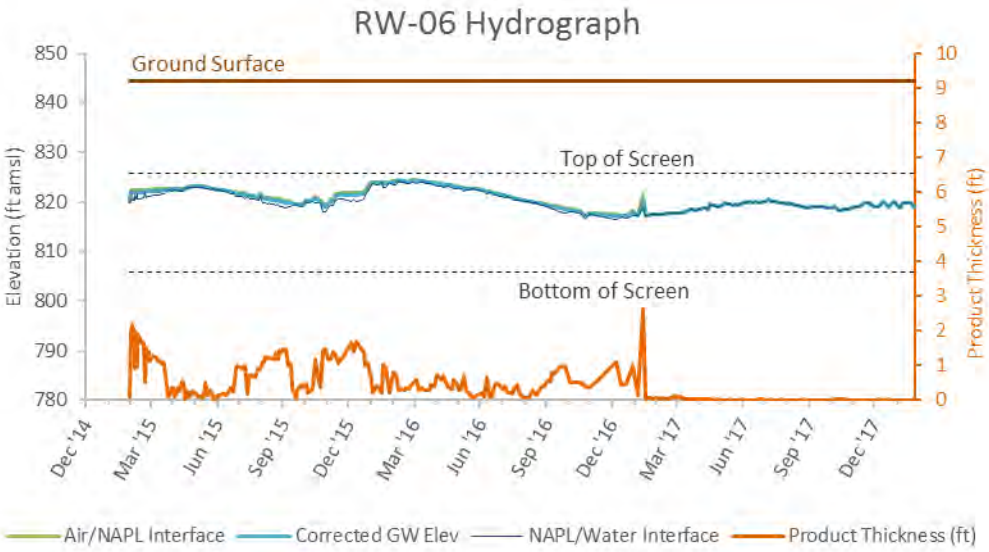

RW-01 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

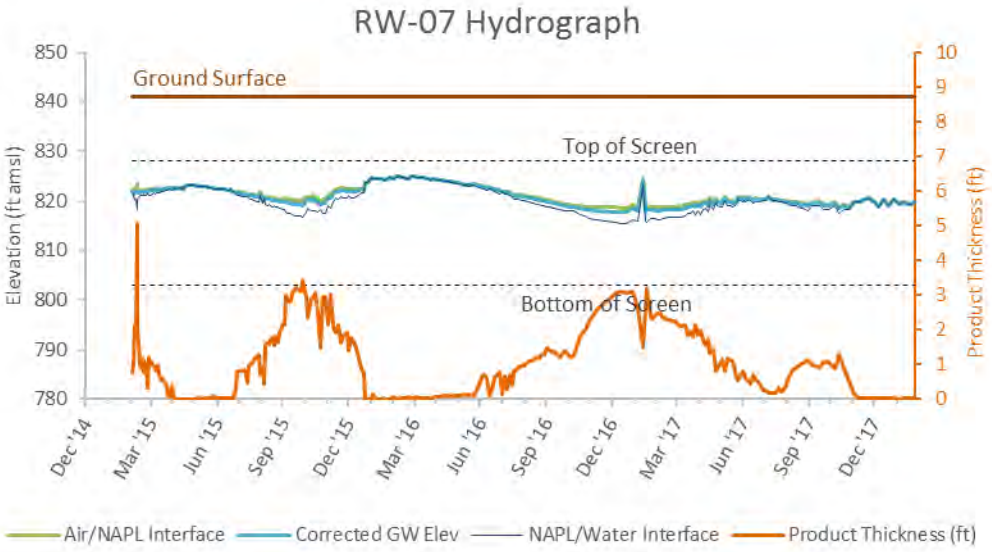

RW-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

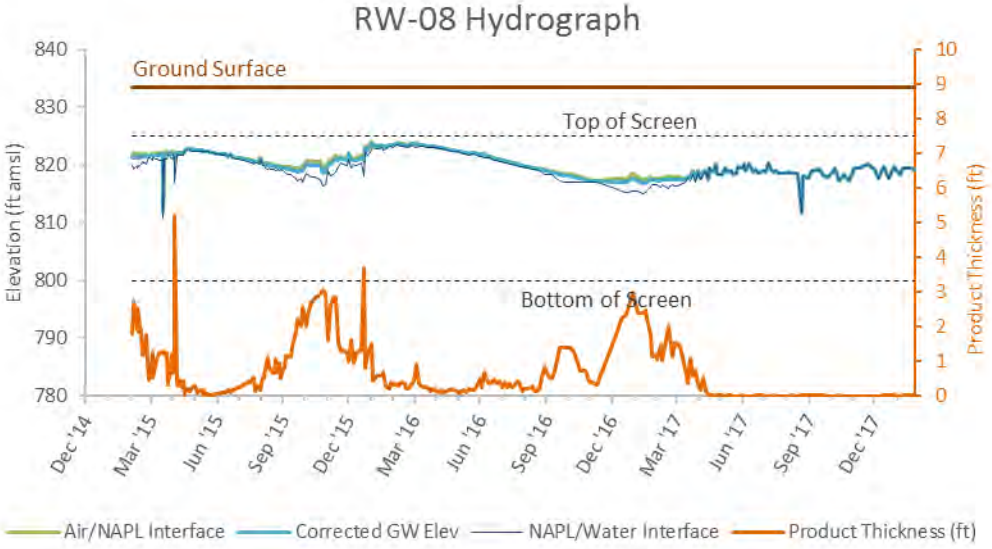

RW-03 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
810
805
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

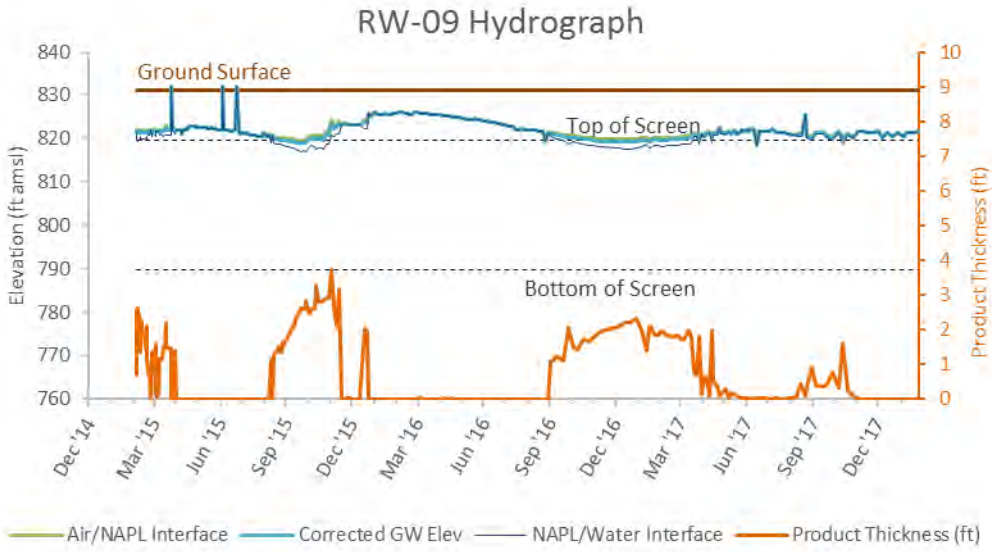

RW-04 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

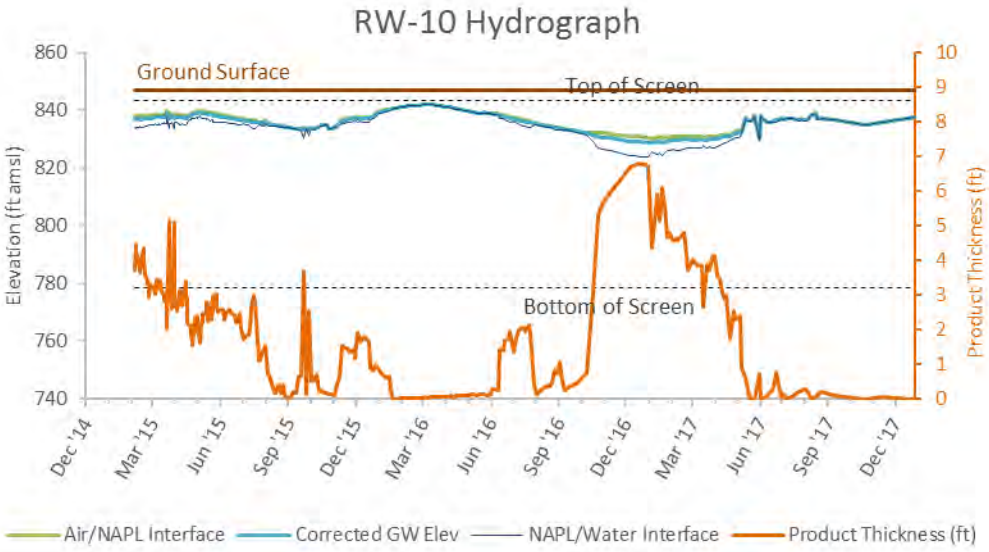

RW-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

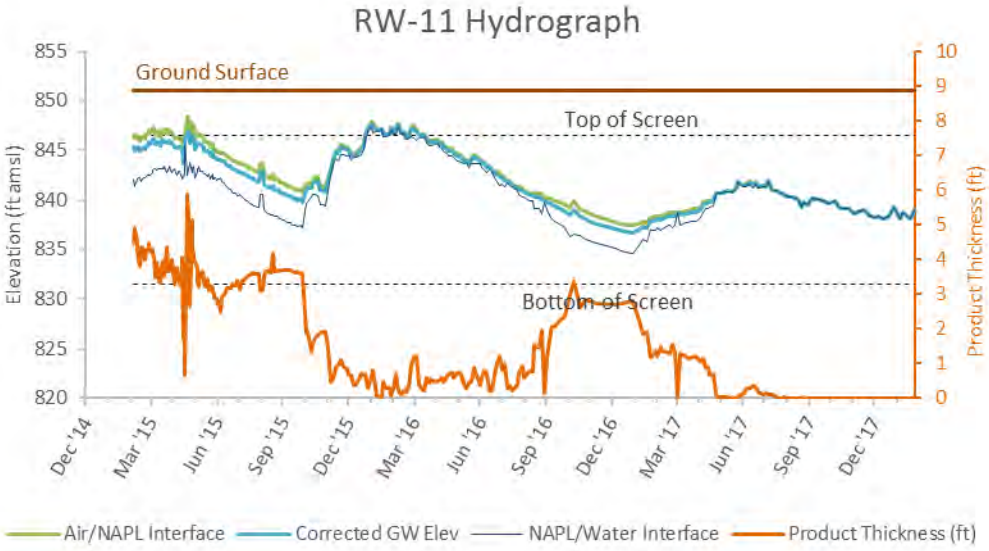

RW-06 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

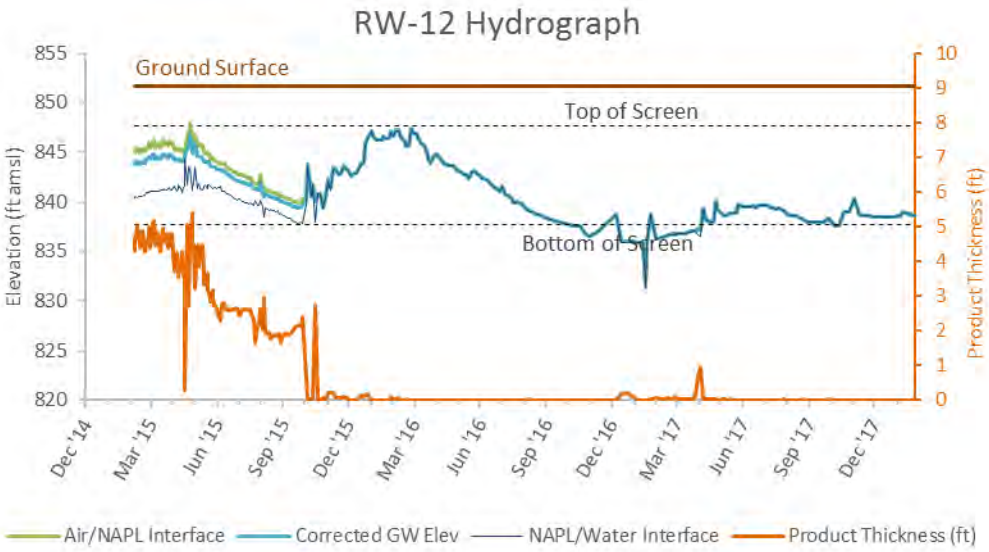

RW-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

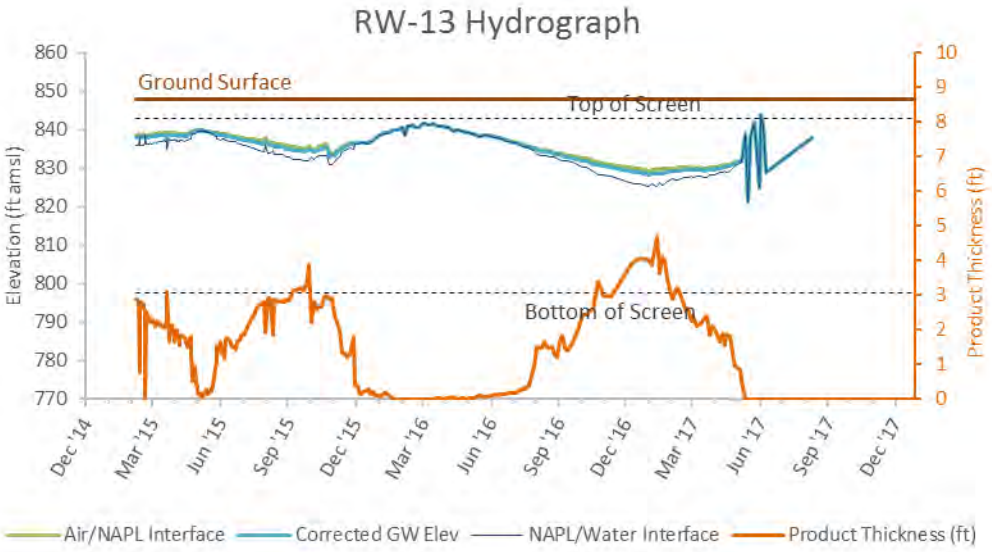

RW-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

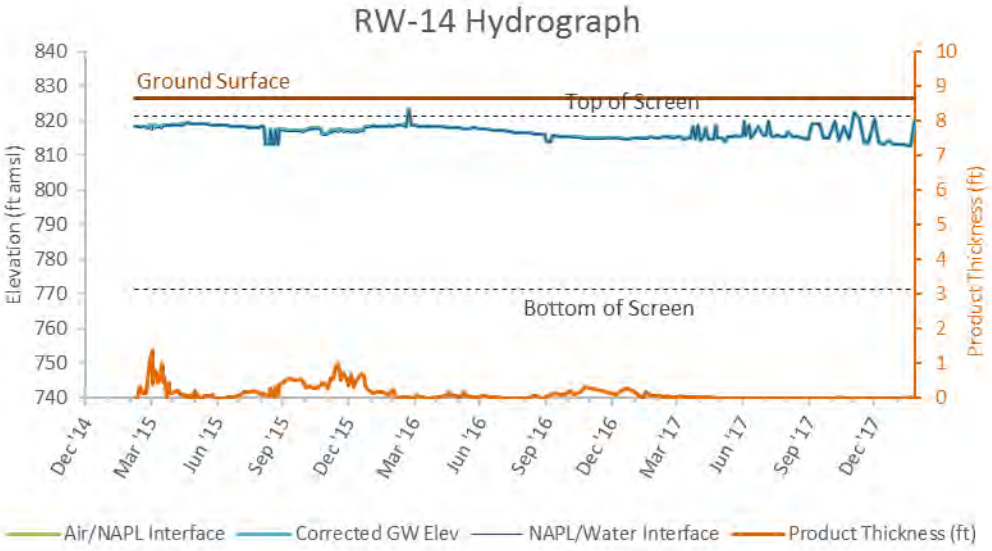

RW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
770
760
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

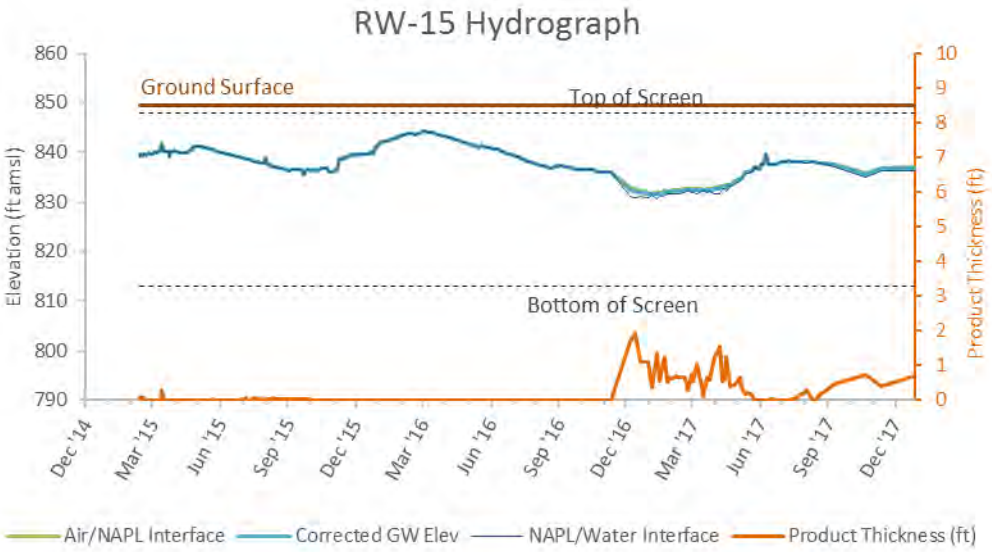

RW-10 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
840
820
800
780
760
740
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

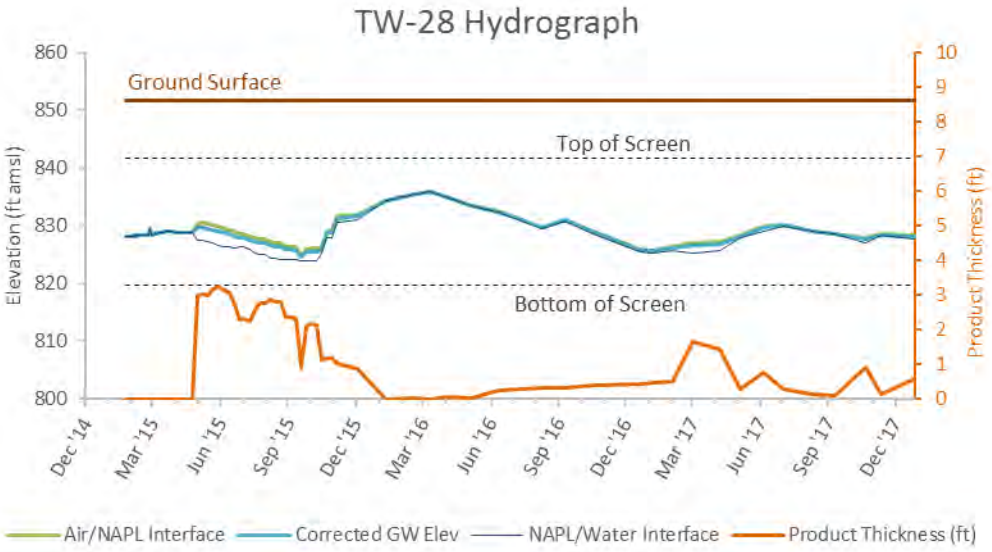

RW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

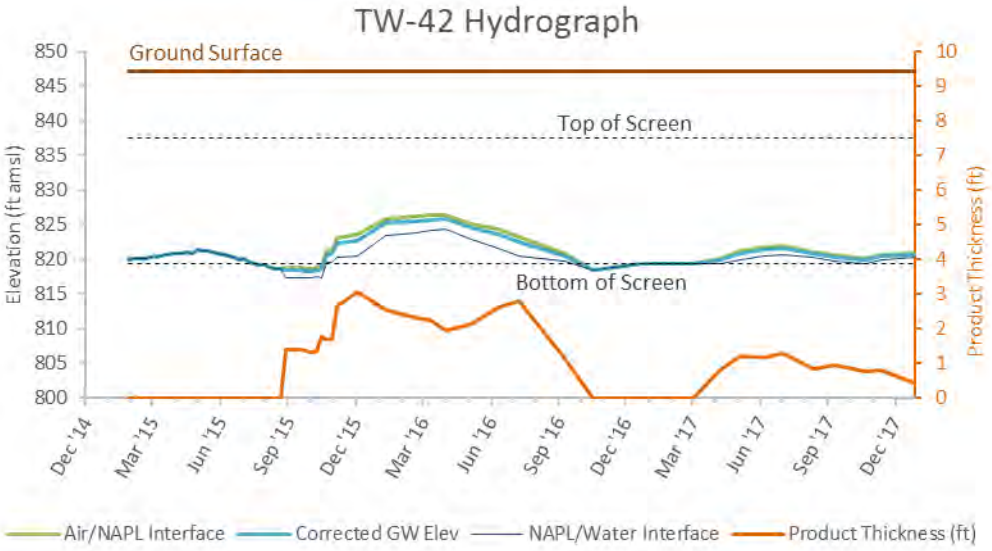

RW-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

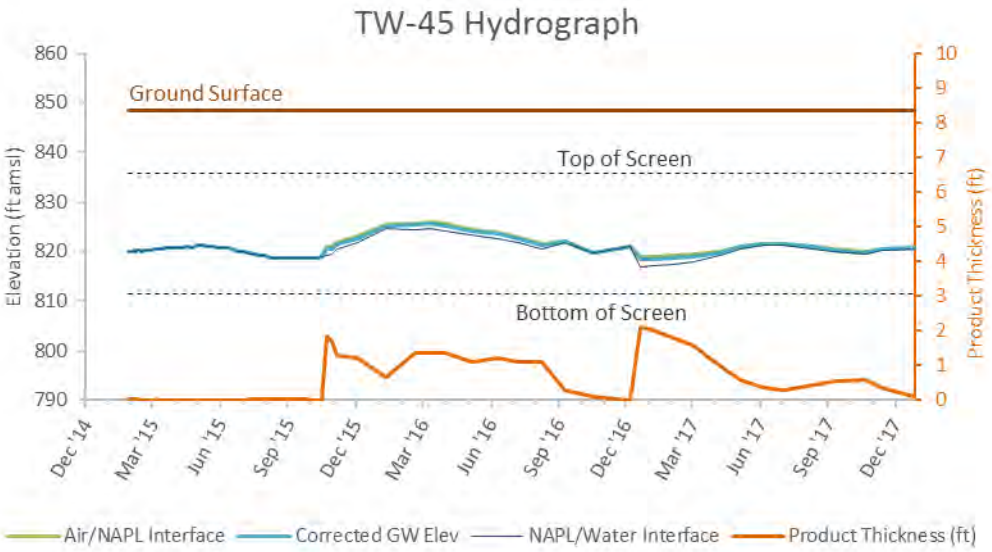

RW-13 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
780
770
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-14 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
770
760
750
740
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-15 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


TW-28 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


TW-42 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
805
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


TW-45 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)