Document Receipt Information

☐ Hard Copy ☒ CD ☐ Email

Date Received 1-22-2019

Permit Number 18093

Project Manager Bobbi Coleman

Name of Contractor Jacobs

UST Certification Number Third Qtr Monitoring Report

Docket Number 292 URP

Scanned _____

111 Corning Road, Suite 116
Cary, North Carolina 27518
United States
T +1.919.859.5001
www.jacobs.com

January 21, 2019

Delivered via FedEx Overnight

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

Subject: **2018 Third Quarter 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), now part of Jacobs Engineering Group Inc. (Jacobs), is submitting the attached 2018 Third Quarter Monitoring Report for the Lewis Drive Remediation Site in Belton, South Carolina. This report summarizes the work performed at the site between July 1, 2018, and September 30, 2018. If you have any questions or concerns, please call me at 919-760-1777 or Mr. Jerry Aycock/Plantation at 770-751-4165.

Regards,

William M. Waldron, P.E.
Program Manager

c: Jerry Aycock, Plantation (Digital, Jerry_Aycock@kindermorgan.com)
Mary Clair Lyons, Esq., Plantation (Digital, Mary_Lyons@kindermorgan.com)
Richard Morton, Esq., Womble Bond Dickinson, LLP (Digital, ric.morton@wbd-us.com)
File

Plantation Pipe Line Company
Lewis Drive Remediation Site
Belton, South Carolina
Site ID Number 18693
“Kinder Morgan Belton Pipeline Release”

2018 Third Quarter Monitoring Report

Final

January 21, 2019

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Project No:	699858
Document Title:	2018 Third Quarter Monitoring Report
Revision:	Final
Date:	January 21, 2019
Client Name:	Plantation Pipe Line Company
Project Manager:	William Waldron
Author:	Bethany Garvey

Jacobs Engineering Group Inc.

111 Corning Road, Suite 116
Cary, North Carolina 27518
United States
T +1.919.859.5789
www.jacobs.com

The material and data presented in this report were prepared consistent with current and generally accepted consulting principles and practices. This work was supervised by the following Jacobs licensed professional.

Jonathan Grimes, P.G.
South Carolina Registered Professional Geologist No. 2235

January 21, 2019
Date

Contents

Appendixes

Tables

Figures

Acronyms and Abbreviations

µg/L	microgram(s) per liter
1,2-DCA	1,2-dichloroethane
BCPZ	Brown's Creek Protection Zone
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
CCPZ	Cupboard Creek Protection Zone
CH2M	CH2M HILL Engineers, Inc., now part of Jacobs Engineering Group Inc.
COC	chain-of-custody
DO	dissolved oxygen
DOT	Department of Transportation
EPA	U.S. Environmental Protection Agency
HSA	hollow-stem auger
ID	identification
Jacobs	Jacobs Engineering Group Inc.
LLC	limited liability company
mg/L	milligram(s) per liter
MTBE	methyl tertiary butyl ether
O&M	operation and maintenance
PID	photoionization detector
Plantation	Plantation Pipe Line Company
QAPP	Quality Assurance Project Plan
SCDHEC	South Carolina Department of Health and Environmental Control
scfm	standard cubic feet per minute
scfm/ft	standard cubic feet per minute per foot
TSL	Target Screening Level
UST	underground storage tank

1. Introduction

On behalf of Plantation Pipe Line Company (Plantation), CH2M HILL Engineers, Inc. (CH2M), now a wholly owned subsidiary of Jacobs Engineering Group Inc. (Jacobs), is submitting this 2018 Third Quarter Monitoring Report for the Lewis Drive Remediation Site in Belton, South Carolina. This report summarizes the work performed at the site between July 1, 2018, and September 30, 2018.

On December 8, 2014, a release of an estimated 8,800 barrels (369,600 gallons) of gasoline and a small amount of diesel fuel (Plantation, 2015) was discovered from Plantation's 26-inch product pipeline near Lewis Drive in Belton, South Carolina (Figure 1). The release point is located on the pipeline right-of-way between Lewis Drive, a rural two-lane undivided asphalt road to the south, and a hayfield to the north. The release location and site features (including the location of monitoring wells, recovery sumps, temporary wells [piezometers], recovery trenches, recovery wells, and vertical and horizontal air sparging wells) are shown on Figure 1.

This site has been designated by the South Carolina Department of Health and Environmental Control (SCDHEC) as Site Number 18693 "Kinder Morgan Belton Pipeline Release." This Third Quarter Monitoring Report was prepared in accordance with the Corrective Action Plan (CAP) (CH2M, 2016b), CAP Addendum, Revision 1 (CH2M, 2017a), CAP Addendum, Revision 2 (CH2M, 2017d), Comprehensive Site Assessment Report (CH2M, 2016a), and project Quality Assurance Project Plan (QAPP), Revision 4 (CH2M-Jacobs, 2018b). Correspondence between Plantation and SCDHEC during this reporting period is summarized below:

- July 24, 2018 – Plantation submitted its response to SCDHEC comments in SCDHEC's Letter titled "Reviews of Requests for Injection Wells, Pumping of Monitoring Wells and Monthly Status Reports" dated June 26, 2018 (CH2M-Jacobs, 2018f).
- July 27, 2018 – Plantation submitted the *Monthly Status Update, Plantation Pipe Line Company, Lewis Drive Remediation, Site ID Number 18693, "Kinder Morgan Belton Pipeline Release,"* June 2018 (CH2M-Jacobs, 2018h).
- September 26, 2018 – Plantation submitted the *2018 Second Quarter Monitoring Report, Lewis Drive Remediation Site, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release"* (CH2M-Jacobs, 2018j).

2. Work Activities

The following remedial activities were performed during the third quarter 2018 in accordance with the CAP (CH2M, 2016b), CAP Addendum, Revision 1 (CH2M, 2017a), CAP Addendum, Revision 2 (CH2M, 2017d), and project QAPP, Revision 4 (CH2M-Jacobs, 2018b):

- Performed continuous, free product recovery from canisters and petroleum-absorbent socks in 18 wells at the site. Canisters were emptied monthly, recording the volume of product collected from each well. Product recovered from the absorbent socks was measured by weighing the absorbent socks before and after placement in each well.
- Conducted three groundwater sampling events and three surface water sampling events. This included sitewide gauging and inspections of surface water features at Brown's Creek and Cupboard Creek.
- Recorded changes in groundwater levels and barometric pressures in eight monitoring wells using In Situ Rugged Troll 100 data loggers. Six monitoring well locations (MW-02, MW-12, MW-25, MW-29, MW-39, and MW-40) contained water level data loggers and two monitoring well locations (MW-01 and MW-10) contained barometric pressure loggers.
- Operated vertical air sparging wells in the areas of Brown's Creek and Cupboard Creek (Figure 1).
- Operated stream aerators in Brown's Creek.
- Operated three horizontal air sparging wells in the Hayfield Zone (Figure 1).
- Performed routine operation and maintenance (O&M) on the air sparging system.
- Installed four new monitoring wells: MW-51, MW-52 (upgradient of MW-38), MW-53, and MW-54 (north and west of MW-30) (Figure 1) (CH2M-Jacobs, 2018d).
- Installed 13 additional air sparging wells: 5 vertical air sparging wells south and southwest of MW-17 to address impacts to the north of the Cupboard Creek air sparge curtain, and 8 vertical air sparging wells southwest to northeast of MW-11 (Figure 1) (CH2M-Jacobs, 2018e) to address impacts in the shallow bedrock zone just upgradient of the Brown's Creek air sparge curtain.
- Abandoned 22 1-inch-diameter wells (piezometers) and 1 recovery well (RW-13) that no longer provide useful information.
- Transported and disposed soil cuttings generated during the installation of the 13 air sparging wells and 4 monitoring wells (one 25 cubic yard roll-off). Purge water, free product recovered from canisters, and well development water are stored in the onsite tanks at the site. No liquids were removed from the site during this reporting period.

3. Work Procedures

3.1 Gauging Events

Monitoring wells, surface water locations, piezometers, and product recovery features (recovery sumps, trenches, and wells) were gauged monthly during this reporting period. During gauging events, dissolved oxygen (DO) measurements were recorded for select wells using an in-well YSI ProODO meter. Observations made during this reporting period are summarized in Table 1 and discussed in Section 3.2. Field forms and notes for this reporting period are included in Appendix A.

3.2 Product Recovery

In accordance with the SCDHEC-approved *Interim Free Product Recovery Plan – Revision 3* (CH2M, 2017c), free product recovery was focused on the Brown's Creek Protection Zone (BCPZ) and Cupboard Creek Protection Zone (CCPZ) during this reporting period. Free product is not being collected in the Hayfield Zone of the site since it was agreed to use an air sparge system to see how it would address free product. Product recovery was performed continuously in these two zones in recovery wells, sumps, and trenches (Table 2). In February 2018, in accordance with the *Free-Product Recovery Plan – Revision 4* (CH2M-Jacobs, 2018a), skimmers and absorbent socks (where sufficient water column was not available to install a canister) were placed in recovery features containing product to allow for improved product recovery and quantification of recovery from each location. During each monthly monitoring event, the field team recorded the product recovered from each recovery device (Table 2). The amount of recovered product from the canisters was tracked by measuring the fluid volume from the skimmers in a stainless-steel measuring cup and placing the fluid in a metal 5-gallon bucket. The amount of recovered product from the absorbent socks was measured by weighing the absorbent socks before and after deployment into the recovery feature. Recovered fluids from the skimmers were placed into the onsite poly tanks for temporary storage, separation, and eventual offsite disposal. Used absorbent socks were placed in a Department of Transportation (DOT)-approved 55-gallon steel drum for offsite disposal.

3.3 Surface Water

Inspections of surface water features were performed monthly. The inspection route used is illustrated on Figures 1, 2A, and 2B. The air sparging system, including the stream aerators, was operating during this reporting period.

Surface water samples were collected at locations shown on Figure 2A. Surface water samples were collected in July and September 2018 during this reporting period. Additionally, SW-13 (only) was sampled in August 2018 due to what was believed to be an anomalous exceedance of benzene from the June 2018 monitoring event.

Surface water samples were scheduled to be collected from 17 locations during this reporting period. However, locations SW-05 and SW-06 in Cupboard Creek were not sampled due to insufficient water; and in September 2018, location SW-07 in Cupboard Creek was not sampled due to insufficient surface water.

Samples were collected in accordance with the project QAPP, Revision 4 (CH2M-Jacobs, 2018b), and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, and methyl tertiary butyl ether (MTBE) using U.S. Environmental Protection Agency (EPA) Method 8260B (see Table 3). The samples were packed in wet ice and transported by FedEx under standard chain-of-custody (COC) procedures to Pace Analytical in Mount Juliet, Tennessee (formerly known as ESC Lab Sciences). Field notes are included in Appendix A. Laboratory reports for surface water samples and COC records for this reporting period are included in Appendix B. Laboratory results are summarized in Table 3.

3.4 Groundwater Sampling Events

Three groundwater sampling events were performed during this reporting period on July 12 and 13, 2018 (Event 1, final monthly), August 2, 2018 (Event 2), and September 11 through 13, 2018 (Event 3, quarterly). Event 2 comprised the collection of groundwater samples from five select wells that were purged of three to five well volumes, as approved in the SCDHEC correspondence dated July 24, 2018 (CH2M, 2018f). The air sparging system, including the stream aerators, was operating during this reporting period. Prior to each sampling event, a comprehensive round of groundwater gauging was conducted 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 use and before the final measurement. Decontamination was performed in accordance with the SCDHEC *Programmatic Quality Assurance Program Plan, Revision 3.1* (Programmatic QAPP) or project QAPP, Revision 4 (CH2M-Jacobs, 2018b) as applicable. Groundwater elevation and product thickness data are summarized in Table 4. Gauging sheets and field notes for this reporting period are included in Appendix A. Figures 2A and 2B show groundwater elevations in the residuum and bedrock aquifers, respectively. Figure 3 presents product thickness data for the site.

Monitoring wells without free product were sampled using either a HydraSleeve, a peristaltic pump using low-flow purge, or a submersible pump (Event 2 only). Purge logs for wells that were sampled with the non-HydraSleeve method are provided in Appendix A. The height of the water column in the well determined if a well was sampled using a HydraSleeve or peristaltic pump according to the following:

- Water column greater than 3 feet: A HydraSleeve was used to collect an undisturbed groundwater sample from the well, in accordance with the project QAPP, Revision 4 (CH2M 2018b). A HydraSleeve was installed to the midpoint of the screened interval and immediately recovered. The water in the HydraSleeve was then used to fill the sample containers.
- Water column less than 3 feet but greater than 0.5 foot: A peristaltic pump was used to purge the well, while field parameters (including DO concentrations) were measured using a YSI 6920 V2-2 Multi-Parameter Water Quality Sonde meter to confirm stabilization of the groundwater, in accordance with the Programmatic QAPP (South Carolina UST Management Division, 2016). After the water quality parameters stabilized, a sample was collected from the well using the straw method in accordance with the Programmatic QAPP. Upon stabilization, the field parameters were recorded on a separate purge log. DO measurements are summarized in Table 5.
- Water column less than 0.5 foot: The well was reported and documented in the field logbook as insufficient water, was not sampled, and DO measurements were not collected.

Samples were labeled, packed with wet ice, and transported by FedEx under standard COC procedures to Pace Analytical in Mount Juliet, Tennessee. Samples were analyzed for BTEX, 1,2-dichloroethane (1,2-DCA), MTBE, and naphthalene using EPA Method 8260B. Field notes and purge logs are included in Appendix A. Laboratory reports for groundwater samples and COC records are included in Appendix B. Laboratory results are summarized in Table 6.

3.5 Air Sparging System Operation and Maintenance

Air sparging was initiated on March 6, 2017, and has evolved since to achieve design flow rates. These changes have been agreed to during discussions with SCDHEC. Routine O&M activities were performed during this reporting period. O&M logs for July through September 2018 are provided in Appendix C. Air sparging activities are summarized by remediation area below. When air sparging rates were increased in zones of the site, air monitoring was performed with a photoionization detector (PID) and visual observations were made in the areas where flow rates were adjusted.

- BCPZ: Air sparging in the BCPZ was performed using 26 vertical air sparging wells screened from 13 to 71.5 feet below ground surface (bgs). The flow rates in these wells averaged 9.52 standard cubic feet per minute (scfm) per sparge well during the reporting period. Additionally, air was injected into two submersible diffusion aerators installed in Brown's Creek. The flow rates in these aerators averaged 14.35 scfm each during this reporting period.

- CCPZ: Air sparging in the CCPZ was performed using a curtain of 19 vertical air sparging wells screened from 9.5 to 31.20 feet bgs. The flow rates in these wells averaged 10.32 scfm per sparge well during this reporting period.
- Hayfield Zone: Air sparging in the Hayfield Zone was performed using three horizontal wells, HAS-01, HAS-02, and HAS-03, which have screen lengths of approximately 752, 715, and 377 feet, respectively. The flow rates in each of the three horizontal wells (HAS-1, HAS-2, and HAS-3) were maintained at approximately 0.60 scfm per foot of screen (scfm/ft) during this reporting period, resulting in the following approximate flows per well: 0.58, 0.58, and 0.63 scfm per foot, respectively.

Water levels were measured in the BCPZ, CCPZ, and Hayfield Zone to document the influence of the air sparging system on the residuum aquifer. Water level data loggers (In Situ Rugged Troll 100) have measured groundwater elevations continuously at various locations around the site. During this reporting period, data loggers were positioned in MW-02, MW-12, MW-25, MW-29, MW-39, and MW-40, and two barometric pressure loggers were positioned in MW-01 and MW-10.

3.6 Additional Activities

The following additional activities were performed during this reporting period:

- Biosparging system expansions – Additional air sparging wells were installed to reduce dissolved hydrocarbon concentrations in areas of CCPZ and BCPZ. Thirteen additional vertical air sparging wells were installed to the top of bedrock (VAS-47 through VAS-59) between August 14 and September 7, 2018, using a combination of a CME 750 hollow-stem auger (HSA) drill rig and Geoprobe 8040 with HSA capability. Well construction details are presented in Table 7. Five of these wells were installed to extend the remedial zone of influence of the CCPZ air sparging curtain to the northwest across Lewis Drive downgradient of monitoring well MW-17 (Figure 1). The remaining eight wells were installed to extend the remedial zone of influence of the BCPZ air sparging curtain southwest toward monitoring well MW-11 (Figure 1) into the shallow bedrock zone. Plantation proposed the expansion of the existing air sparging system in correspondence dated May 4, 2018 (CH2M-Jacobs, 2018e). SCDHEC approved the installation of these wells in a letter dated June 26, 2018 (SCDHEC, 2018b). These wells will be connected to the sparging system in December 2018.

    - Four residuum monitoring wells (MW-51, MW-52, MW-53, and MW-54) were installed for additional delineation in the Hayfield Zone. The wells were installed using a CME 750 HSA drill rig. MW-53 and MW-54 were installed on August 28 and 30, 2018, respectively, to expand the monitoring network north and west of MW-30. MW-51 and MW-52 were installed between September 4 and 5, 2018, upgradient of MW-38. The wells were installed in accordance with SCDHEC Well Standards R. 61-71 (SCDHEC, 2016) and the SCDHEC Monitoring Well Approval Form Number MW-11508 (SCDHEC, 2018a). Well construction details are presented in Table 7. The boring logs and well completion diagrams for these monitoring wells are provided in Appendix D. Well completion forms (Form 1903) were sent to SCDHEC in a separate submittal by AGE Drilling Services, LLC. Additionally, a soil sample was collected from each newly installed monitoring well boring in accordance with the project QAPP, Revision 4 (CH2M-Jacobs, 2018b). These soil samples were labeled, packed with wet ice, and transported by FedEx under standard COC procedures to Pace Analytical in Mount Juliet, Tennessee for BTEX analysis by Method SW-846 8260B. All samples were nondetect (see Table 8). Laboratory reports for soil samples and COC records are included in Appendix B.

- Soil cuttings generated during installation of the monitoring and sparging wells were placed in a roll-off dumpster and transported for disposal by A&D Environmental to the Republic Services Union County Regional Landfill in Enoree, South Carolina. See Appendix B for the remediation-derived waste laboratory report, and Appendix E for the manifest and waste profile.

- Twenty-two 1-inch-diameter temporary wells (piezometers) were abandoned at the end of August 2018. These wells were installed early during emergency response activities to delineate free product impacts at the site. The data collected from the 1-inch piezometers is not representative of

actual product thickness in the subsurface due to capillary action. Also, the 1-inch piezometers are redundant with the existing 2-inch monitoring well network currently being used for groundwater elevation and product thickness measurements. RW-13 was also abandoned because of high pressure within the well due to air sparging that resulted in a safety concern involving gauging or product recovery from this well. The abandoned locations are shown on Figure 1. All wells were abandoned in accordance with SCDHEC Well Standards R. 61-71 (SCDHEC, 2016). SCDHEC approval for abandonment of piezometers was provided in a letter dated June 26, 2018 (SCDHEC, 2018b). SCDHEC 1903 Forms for the well abandonments were submitted to SCDHEC in a letter dated October 15, 2018 (CH2M-Jacobs, 2018k).

4. Discussion of Results

4.1 Product Recovery

During this third quarter 2018 reporting period, only 2.44 gallons of product were recovered at the site. Overall, there was a decrease each month in the volume being recovered as noted in Table 2. The average amount recovered per recovery feature during this reporting period was 0.05 gallon.

Table 2 shows the dates and quantities of product that was recovered. Table 9 shows the dates and quantities of product that was shipped offsite for disposal. Field notes for this reporting period are included in Appendix A.

4.2 Surface Water

No new signs of distressed vegetation, hydrocarbon sheens, or odors were observed during the surface water inspections for this reporting period. Observations made during this reporting period are summarized in Table 1. Field notes for this reporting period are included in Appendix A.

During this reporting period, dissolved hydrocarbons were detected in surface water at 4 of the 15 locations sampled, SW-01, SW-02, SW-12, and SW-14 (Table 3). However, no analytes exceeded the surface water standard for protection of human health for consumption of water and organisms (SCDHEC, 2014).

Surface water sample results are summarized in Table 3. Trends for surface water sampling locations SW-01, SW-02, SW-04, SW-12, SW-13, and SW-14 are presented in Appendix F. Construction details for the stream gauges are presented in Table 10. Field notes for this reporting period are included in Appendix A. Analytical data sheets and COC records are included in Appendix B.

4.3 Groundwater Flow and Product Distribution

Water level data from the September 2018 gauging event were used to create potentiometric surface maps for the site (Figures 2A and 2B). Groundwater flow in both the residuum (Figure 2A) and bedrock (Figure 2B) mimics the topography of the site and generally 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 September 2018 water table configurations and direction of groundwater flow are consistent with previous findings.

Stream elevations are tabulated in Table 4 and are presented with groundwater elevations on Figure 2A. Construction details for recovery and nonrecovery features are presented in Table 7.

Product thicknesses continue to be minimal throughout the site. Measurable thicknesses in September 2018 ranged from 0.01 foot at RS-05 and RW-02 to 0.3 foot at MW-20. Measurable product thicknesses were only observed at 9 features out of the 161 features monitored. Free product levels are presented alongside well gauging data in Table 4.

In September 2018, no recovery wells/features within the BCPZ or the CCPZ contained measurable product.

Gauging sheets for this reporting period are included in Appendix A. Hydrographs for nonrecovery (monitoring wells and piezometers) and recovery features representative of general product thickness trends are presented in Appendix G.

4.4 Dissolved Oxygen Distribution

Overall during this reporting period, the average DO concentration has stabilized in the residuum wells and increased in the bedrock wells. In residuum wells, the average DO concentration ranged from 6.65 milligrams per liter (mg/L) in July 2018 to 7.04 mg/L in September 2018. In bedrock wells, the average DO concentration increased from 1.00 mg/L in July 2018 to 3.11 mg/L in September 2018. DO measurements in groundwater are provided in Table 5. Field notes for this reporting period are included in Appendix A.

4.4.1 Brown's Creek Protection Zone

The average DO levels in the BCPZ were stable with 3.88 mg/L in July 2018 to 4.03 mg/L in September 2018.

4.4.2 Cupboard Creek Protection Zone

The average DO concentrations in the CCPZ increased from 2.26 mg/L in July 2018 to 3.74 mg/L in September 2018.

4.4.3 Hayfield Zone

The average DO concentrations in the Hayfield Zone were stable at 7.90 mg/L in July 2018 to 8.36 mg/L in September 2018.

4.4.4 Shallow Bedrock Zone

DO levels in this zone increased from 1.14 mg/L in July 2018 to 3.13 mg/L in September 2018 indicating that the air sparging systems are having an effect on the shallow bedrock zone, which will increase the natural attenuation capabilities of the shallow bedrock zone.

4.5 Groundwater Monitoring Results

Groundwater monitoring results for this reporting period 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, as well as other locations outside the direct influence of the air sparging systems. Table 6 presents analytical results for all groundwater samples that have been collected at the site since July 2015. Laboratory analytical reports for the sampling events for this reporting period are provided in Appendix B. Groundwater analytical results are screened against the risk-based screening levels listed in the Programmatic QAPP, Table D1 (South Carolina UST Management Division, 2016), referred to as Target Screening Levels (TSLs), and are provided at the top of Table 6. The September 2018 results are shown on Figures 4A and 4B and summarized in the following sections. Trend plots for select groundwater monitoring wells are shown in Appendix H. If the monitoring well is directly influenced by the air sparging system, there will be a gray shaded area on the trend charts. Trends were not created for monitoring wells that have been nondetect since sampling began. Field notes and purge logs for this reporting period are included in Appendix A.

4.5.1 Brown's Creek Protection Zone

Dissolved concentrations continue to show an overall decreasing trend in the residuum aquifer of the BCPZ. For example, in monitoring wells MW-34, MW-40, and MW-42, benzene concentrations have decreased by one to three orders of magnitude to below 30 micrograms per liter (µg/L) at MW-34 and MW-40 and to below detection levels at MW-42. Concentrations of BTEX constituents, which were stable in MW-12 between September 2017 and March 2018, have shown a decrease since June 2018, and all constituents were below TSLs in September 2018.

Benzene concentrations show a slight increase in MW-12B and a decrease in MW-15B. Benzene was nondetect in all other bedrock monitoring wells in September 2018.

Benzene was detected above TSLs in 5 of 15 residuum monitoring wells in the BCPZ (MW-15, MW-28, MW-34, MW-38, and MW-40), ranging from 14.6 µg/L to 157 µg/L. MTBE was detected above its TSL in MW-15, MW-34, MW-39, and MW-40, ranging from 72.2 µg/L to 209 µg/L. Constituents in cross-gradient monitoring wells MW-37 (to the north) and MW-35 (to the south) have been nondetect, except for MTBE, which is below its TSL since system startup. Constituent concentrations in monitoring wells MW-24, MW-25, MW-41, MW-42, MW-43, and MW-49 continue to remain below TSLs since early 2018.

4.5.2 Cupboard Creek Protection Zone

Since air sparging was initiated, dissolved concentrations in the CCPZ have stabilized. MW-19 has not been able to be sampled on a regular frequency due to insufficient water; however, it was sampled during the July and September 2018 events with no detections above TSLs. Since MW-46 was installed in September 2017, BTEX concentrations had been increasing but seem to have stabilized based on the August and September 2018 monitoring events.

MW-20 has not been able to be sampled for a considerable period of time due to the presence of free product. However, it was sampled in July 2018 with exceedances for BTEX and MTBE concentrations. Benzene was also detected above its TSL (5 µg/L) during this reporting period in two other residuum monitoring wells in the CCPZ: MW-23 at 17.9 µg/L (August 2018), and MW-46 at 1,510 µg/L (September 2018). MTBE was detected above its TSL (40 µg/L) in MW-46 at 311 µg/L (September 2018). Downgradient monitoring wells MW-26 and MW-29 were nondetect for all constituents since February 2018 and January 2016 respectively.

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

4.5.3 Hayfield Zone

A decreasing trend is very evident in the residuum aquifer in the Hayfield Zone, with reduced concentrations of detected constituents and reduced number of constituents exceeding TSLs. For example, of the 29 monitoring wells sampled in the Hayfield Zone, the constituents at 22 locations are below their respective TSLs. Since the initialization of the horizontal sparging wells in 2017, these concentrations have decreased by three orders of magnitude.

In the residuum, benzene, toluene, and naphthalene were detected above the TSLs in 2 of 22 monitoring wells in the Hayfield Zone (MW-07 and MW-16). Benzene concentrations exceeded the TSL in MW-36, and MTBE concentrations exceeded the TSL in MW-45. Concentrations are shown in the table below.

Well	Date	Units	Benzene	Toluene	MTBE	Naphthalene
MW-07	9/12/2018	µg/L	4,620	13,600	1 U	82.5
MW-16	9/13/2018	µg/L	150	2,100	21.5	635
MW-36	9/11/2018	µg/L	238	326	1 U	5 U
MW-45	9/13/2018	µg/L	1 U	1 U	46.3	5 U

Gray shading indicates the analyte exceeded Target Screening Levels
U = analyte was not detected above the reported sample quantitation limit

Four residuum monitoring wells in the Hayfield Zone were not sampled because of insufficient water (MW-13, MW-17, and MW-30) and the presence of product (MW-18). MW-18 is the only monitoring well in the Hayfield Zone with measurable product.

In the bedrock, benzene was detected above its TSL in 3 of 10 wells, ranging in concentration from 150 µg/L in MW-50B to 8,180 µg/L in MW-17B (September 2018). Concentrations of ethylbenzene, toluene, and MTBE exceeded the TSLs at MW-17B. MTBE also exceeded its TSL in MW-13B and MW-50B.

At locations outside the direct influence of the air sparging system, only two locations, MW-45 and MW-50B, showed concentration increases from June 2018 to September 2018. Additionally, constituents in MW-13B, MW-17B, and MW-36, which are also outside of the direct influence of the air sparge system, have remained stable. These wells will continue to be evaluated.

4.5.4 Shallow Bedrock Zone

In the residuum of the shallow bedrock zone, MW-11 was the only well that contained product (0.02 foot). The constituents in all other residuum wells in the shallow bedrock zone had concentrations below TSLs.

In bedrock, benzene was detected above its TSL in only one of three wells in the shallow bedrock zone at a concentration of 11.1 µg/L in MW-01B.

4.6 Air Sparging System Operating Efficiency and Performance Data

Between July 1, 2018, and September 30, 2018, the air sparging system operated a total of approximately 4,243 hours, with an operating uptime of 100 percent. Since two compressors were operating during this timeframe, system maintenance activities could be conducted with no system downtime. Air sparging flow rates for this reporting period in the stream aerators, horizontal wells, and vertical wells were at 96 percent, 80 percent, and 66 percent of design flow capacity, respectively.

5. Conclusions

The following conclusions are based on data analysis from the site work performed between July 1, 2018, and September 30, 2018:

- Since starting the air sparging system at the site on March 6, 2017 (vertical sparging systems in the BCPZ and CCPZ areas) and in May 2017 (horizontal sparging system in the Hayfield Zone), product thickness values have substantially declined in both recovery and nonrecovery features across the site. The number of locations with product thicknesses greater than 0.5 foot has decreased from seven locations in March 2018, to one location in June 2018, and no locations in September 2018. The locations that have measurable product thickness are not adjacent to any surface water bodies at the site.
- The volume of product recovered between July 2018 and September 2018 was 2.44 gallons, which is less than the previous quarter. Additionally, the quantity of product recovered during the reporting period decreased each month.
- Three surface water sampling events were performed during this quarter (July, August, and September 2018). The August 2018 sampling event included SW-13 only due to what was believed to be an anomalous exceedance of benzene from the June 2018 monitoring event. The benzene exceedance in June 2018 at SW-13 will continue to be monitored.
- The average DO concentration in residuum has remained stable, and the average DO concentration in bedrock wells has increased for this reporting period. This shows the effectiveness of the air sparging system at introducing oxygen into the subsurface. Air sparging will continue to be increased at the vertical and horizontal wells to design flow rates during the next quarter to meet the increasing biomass oxygen demand. The design flow rates have been met and sustained at the stream aerator locations.
- Groundwater monitoring results for this reporting period indicate that due to operation of the air sparging systems there are continued 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 direct influence of the air sparging system. Concentrations in MW-40 dropped significantly during the September 2018 event. Concentrations in MW-12, MW-19, MW-23, and MW-27 are now below TSLs.
- During this reporting period, the air sparging system had an operating uptime of 100 percent. Operating flows in the stream aerators, horizontal wells, and vertical wells were at 96 percent, 80 percent, and 66 percent of design flow capacity, respectively.

6. Future Activities

This section describes future activities planned for the site.

6.1 Groundwater and Surface Water Monitoring

- Continue gauging of monitoring wells and surface water sampling locations in accordance with the CAP Addendum, Revision 2 (CH2M, 2017d) submitted to SCDHEC on October 12, 2017.
- Sample monitoring wells and surface water sampling locations on a quarterly basis per Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017d).
- Collect DO concentration measurements on a quarterly basis, per Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017d).
- Submit quarterly reports per Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017d).
- Continue routine visual inspection of Brown's Creek and Cupboard Creek as outlined in the CAP Addendum, Revision 2 (CH2M, 2017d).
- Include the newly installed monitoring wells (MW-51, MW-52, MW-53, and MW-54) as part of the quarterly gauging and sampling events.
- Install additional monitoring wells MW-55 (west of MW-36), MW-56, and MW-57 (southwest and west of MW-46, respectively), and advance one soil boring to the top of bedrock (east side of Brown's Creek near SW-02).
- Abandon the remaining 1-inch-diameter wells (piezometers) because these 1-inch piezometers are less representative of product thickness measurements and are redundant with the existing 2-inch monitoring well network, which is sufficient for groundwater elevation and product thickness measurements.
- Abandon monitoring wells MW-17 and MW-19 without replacement. These wells have consistently experienced insufficient groundwater for collecting groundwater samples, and additional downgradient and cross-gradient wells have since been installed in the vicinity that provide sufficient water for groundwater sampling purposes.
- Analyze concentration trends in the monitoring well network to identify areas for additional remediation, if necessary, and to optimize the monitoring well network.

6.2 Product Recovery

Continue continuous product recovery, with monthly collection, using skimmers and socks in accordance with the *Free-Product Recovery Plan, Revision 4* (CH2M-Jacobs, 2018c).

6.3 System Operation and Maintenance

- Complete ongoing efforts to expand the existing biosparging system and start air flow to new sparging wells.
- Continue routine O&M activities for the air sparging system as described in the CAP Addendum, Revision 2 (CH2M, 2017d).
- Continue air sparging in the BCPZ and CCPZ up to the maximum design flow rate of 15 scfm per well.
- Continue air sparging in the horizontal wells in the Hayfield Zone up to the maximum design flow rate of 0.75 scfm/ft.
- Continue operating the stream diffusion aerators at the design flow rate of 15 scfm in each location, according to the Sparging Operating Limits letter (CH2M, 2017b).

7. References

CH2M HILL Engineers, Inc. (CH2M). 2016a. *Comprehensive Site Assessment Report, Lewis Drive Release Site, Belton, South Carolina. Site ID Number 18693 ("Kinder Morgan Belton Pipeline Release").* July.

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

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

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

CH2M HILL Engineers, Inc. (CH2M). 2017c. *Interim Free Product Recovery Plan – Revision 3, Plantation Pipe Line Company, Lewis Drive Remediation Site, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release."* August 4.

CH2M HILL Engineers, Inc. (CH2M). 2017d. *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 Engineers, Inc. (CH2M-Jacobs). 2018a. *Free-Product Recovery Plan – Revision 4, Lewis Drive Remediation, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release."* February 6.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018b. *Quality Assurance Project Plan, Revision 4.* Addendum to the SCDHEC UST Programmatic Quality Assurance Program Plan for Plantation Pipe Line Company/Site ID No. 18693. February 9.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018c. *Free-Product Recovery Plan, Revision 4., Lewis Drive Remediation Site, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release."* February 8.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018d. *Request for Well Permit to Install Additional Monitoring Wells, Lewis Drive Release, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release."* March 26.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018e. *Request for Well Permit to Install Additional Vertical Sparging Wells for Biosparging System Expansion, Lewis Drive Release, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release."* May 4.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018f. *Response to Comments in SCDHEC Letter titled "Reviews of Requests for Injection Wells, Pumping of Monitoring Wells and Monthly Status Reports" dated June 26, 2018.* July 24.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018g. Lewis Drive Spill Clean Up Stormwater Management and Sediment Control Application, Major Modification 4 – SWPPP Permit No. STW0315-09 (with NOI form 2617). July 24.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018h. *Lewis Drive – June 2018 Monthly Status Update, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release."* July 27.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018i. Stormwater Management and Sediment Control Application Major Modification 4 – Approval (SWPPP Permit No. STW0315-09 Approval). August 10.

CH2M HILL Engineers, Inc. (CH2M-Jacobs). 2018j. *2018 Second Quarter Monitoring Report, Lewis Drive Remediation Site, Plantation Pipe Line Company, Belton, South Carolina. Site ID Number 18693, "Kinder Morgan Belton Pipeline Release."* September 26.

Plantation Pipe Line Company (Plantation). 2015. Department of Transportation (DOT) Form 7000.1 Accident Report - Hazardous Liquid Pipeline Systems. Submitted to the DOT Pipeline and Hazardous Materials Safety Administration (PHMSA). January 7.

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.

South Carolina Department of Health and Environmental Control (SCDHEC). 2018a. Monitoring Well Approval Form, Approval #: MW-11508. April 11.

South Carolina Department of Health and Environmental Control (SCDHEC). 2018b. Reviews of Requests for Injection Well Installation, Pumping of Monitoring Wells and Monthly Status Reports. June 26.

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

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.)
7/11/2018	No odors, sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
8/1/2018	No odors, sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.
9/14/2018	No odors, sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.

Note:

ID = identification

Table 2. Product Skimmer Recovery Results

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Well Identifier	Week 1 Volume Recovered (gal)	Week 2 Volume Recovered (gal)	Week 3 Volume Recovered (gal)	Week 4 Volume Recovered (gal)	Week 5 Volume Recovered (gal)	Week 6 Volume Recovered (gal)	Week 7 Volume Recovered (gal)	Week 8 Volume Recovered (gal)	Week 9 Volume Recovered (gal)	Week 10 Volume Recovered (gal)	Total Recovered to Date (gal)
Date	**2/20/2018**	**2/26/2018**	**3/9/2018**	**3/15/2018**	**4/6/2018**	**5/3/2018**	**6/7/2018**	**7/13/2018**	**8/1/2018**	**9/11/2018**	
Product Skimmers											
MW-08	-	-	-	-	0.001	-	-	-	-	-	**0.001**
MW-15	-	-	0.023	0.004	-	-	-	-	-	-	**0.027**
MW-20	0.004	0.017	0.016	-	0.002	-	0.008	-	-	-	**0.046**
RS-01	NA	NA	0.031	0.008	-	-	-	0.031	0.016	0.008	**0.094**
RS-02	-	-	0.001	-	-	-	0.008	0.016	0.016	-	**0.040**
RS-05	0.844	0.813	1.094	1.125	0.031	0.002	0.008	0.004	0.023	0.016	**3.959**
RS-10	0.002	-	-	-	0.008	-	-	-	0.004	0.002	**0.015**
RS-14	0.016	-	-	-	-	-	0.008	0.002	0.004	-	**0.029**
RS-17	-	-	0.001	-	-	-	0.008	0.002	-	-	**0.010**
RW-02	-	0.090	0.047	-	0.033	-	0.008	0.001	0.016	0.023	**0.217**
RW-03	-	-	0.008	0.008	0.002	-	0.008	0.001	0.004	0.006	**0.036**
RW-04	-	0.008	0.016	-	0.001	-	0.016	0.023	0.008	-	**0.071**
RW-05	-	0.016	0.016	0.656	-	0.001	0.018	-	0.047	0.031	**0.784**
RW-07	0.002	-	0.008	-	-	-	-	-	0.004	0.001	**0.014**
RW-08	-	-	-	-	-	-	-	-	-	-	**-**
RW-15	0.078	-	-	0.117	0.031	0.002	-	0.008	-	0.002	**0.238**
RW-10								0.234	0.004	-	**0.238**
Petroleum-Absorbent Socks											
MW-11	0.200	0.224	-	0.256	0.200	0.008	0.221	-	-	-	**1.109**
RS-08	-	-	-	-	0.243	0.040	0.016	0.224	-	-	**0.523**
RT-2K	-	-	-	-	0.006	0.006	0.209	0.152	0.187	-	**0.560**
RT-1A	-	-	-	-	0.228	0.036	0.254	0.205	0.233	0.131	**1.086**
RT-1B	-	-	-	-	0.251	0.038	0.244	0.235	0.212	-	**0.979**
RT-1C	-	-	-	-	0.255	0.039	0.231	0.201	0.069	0.041	**0.836**
Total:	**1.145**	**1.167**	**1.259**	**2.174**	**1.291**	**0.171**	**1.263**	**1.337**	**0.845**	**0.259**	**10.912**

Notes:

- = no product recovered
gal = gallons
ID = identification
NA = not applicable
MW = monitoring well
RS - recovery sump
RT = recovery trench
RW = recovery well

Table 3. 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	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

Table 3. 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	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-01	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
	SW01-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	**1.15**	5 U	NA
	SW01-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW01-030918	3/9/2018	µg/L	**1.15**	1 U	1 U	2 U	1 U	5 U	1 U
	SW01-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.1**
	SW01-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW01-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.43**
	SW01-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.09**
	SW01-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.51**
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

Table 3. 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	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	SW02-112415	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**	**9.4**	**9.74**	**7.32**	5 U	NA
	SW02-010918	1/9/2018	µg/L	**25.0**	**1.56**	**12.4**	**11**	**8.24**	5 U	NA
	SW02-020618	2/6/2018	µg/L	**6.69**	**1** U	**2.65**	**2.75**	**1.87**	5 U	1 U
	SW02-030918	3/9/2018	µg/L	**3.19**	1 U	**1.39**	2 U	**1.11**	5 U	1 U
	SW02-040618	4/6/2018	µg/L	**2.23**	1 U	1 U	2 U	1 U	5 U	**2.13**
	SW02-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**2.25**
	SW02-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.92**

Table 3. 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	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	SW02-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.15**
	SW02-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**2.94**
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 U	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

Table 3. 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	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	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
	--	1/9/2018	--	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS	NS-HS
	SW03-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW03-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW03-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW03-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW03-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW03-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW03-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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	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
	SW04-010918	1/9/2018	µg/L	1 U	1 U	**4.09**	2 U	1 U	5 U	NA
	SW04-020618	2/6/2018	µg/L	**3.04**	1 U	**1.73**	2 U	**1.12**	5 U	1 U
	SW04-030918	3/9/2018	µg/L	1 U	1 U	**1.37**	2 U	1 U	5 U	1 U
	SW04-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW04-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.2**

Table 3. 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	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	SW04-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.31**
	SW04-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW04-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.13**
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

Table 3. 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	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	--	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
	--	1/9/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW05-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW05-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	--	4/6/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	SW05-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	--	6/7/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	7/12/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/14/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
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

Table 3. 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	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	--	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
	--	1/9/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	2/6/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	3/9/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	4/6/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	5/3/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/7/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW

Table 3. 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	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	--	7/12/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/14/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
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

Table 3. 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	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	SW07-032117	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
	SW07-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW07-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW07-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW07-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW07-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW07-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW07-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	--	9/14/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
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

Table 3. 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	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	SW08-122215	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
	SW08-010918	1/9/2018	µg/L	**1.16**	1 U	1 U	2 U	**1.87**	5 U	NA
	SW08-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW08-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW08-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW08-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW08-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U

Table 3. 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	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	SW08-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW08-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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	SW09-032117	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
	SW09-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW09-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW09-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW09-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW09-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW09-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW09-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW09-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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	SW10-122215	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
	SW10-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW10-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW10-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW10-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW10-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW10-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U

Table 3. 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	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	SW10-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW10-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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	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
	SW11-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW11-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW11-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW11-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW11-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW11-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW11-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW11-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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	SW12-090517	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
	SW12-010918	1/9/2018	µg/L	**12.3**	**2.16**	**5.65**	**14.6**	**11.1**	5 U	NA
	SW12-020618	2/6/2018	µg/L	**2.53**	1 U	**1.20**	**4.04**	**2.44**	5 U	1 U
	SW12-030918	3/9/2018	µg/L	**3.24**	**1.79**	**12.2**	**9.75**	**4.28**	5 U	1 U
	SW12-040618	4/6/2018	µg/L	**1.88**	1 U	1 U	**5.05**	**2.82**	5 U	1 U
	SW12-050318	5/3/2018	µg/L	1 U	1 U	1 U	**4.18**	**2.72**	5 U	1 U
	SW12-060718	6/7/2018	µg/L	**1.85**	1 U	1 U	**3.24**	**1.64**	5 U	1 U
	SW12-071218	7/12/2018	µg/L	**1.79**	1 U	1 U	**3.81**	**2.15**	5 U	1 U
	SW12-091418	9/14/2018	µg/L	**1.34**	1 U	1 U	**3.20**	**2.00**	5 U	1 U
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
	SW13-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW13-020618	2/6/2018	µg/L	**1.78**	1 U	1 U	2 U	1 U	5 U	**4.26**
	SW13-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**2.07**
	SW13-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.4**

Table 3. 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	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-13	SW13-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**3.67**
	SW13-060718	6/7/2018	µg/L	**2.99**	1 U	**2.48**	2 U	1 U	5 U	**8.08**
	SW13-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW13-081318	8/13/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW13-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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
	SW14-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	SW14-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW14-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW14-040618	4/6/2018	µg/L	1 U	1 U	**1.43**	2 U	1 U	5 U	1 U
	SW14-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	SW14-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.18**
	SW14-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	**1.33**
	SW14-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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	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
	FP01-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP01-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP01-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP01-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP01-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP01-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP01-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP01-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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-02	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
	FP02-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP02-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP02-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP02-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP02-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP02-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP02-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP02-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
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

Table 3. 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	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	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
	FP03-010918	1/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	NA
	FP03-020618	2/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP03-030918	3/9/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP03-040618	4/6/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP03-050318	5/3/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP03-060718	6/7/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP03-071218	7/12/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U
	FP03-091418	9/14/2018	µg/L	1 U	1 U	1 U	2 U	1 U	5 U	1 U

Notes:

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

[b] Screening levels for these analytes are not specified in SCDHEC 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 cannot be determined.

Samples analyzed by EPA Method SW 8260B

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

Gray shading indicates the analyte exceeded its screening value.

µg/L = microgram(s) per liter

FP = fishing pond

ID = identification

J = estimated

MTBE = methyl tertiary butyl ether

NA = not applicable

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

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

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

SW = surface water

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

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
MW-01					853.07		
	9/11/2018	-	4.07	-		849.00	-
	8/1/2018	-	7.49	-		845.58	-
	7/11/2018	-	6.64	-		846.43	-
MW-01B					852.99		
	9/11/2018	-	9.28	-		843.71	-
	8/1/2018	-	8.01	-		844.98	-
	7/11/2018	-	7.20	-		845.79	-
MW-02					841.04		
	9/11/2018	-	12.10	-		828.94	-
	8/1/2018	-	5.50	-		835.54	-
	7/11/2018	-	15.25	-		825.79	-
MW-02B					841.19		
	9/11/2018	-	18.65	-		822.54	-
	8/1/2018	-	9.13	-		832.06	-
	7/11/2018	-	5.88	-		835.31	-
MW-03					838.36		
	9/11/2018	-	17.30	-		821.06	-
	8/1/2018	-	13.00	-		825.36	-
	7/11/2018	-	-	-		838.36	-
MW-04					844.42		
	9/11/2018	-	13.31	-		831.11	-
	8/1/2018	-	9.27	-		835.15	-
	7/11/2018	-	8.27	-		836.15	-
MW-05					851.11		
	9/11/2018	-	14.18	-		836.93	-
	8/1/2018	-	12.70	-		838.41	-
	7/11/2018	-	11.70	-		839.41	-
MW-06					852.92		
	9/11/2018	-	12.69	-		840.23	-
	8/1/2018	-	10.96	-		841.96	-
	7/11/2018	-	10.31	-		842.61	-
MW-06B					852.57		
	9/11/2018	-	12.50	-		840.07	-
	8/1/2018	-	10.58	-		841.99	-
	7/11/2018	-	10.06	-		842.51	-
MW-07					853.02		
	9/11/2018	-	11.40	-		841.62	-
	8/1/2018	-	10.06	-		842.96	-
	7/11/2018	-	9.55	-		843.47	-
MW-08					844.72		
	9/11/2018	-	16.85	-		827.87	-
	8/1/2018	-	10.53	-		834.19	-
	7/11/2018	-	9.30	-		835.42	-
MW-09					843.63		
	9/11/2018	-	10.56	-		833.07	-
	8/1/2018	-	-	-		843.63	-
	7/11/2018	-	-	-		843.63	-
MW-09B					843.92		

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
MW-09B (cont'd)	9/11/2018	-	18.50	-		825.42	-
	8/1/2018	-	4.00	-		839.92	-
	7/11/2018	-	6.65	-		837.27	-
MW-10					845.41		
	9/11/2018	-	16.41	-		829.00	-
	8/1/2018	-	12.12	-		833.29	-
	7/11/2018	-	10.75	-		834.66	-
MW-11					855.63		
	9/11/2018	29.01	29.03	0.02		826.60	826.61
	8/1/2018	-	27.20	-		828.43	-
	7/11/2018	-	26.64	-		828.99	-
MW-12					834.53		
	9/11/2018	-	13.19	-		821.34	-
	8/1/2018	-	12.98	-		821.55	-
	7/11/2018	-	12.94	-		821.59	-
MW-12B					834.98		
	9/11/2018	-	14.07	-		820.91	-
	8/1/2018	-	12.88	-		822.10	-
	7/11/2018	-	12.88	-		822.10	-
MW-13					848.84		
	9/11/2018	-	21.85	-		826.99	-
	8/1/2018	-	20.05	-		828.79	-
	7/11/2018	-	19.41	-		829.43	-
MW-13B					849.82		
	9/11/2018	-	21.81	-		828.01	-
	8/1/2018	-	20.75	-		829.07	-
	7/11/2018	-	20.10	-		829.72	-
MW-14					838.70		
	9/11/2018	-	16.64	-		822.06	-
	8/1/2018	-	15.60	-		823.10	-
	7/11/2018	-	15.02	-		823.68	-
MW-14B					840.20		
	9/11/2018	-	17.59	-		822.61	-
	8/1/2018	-	16.70	-		823.50	-
	7/11/2018	-	16.10	-		824.10	-
MW-15					831.03		
	9/11/2018	-	11.35	-		819.68	-
	8/1/2018	-	10.96	-		820.07	-
	7/11/2018	-	10.30	-		820.73	-
MW-15B					831.29		
	9/11/2018	-	15.19	-		816.10	-
	8/1/2018	-	14.61	-		816.68	-
	7/11/2018	-	14.53	-		816.76	-
MW-16					847.67		
	9/11/2018	-	12.35	-		835.32	-
	8/1/2018	-	-	-		847.67	-
	7/11/2018	-	6.00	-		841.67	-
MW-17					855.35		
	9/11/2018	-	10.86	-		844.49	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
MW-17 (cont'd)	8/1/2018	-	10.85	-		844.50	-
	7/11/2018	-	10.85	-		844.50	-
MW-17B					855.37		
	9/11/2018	-	13.74	-		841.63	-
	8/1/2018	-	12.56	-		842.81	-
	7/11/2018	-	17.10	-		838.27	-
MW-18					846.89		
	9/11/2018	-	19.56	-		827.33	-
	8/1/2018	16.61	16.64	0.03		830.25	830.27
	7/11/2018	16.00	18.00	**2.00**		828.89	830.35
MW-19					853.94		
	9/11/2018	-	10.05	-		843.89	-
	8/1/2018	-	8.74	-		845.20	-
	7/11/2018	-	10.50	-		843.44	-
MW-20					852.89		
	9/11/2018	10.29	10.59	0.30		842.30	842.51
	8/1/2018	9.02	9.04	0.02		843.85	843.86
	7/11/2018	-	8.83	-		844.06	-
MW-21					855.77		
	9/11/2018	-	14.51	-		841.26	-
	8/1/2018	-	13.53	-		842.24	-
	7/11/2018	-	13.07	-		842.70	-
MW-22					854.60		
	9/11/2018	-	9.57	-		845.03	-
	8/1/2018	-	8.45	-		846.15	-
	7/11/2018	-	7.90	-		846.70	-
MW-23					849.57		
	9/11/2018	-	5.94	-		843.63	-
	8/1/2018	-	7.56	-		842.01	-
	7/11/2018	-	7.15	-		842.42	-
MW-23B					849.69		
	9/11/2018	-	5.40	-		844.29	-
	8/1/2018	-	8.47	-		841.22	-
	7/11/2018	-	8.60	-		841.09	-
MW-24					817.92		
	9/11/2018	-	5.22	-		812.70	-
	8/1/2018	-	4.45	-		813.47	-
	7/11/2018	-	4.67	-		813.25	-
MW-24B					818.72		
	9/11/2018	-	5.85	-		812.87	-
	8/1/2018	-	5.19	-		813.53	-
	7/11/2018	-	5.35	-		813.37	-
MW-25					826.18		
	9/11/2018	-	7.88	-		818.30	-
	8/1/2018	-	7.41	-		818.77	-
	7/11/2018	-	7.70	-		818.48	-
MW-25B					823.81		
	9/11/2018	-	4.76	-		819.05	-
	8/1/2018	-	4.15	-		819.66	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
MW-25B (cont'd)	7/11/2018	-	3.91	-		819.90	-
MW-26					847.56		
	9/11/2018	-	2.65	-		844.91	-
	8/1/2018	-	3.78	-		843.78	-
	7/11/2018	-	3.67	-		843.89	-
MW-26B					847.81		
	9/11/2018	-	4.55	-		843.26	-
	8/1/2018	-	6.18	-		841.63	-
	7/11/2018	-	5.42	-		842.39	-
MW-27					854.11		
	9/11/2018	-	25.17	-		828.94	-
	8/1/2018	-	23.92	-		830.19	-
	7/11/2018	-	23.30	-		830.81	-
MW-27B					857.14		
	9/11/2018	-	28.49	-		828.65	-
	8/1/2018	-	28.10	-		829.04	-
	7/11/2018	-	28.09	-		829.05	-
MW-28					844.31		
	9/11/2018	-	22.00	-		822.31	-
	8/1/2018	-	21.51	-		822.80	-
	7/11/2018	-	20.92	-		823.39	-
MW-29					852.20		
	9/11/2018	-	8.36	-		843.84	-
	8/1/2018	-	7.18	-		845.02	-
	7/11/2018	-	6.35	-		845.85	-
MW-30					841.28		
	9/11/2018	-	14.60	-		826.68	-
	8/1/2018	-	13.10	-		828.18	-
	7/11/2018	-	12.26	-		829.02	-
MW-31					845.04		
	9/11/2018	-	21.88	-		823.16	-
	8/1/2018	-	19.25	-		825.79	-
	7/11/2018	-	18.37	-		826.67	-
MW-31B					844.94		
	9/11/2018	-	21.25	-		823.69	-
	8/1/2018	-	18.95	-		825.99	-
	7/11/2018	-	18.24	-		826.70	-
MW-32					842.93		
	9/11/2018	-	21.07	-		821.86	-
	8/1/2018	-	12.70	-		830.23	-
	7/11/2018	-	11.00	-		831.93	-
MW-33					849.20		
	9/11/2018	-	26.75	-		822.45	-
	8/1/2018	-	23.65	-		825.55	-
	7/11/2018	-	22.87	-		826.33	-
MW-33T					849.11		
	9/11/2018	-	25.91	-		823.20	-
	8/1/2018	-	24.83	-		824.28	-
	7/11/2018	-	24.09	-		825.02	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
MW-34					816.35		
	9/11/2018	-	3.18	-		813.17	-
	8/1/2018	-	2.48	-		813.87	-
	7/11/2018	-	2.60	-		813.75	-
MW-35					829.40		
	9/11/2018	-	9.14	-		820.26	-
	8/1/2018	-	8.50	-		820.90	-
	7/11/2018	-	7.22	-		822.18	-
MW-36					858.47		
	9/11/2018	-	16.68	-		841.79	-
	8/1/2018	-	15.78	-		842.69	-
	7/11/2018	-	15.24	-		843.23	-
MW-36B					858.15		
	9/11/2018	-	16.39	-		841.76	-
	8/1/2018	-	15.50	-		842.65	-
	7/11/2018	-	14.97	-		843.18	-
MW-37					813.92		
	9/11/2018	-	3.29	-		810.63	-
	8/1/2018	-	3.10	-		810.82	-
	7/11/2018	-	3.26	-		810.66	-
MW-38					813.28		
	9/11/2018	-	2.17	-		811.11	-
	8/1/2018	-	2.50	-		810.78	-
	7/11/2018	-	1.45	-		811.83	-
MW-39					819.90		
	9/11/2018	-	5.12	-		814.78	-
	8/1/2018	-	4.83	-		815.07	-
	7/11/2018	-	4.75	-		815.15	-
MW-40					817.79		
	9/11/2018	-	2.77	-		815.02	-
	8/1/2018	-	2.38	-		815.41	-
	7/11/2018	-	2.44	-		815.35	-
MW-41					819.68		
	9/11/2018	-	4.25	-		815.43	-
	8/1/2018	-	3.90	-		815.78	-
	7/11/2018	-	4.07	-		815.61	-
MW-42					820.33		
	9/11/2018	-	4.96	-		815.37	-
	8/1/2018	-	4.68	-		815.65	-
	7/11/2018	-	4.85	-		815.48	-
MW-43					818.12		
	9/11/2018	-	5.24	-		812.88	-
	8/1/2018	-	4.41	-		813.71	-
	7/11/2018	-	4.74	-		813.38	-
MW-43B					818.80		
	9/11/2018	-	1.88	-		816.92	-
	8/1/2018	-	1.13	-		817.67	-
	7/11/2018	-	0.95	-		817.85	-
MW-44					853.67		

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
MW-44 (cont'd)	9/11/2018	-	8.65	-		845.02	-
	8/1/2018	-	7.12	-		846.55	-
	7/11/2018	-	6.78	-		846.89	-
MW-44B					853.38		
	9/11/2018	-	12.35	-		841.03	-
	8/1/2018	-	10.92	-		842.46	-
	7/11/2018	-	10.05	-		843.33	-
MW-45					852.47		
	9/11/2018	-	12.00	-		840.47	-
	8/1/2018	-	11.22	-		841.25	-
	7/11/2018	-	10.66	-		841.81	-
MW-45B					852.85		
	9/11/2018	-	12.84	-		840.01	-
	8/1/2018	-	12.36	-		840.49	-
	7/11/2018	-	12.20	-		840.65	-
MW-46					845.47		
	9/11/2018	-	7.88	-		837.59	-
	8/1/2018	-	6.67	-		838.80	-
	7/11/2018	-	6.35	-		839.12	-
MW-47					842.98		
	9/11/2018	-	19.42	-		823.56	-
	8/1/2018	-	16.84	-		826.14	-
	7/11/2018	-	16.08	-		826.90	-
MW-48B					832.34		
	9/11/2018	-	17.45	-		814.89	-
	8/1/2018	-	16.70	-		815.64	-
	7/11/2018	-	16.40	-		815.94	-
MW-49					846.78		
	9/11/2018	-	18.28	-		828.50	-
	8/1/2018	-	17.14	-		829.64	-
	7/11/2018	-	16.39	-		830.39	-
MW-50B					850.34		
	9/11/2018	-	23.28	-		827.06	-
	8/1/2018	-	22.43	-		827.91	-
	7/11/2018	-	19.53	-		830.81	-
RS-01					849.13		
	9/11/2018	14.19	14.21	0.02		834.92	834.93
	8/1/2018	7.87	7.88	0.01		841.25	841.26
	7/11/2018	6.78	6.80	0.02		842.33	842.34
RS-02					849.52		
	9/11/2018	-	12.03	-		837.49	-
	8/1/2018	-	6.71	-		842.81	-
	7/11/2018	-	5.68	-		843.84	-
RS-04					851.47		
	9/11/2018	-	9.79	-		841.68	-
	8/1/2018	-	8.72	-		842.75	-
	7/11/2018	-	7.95	-		843.52	-
RS-05					848.31		
	9/11/2018	14.57	14.58	0.01		833.73	833.74

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
RS-05 (cont'd)	8/1/2018	8.51	8.56	0.05		839.75	839.79
	7/11/2018	6.57	6.58	0.01		841.73	841.74
RS-06					849.47		
	9/11/2018	-	12.92	-		836.55	-
	8/1/2018	-	7.88	-		841.59	-
	7/11/2018	-	6.70	-		842.77	-
RS-07					855.08		
	9/11/2018	-	11.79	-		843.29	-
	8/1/2018	-	10.87	-		844.21	-
	7/11/2018	-	10.21	-		844.87	-
RS-08					854.24		
	9/11/2018	-	10.35	-		843.89	-
	8/1/2018	-	11.24	-		843.00	-
	7/11/2018	-	10.50	-		843.74	-
RS-09					847.60		
	9/11/2018	-	15.91	-		831.69	-
	8/1/2018	-	6.90	-		840.70	-
	7/11/2018	-	6.23	-		841.37	-
RS-10					847.42		
	9/11/2018	-	14.83	-		832.59	-
	8/1/2018	-	6.16	-		841.26	-
	7/11/2018	5.38	5.40	0.02		842.02	842.03
RS-11					847.44		
	9/11/2018	-	12.06	-		835.38	-
	8/1/2018	-	5.89	-		841.55	-
	7/11/2018	-	5.35	-		842.09	-
RS-12					847.74		
	9/11/2018	-	12.56	-		835.18	-
	8/1/2018	-	6.21	-		841.53	-
	7/11/2018	-	5.70	-		842.04	-
RS-13					845.98		
	9/11/2018	-	15.42	-		830.56	-
	8/1/2018	-	5.58	-		840.40	-
	7/11/2018	-	4.66	-		841.32	-
RS-14					845.97		
	9/11/2018	-	12.08	-		833.89	-
	8/1/2018	3.84	3.85	0.01		842.12	842.13
	7/11/2018	3.85	3.86	0.01		842.11	842.12
RS-15					846.41		
	9/11/2018	-	10.74	-		835.67	-
	8/1/2018	-	4.28	-		842.13	-
	7/11/2018	-	4.15	-		842.26	-
RS-16					845.44		
	9/11/2018	-	13.87	-		831.57	-
	8/1/2018	-	4.85	-		840.59	-
	7/11/2018	-	3.63	-		841.81	-
RS-17					844.22		
	9/11/2018	-	9.95	-		834.27	-
	8/1/2018	-	3.28	-		840.94	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
RS-17 (cont'd)	7/11/2018	-	3.52	-		840.70	-
RS-18					847.89		
	9/11/2018	-	16.76	-		831.13	-
	8/1/2018	-	7.33	-		840.56	-
	7/11/2018	-	6.50	-		841.39	-
RS-19					850.40		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	NM	-		-	-
RS-20					842.69		
	9/11/2018	-	10.24	-		832.45	-
	8/1/2018	-	5.22	-		837.47	-
	7/11/2018	-	4.95	-		837.74	-
RT-1A					854.06		
	9/11/2018	-	11.72	-		842.34	-
	8/1/2018	-	10.80	-		843.26	-
	7/11/2018	-	10.75	-		843.31	-
RT-1B					854.15		
	9/11/2018	-	11.70	-		842.45	-
	8/1/2018	-	10.78	-		843.37	-
	7/11/2018	-	10.22	-		843.93	-
RT-1C					854.55		
	9/11/2018	-	12.30	-		842.25	-
	8/1/2018	-	11.39	-		843.16	-
	7/11/2018	-	10.24	-		844.31	-
RT-2A					817.48		
	9/11/2018	-	0.80	-		816.68	-
	8/1/2018	-	0.60	-		816.88	-
	7/11/2018	-	0.50	-		816.98	-
RT-2B					817.61		
	9/11/2018	-	0.80	-		816.81	-
	8/1/2018	-	0.80	-		816.81	-
	7/11/2018	-	0.08	-		817.53	-
RT-2C					818.06		
	9/11/2018	-	1.46	-		816.60	-
	8/1/2018	-	1.24	-		816.82	-
	7/11/2018	-	1.20	-		816.86	-
RT-2D					818.12		
	9/11/2018	-	1.50	-		816.62	-
	8/1/2018	-	1.30	-		816.82	-
	7/11/2018	-	1.33	-		816.79	-
RT-2E					818.25		
	9/11/2018	-	1.63	-		816.62	-
	8/1/2018	-	1.42	-		816.83	-
	7/11/2018	-	1.42	-		816.83	-
RT-2F					818.57		
	9/11/2018	-	2.00	-		816.57	-
	8/1/2018	-	1.76	-		816.81	-
	7/11/2018	-	1.80	-		816.77	-
RT-2G					820.07		

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
RT-2G (cont'd)	9/11/2018	-	3.84	-		816.23	-
	8/1/2018	-	2.99	-		817.08	-
	7/11/2018	-	2.10	-		817.97	-
RT-2H					822.17		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	NM	-		-	-
RT-2I					819.51		
	9/11/2018	-	2.74	-		816.77	-
	8/1/2018	-	2.63	-		816.88	-
	7/11/2018	-	2.25	-		817.26	-
RT-2J					817.63		
	9/11/2018	-	1.15	-		816.48	-
	8/1/2018	-	1.98	-		815.65	-
	7/11/2018	-	0.80	-		816.83	-
RT-2K					817.40		
	9/11/2018	-	1.15	-		816.25	-
	8/1/2018	-	0.78	-		816.62	-
	7/11/2018	-	0.95	-		816.45	-
RT-2L					819.54		
	9/11/2018	-	2.28	-		817.26	-
	8/1/2018	-	1.52	-		818.02	-
	7/11/2018	-	1.40	-		818.14	-
RW-01					851.92		
	9/11/2018	-	10.06	-		841.86	-
	8/1/2018	-	14.01	-		837.91	-
	7/11/2018	-	13.97	-		837.95	-
RW-02					852.69		
	9/11/2018	23.88	23.89	0.01		828.80	828.81
	8/1/2018	-	21.69	-		831.00	-
	7/11/2018	20.86	20.87	0.01		831.82	831.83
RW-03					852.34		
	9/11/2018	24.57	24.61	0.04		827.73	827.76
	8/1/2018	-	22.71	-		829.63	-
	7/11/2018	-	21.72	-		830.62	-
RW-04					853.93		
	9/11/2018	29.45	29.65	0.20		824.28	824.43
	8/1/2018	27.39	27.63	0.24		826.30	826.48
	7/11/2018	26.70	26.81	0.11		827.12	827.20
RW-05					853.53		
	9/11/2018	32.67	32.87	0.20		820.66	820.81
	8/1/2018	31.61	31.71	0.10		821.82	821.90
	7/11/2018	31.25	31.32	0.07		822.21	822.26
RW-06					846.21		
	9/11/2018	-	25.55	-		820.66	-
	8/1/2018	-	24.40	-		821.81	-
	7/11/2018	-	24.31	-		821.90	-
RW-07					843.19		
	9/11/2018	-	22.10	-		821.09	-
	8/1/2018	-	21.49	-		821.70	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
RW-07 (cont'd)	7/11/2018	-	21.03	-		822.16	-
RW-08					835.48		
	9/11/2018	-	15.21	-		820.27	-
	8/1/2018	-	14.70	-		820.78	-
	7/11/2018	-	14.66	-		820.82	-
RW-09					835.12		
	9/11/2018	-	12.31	-		822.81	-
	8/1/2018	-	12.11	-		823.01	-
	7/11/2018	-	12.44	-		822.68	-
RW-10					848.53		
	9/11/2018	16.82	16.90	0.08		831.63	831.69
	8/1/2018	-	10.40	-		838.13	-
	7/11/2018	9.24	9.29	0.05		839.24	839.28
RW-11					852.97		
	9/11/2018	-	4.41	-		848.56	-
	8/1/2018	8.90	8.91	0.01		844.06	844.06
	7/11/2018	-	9.71	-		843.26	-
RW-12					854.49		
	9/11/2018	-	12.68	-		841.81	-
	8/1/2018	12.53	12.54	0.01		841.95	841.95
	7/11/2018	-	10.70	-		843.79	-
RW-13					847.97		
	9/11/2018	-	NM	-		-	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	NM	-		-	-
RW-14					827.54		
	9/11/2018	-	9.70	-		817.84	-
	8/1/2018	-	1.70	-		825.84	-
	7/11/2018	-	10.02	-		817.52	-
RW-15					851.64		
	9/11/2018	-	14.35	-		837.29	-
	8/1/2018	-	11.39	-		840.25	-
	7/11/2018	10.21	10.22	0.01		841.42	841.42
SW-01					812.82		
	9/11/2018	-	(0.20)	-		813.02	-
	8/1/2018	-	(0.75)	-		813.57	-
	7/11/2018	-	(5.69)	-		818.51	-
SW-02					808.65		
	9/11/2018	-	(1.80)	-		810.45	-
	8/1/2018	-	(1.90)	-		810.55	-
	7/11/2018	-	NM	-		-	-
SW-03					815.09		
	9/11/2018	-	-	-		815.09	-
	8/1/2018	-	(0.30)	-		815.39	-
	7/11/2018	-	(0.59)	-		815.68	-
SW-05					838.75		
	9/11/2018	-	-	-		838.75	-
	8/1/2018	-	(0.30)	-		839.05	-
	7/11/2018	-	NM	-		-	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
SW-08					802.04		
	9/11/2018	-	(0.94)	-		802.98	-
	8/1/2018	-	(0.85)	-		802.89	-
	7/11/2018	-	(0.84)	-		802.88	-
SW-10					778.09		
	9/11/2018	-	(0.43)	-		778.52	-
	8/1/2018	-	(0.40)	-		778.49	-
	7/11/2018	-	(0.40)	-		778.49	-
TW-04R					852.64		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	3.30	-		849.34	-
TW-05R					849.93		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	NM	-		-	-
TW-14R					853.37		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	4.40	-		848.97	-
TW-15R					850.62		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	NM	-		-	-
TW-21					849.70		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	2.89	-		846.81	-
TW-28					851.42		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	20.50	-		830.92	-
TW-30					851.81		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	19.55	-		832.26	-
TW-34					854.79		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	22.11	-		832.68	-
TW-35					854.10		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	22.63	-		831.47	-
TW-40					853.35		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	26.15	-		827.20	-
TW-41					849.38		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	24.40	-		824.98	-
TW-42					846.84		
	8/1/2018	-	NM	-		-	-
	7/11/2018	23.25	23.76	**0.51**		823.08	823.45
TW-45					848.31		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	24.91	-		823.40	-
TW-46					846.88		
	8/1/2018	-	NM	-		-	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
TW-46 (cont'd)	7/11/2018	-	NM	-		-	-
TW-55					845.93		
	9/11/2018	-	11.51	-		834.42	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	-	-		845.93	-
TW-59					834.78		
	9/11/2018	-	-	-		834.78	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	13.36	-		821.42	-
TW-60					828.03		
	9/11/2018	-	10.25	-		817.78	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	8.86	-		819.17	-
TW-64					845.88		
	9/11/2018	-	19.80	-		826.08	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	15.56	-		830.32	-
TW-65					845.62		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	19.21	-		826.41	-
TW-66					820.31		
	9/11/2018	-	2.17	-		818.14	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	1.46	-		818.85	-
TW-67					852.71		
	9/11/2018	-	10.68	-		842.03	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	9.19	-		843.52	-
TW-68					846.45		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	20.87	-		825.58	-
TW-69					840.27		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	13.18	-		827.09	-
TW-70					841.95		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	16.73	-		825.22	-
TW-73					850.53		
	9/11/2018	-	8.10	-		842.43	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	4.77	-		845.76	-
TW-76					852.44		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	9.55	-		842.89	-
TW-81					849.43		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	2.90	-		846.53	-
TW-82					849.64		
	8/1/2018	-	NM	-		-	-

Table 4. 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[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)
TW-82 (cont'd)	7/11/2018	-	2.80	-		846.84	-
TW-83					850.44		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	3.52	-		846.92	-
TW-84					851.22		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	4.19	-		847.03	-
TW-85					843.49		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	-	-		843.49	-
TW-86					853.10		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	5.28	-		847.82	-
TW-87					852.25		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	5.16	-		847.09	-
TW-90					845.43		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	-	-		845.43	-
TW-94					840.58		
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	-	-		840.58	-
TW-96					840.40		
	9/11/2018	-	16.00	-		824.40	-
	8/1/2018	-	NM	-		-	-
	7/11/2018	-	-	-		840.40	-

Notes:

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

[b.] "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.

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

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

DRY = well contained no measurable water or product

ft = feet | ID = identification | NM = not measured

MW = monitoring well | SW = surface water | TW = temporary piezometer well

RW = recovery well | RT = recovery trench | RS = recovery sump

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.
- RW-13 is no longer accessible due to health and safety issues.

Table 5. 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	Distance to Nearest Sparge Well (feet)	DO (mg/L) 7/11/2018	DO (mg/L) 9/10/2018
MW-02	Hayfield	HAS-02	33	11.41	6.90
MW-02B	Hayfield	HAS-02	24	3.24	8.16
MW-03	Hayfield	HAS-02	12	11.30	12.02
MW-04	Hayfield	HAS-01	82	7.01	7.17
MW-08	Hayfield	HAS-03	12	9.90	9.07
MW-09	Hayfield	HAS-01	37	10.62	10.57
MW-10	Hayfield	HAS-03	27	8.00	5.50
MW-16	Hayfield	HAS-01	24	FP	FP
MW-18	Hayfield	HAS-03	2	FP	FP
MW-30	Hayfield	HAS-01	15	0.72	DRY
TW-55	Hayfield	HAS-01	40	9.86	11.20
TW-59	Hayfield	VAS-38	6	6.95	11.49
TW-60	Hayfield	VAS-25	10	8.50	8.10
TW-64	Hayfield	HAS-03	132	3.25	2.72
TW-66	Hayfield	VAS-28	49	8.00	7.23
TW-67	Hayfield	VAS-11	14	9.06	9.72
TW-73	Hayfield	VAS-19	11	8.70	5.70
TW-96	Hayfield	HAS-03	78	9.90	9.85
			Average Hayfield Zone Values	7.90	8.36
MW-12	Brown's Creek	VAS-37	18	7.98	8.45
MW-12B	Brown's Creek	VAS-37	9	0.31	1.66
MW-15	Brown's Creek	VAS-21	14	10.20	6.20
MW-15B	Brown's Creek	VAS-22	13	0.45	2.44
MW-25	Brown's Creek	VAS-29	54	6.41	5.55
MW-25B	Brown's Creek	VAS-29	56	0.88	1.95
MW-28	Brown's Creek	VAS-46	26	0.94	1.99
			Average Brown's Creek Protection Zone Values	3.88	4.03
MW-19	Cupboard Creek	VAS-08	17	0.82	2.15
MW-20	Cupboard Creek	VAS-03	23	FP	FP
MW-29	Cupboard Creek	VAS-19	111	3.70	5.32
			Average Cupboard Creek Protection Zone Values	2.26	3.74
MW-01	Shallow Bedrock	VBS-01	147	0.12	1.17
MW-01B	Shallow Bedrock	VBS-01	152	0.10	1.34
MW-11	Shallow Bedrock	VBS-01	368	3.64	FP
MW-22	Shallow Bedrock	VBS-03	115	0.69	6.87
			Average Shallow Bedrock Zone Values	1.14	3.13
			Average Residuum	6.57	7.04
			Average Bedrock Values	1.00	3.11

Notes:

DO = dissolved oxygen

DRY = well did not contain water

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

ft = feet

HAS = Hayfield air sparging well

ID = identification

mg/L = milligrams per liter

MW = monitoring well

TW = temporary well

VAS = vertical air sparging well

VBS = vertical bedrock sparging well

Table 6. 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	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-01-030818	3/5/2018	3.80	3/8/2018	µg/L	**1.85**	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01-060518	6/4/2018	3.83	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01-091118	9/10/2018	6.72	9/11/2018	µg/L	**2.02**	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-01B-030818	3/5/2018	7.40	3/8/2018	µg/L	**3.51**	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01B-060518	6/4/2018	6.47	6/5/2018	µg/L	**8.96**	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-01B-091118	9/10/2018	9.28	9/11/2018	µg/L	**11.1**	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-02-010918	1/8/2018	14.26	1/9/2018	µg/L	**307**	10 U	**878**	**1,300**	10 U[b]	**61.8**	**63.7**	--
	MW-02-020618	2/5/2018	0.00	2/6/2018	µg/L	**30.5**	**1.09**	**29.6**	**88**	1 U	**32.0**	5 U	--
	MW-02-030718	3/5/2018	3.00	3/7/2018	µg/L	**131**	**34.1**	**594**	**442**	1 U	**27.6**	**34.5**	--
	MW-02-040618	4/5/2018	4.79	4/6/2018	µg/L	**72.5**	**8.96**	**94.7**	**501**	1 U	**18.4**	5 U	--

Table 6. 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	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-02-050318	5/2/2018	10.85	5/3/2018	µg/L	**35.4**	**7.50**	**14.9**	**163**	1 U	**8.0**	5 U	--
	MW-02-060618	6/4/2018	0.00	6/6/2018	µg/L	1 U	1 U	**3.19**	**3.7**	1 U	**1.25**	5 U	--
	MW-02-071218	7/11/2018	15.25	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-02-091218	9/11/2018	12.1	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
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-02B-030718	3/5/2018	1.50	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-02B-060618	6/4/2018	4.23	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-02B-091218	9/11/2018	18.65	9/12/2018	µg/L	1 U	1 U	1 U	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	--
	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	--
	--	1/8/2018	19.98	1/8/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-03-020618	2/5/2018	--*	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-03-030718	3/5/2018	4.12	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-03-040618	4/5/2018	15.40	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-03-050318	5/2/2018	0	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-03-060618	6/4/2018	16.5	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-03-071218	7/11/2018	0	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-03-091318	9/11/2018	17.3	9/13/2018	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-04-030718	3/5/2018	10.70	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-04-060618	6/4/2018	6.23	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-04-091318	9/11/2018	13.31	9/13/2018	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-05-010918	1/8/2018	16.57	1/9/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-020618	2/5/2018	15.87	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-030718	3/5/2018	13.06	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-040618	4/5/2018	11.80	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-050318	5/2/2018	11.13	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-060718	6/4/2018	10.47	6/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-071318	7/11/2018	11.7	7/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-05-091318	9/11/2018	14.18	9/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-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-06-030718	3/5/2018	13.25	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-06-060718	6/4/2018	10.32	6/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-06-091318	9/11/2018	12.69	9/13/2018	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-06B-030718	3/5/2018	4.12	3/7/2018	µg/L	1 U	1 U	**3.63**	3 U	1 U	1 U	5 U	--
	MW-06B-060718	6/4/2018	10.15	6/7/2018	µg/L	1 U	1 U	**4.69**	3 U	1 U	1 U	5 U	--
	MW-06B-091318	9/11/2018	12.5	9/13/2018	µg/L	1 U	1 U	**1.17**	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
	--	1/8/2018	13.21	1/8/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	2/5/2018	13.19	2/6/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-07-030818	3/5/2018	11.77	3/8/2018	µg/L	**4,550**	**802**	**14,100**	**7,520**	50 U[b]	50 U[b]	250 U[b]	--
	--	4/5/2018	11.39	4/6/2018	µg/L	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-07-050318	5/2/2018	10.35	5/3/2018	µg/L	**6,330**	**662**	**16,500**	**9,060**	250 U[b]	250 U[b]	1,250 U[b]	--
	--	6/4/2018	9.44	6/4/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-07-091218	9/11/2018	11.4	9/12/2018	µg/L	**4,620**	**639**	**13,600**	**6,180**	1 U	1 U	**82.5**	--
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

Table 6. 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	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-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	--
	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-08-030718	3/5/2018	7.50	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-08-060618	6/4/2018	5.63	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-08-091318	9/11/2018	16.85	9/13/2018	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-09-030718	3/5/2018	0.50	3/7/2018	µg/L	**3.3**	1 U	**11.0**	**3.92**	1 U	**8.74**	5 U	--
	MW-09D-030718	3/5/2018	0.50	3/7/2018	µg/L	1 U	1 U	**1.32**	3 U	1 U	**8.74**	5 U	--
	MW-09-060618	6/4/2018	ɔuld not ope	6/6/2018	µg/L	**2.25**	1 U	**6.06**	**4.75**	1 U	**3.65**	5 U	--
	MW-09-091318	9/11/2018	10.56	9/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**2.14**	5 U	--
	MW-09-D-091318	9/11/2018	10.56	9/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**2.00**	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-09B-030718	3/5/2018	0.00	3/7/2018	µg/L	**4.36**	**4.5**	**18.1**	**33.3**	1 U	**1.37**	5 U	--
	MW-09B-060618	6/4/2018	5.7	6/6/2018	µg/L	**17.1**	**16.5**	**66.5**	**139**	1 U	**3.61**	**8.09**	--
	MW-09B-091318	9/11/2018	18.5	9/13/2018	µg/L	1 U	1 U	**5.90**	**4.44**	1 U	1 U	5 U	--
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	--

Table 6. 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	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-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-10-010918	1/8/2018	15.08	1/9/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-020618	2/5/2018	6.81	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-D-020618	2/5/2018	6.81	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-030718	3/5/2018	5.11	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-040618	4/5/2018	8.21	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-050318	5/2/2018	6.97	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-060618	6/4/2018	6.43	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-071318	7/11/2018	10.75	7/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-D-071318	7/11/2018	10.75	7/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-10-091218	9/11/2018	16.41	9/12/2018	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
	--	3/5/2018	28.10	3/5/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	6/4/2018	26.29	6/4/2018	--	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**	--

Table 6. 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	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-12-030818	3/5/2018	12.83	3/8/2018	µg/L	**486**	**25.2**	**1,880**	**1,980**	10 U[b]	10 U	50 U[b]	--
	MW-12-060518	6/4/2018	9.2	6/5/2018	µg/L	**16.3**	**2.51**	**181**	**249**	1 U	1 U	5 U	--
	MW-12-091118	9/10/2018	13.19	9/11/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
MW-12B	MW-12B-012616			1/26/2016	µg/L	**228**	**31.4**	**193**	**532**	1 U	**5.4**	**14.6**	0.019 U
	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-12B-030818	3/5/2018	12.92	3/8/2018	µg/L	**3.06**	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-12B-060518	6/4/2018	9.83	6/5/2018	µg/L	**275**	**58.7**	**20.9**	**171**	1 U	1 U	**22.5**	--
	MW-12B-091118	9/10/2018	14.07	9/11/2018	µg/L	**246**	**39.8**	**2.87**	**68**	1 U	1 U	**18.7**	--
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-13-030618	3/5/2018	20.40	3/6/2018	µg/L	**6.98**	**1.14**	**15.3**	**4.55**	1 U	1 U	5 U	--
	MW-13-060618	6/4/2018	18.8	6/6/2018	µg/L	**44.2**	**4.25**	**86.2**	**19.9**	1 U	1 U	5 U	--
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**	--

Table 6. 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	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-13B-120617	12/4/2017	22.66	12/6/2017	µg/L	**269**	**3.97**	**24.4**	**100**	1 U	**140**	**8.83**	--
	MW-13B-030718	3/5/2018	21.00	3/7/2018	µg/L	**252**	**3.13**	**12.1**	**60.2**	1 U	**175**	**6.44**	--
	MW-13B-060618	6/4/2018	19.56	6/6/2018	µg/L	**498**	**47.7**	**469**	**282**	1 U	**148**	**8.47**	--
	MW-13B-091218	9/10/2018	21.81	9/12/2018	µg/L	**402**	**42.5**	**503**	**271**	1 U	**141**	5 U	--
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-14-030718	3/5/2018	15.11	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-14-060618	6/4/2018	17.48	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-14-091218	9/10/2018	16.64	9/12/2018	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-14B-030718	3/5/2018	16.95	3/7/2018	µg/L	**3.57**	1 U	1 U	**5.6**	1 U	**9.28**	5 U	--
	MW-14B-0604B18	6/4/2018	15.09	6/6/2018	µg/L	**8.63**	1 U	1 U	**5.77**	1 U	**22.1**	5 U	--
	MW-14B-091218	9/10/2018	17.59	9/12/2018	µg/L	**3.32**	1 U	1 U	**3.61**	1 U	**7.86**	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]	--
	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]	--

Table 6. 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	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-15-090817			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-15-030818	3/5/2018	10.04	3/8/2018	µg/L	**53.1**	**2.75**	**89.9**	**53.1**	1 U	**85**	5 U	--
	MW-15-060618	6/4/2018	Skimmer	6/6/2018	µg/L	**52.2**	**4.11**	**81.4**	**46.5**	1 U	**63.8**	5 U	--
	MW-15-091218	9/10/2018	11.35	9/12/2018	µg/L	**14.6**	1 U	**27.9**	**16.0**	1 U	**72.2**	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-15B-030818	3/5/2018	14.66	3/8/2018	µg/L	**1,290**	**151**	**3,140**	**1,070**	25 U[b]	**93.2**	125 U[b]	--
	MW-15B-060618	6/4/2018	13.84	6/6/2018	µg/L	**968**	**82.8**	**1,990**	**791**	1 U	**109**	**12.8**	--
	MW-15B-091218	9/10/2018	15.19	9/12/2018	µg/L	**947**	**122**	**2,270**	**820**	1 U	**111**	**15.9**	--
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-16-030718	3/5/2018	3.00	3/7/2018	µg/L	**130**	**295**	**1,370**	**2,470**	10 U[b]	**132**	**618**	--
	--	6/4/2018	--	6/4/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-16-091318	9/11/2018	12.35	9/13/2018	µg/L	**150**	**200**	**2,100**	**2,730**	1 U	**21.5**	**635**	--
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

Table 6. 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	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
	--			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
	--	3/5/2018	10.85	3/5/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	6/4/2018	10.80	6/4/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	9/10/2018	10.86	9/10/2018	--	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**	--
	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-17B-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-17B-030718	3/5/2018	14.80	3/7/2018	µg/L	**8,830**	**1,110**	**20,200**	**8,220**	50 U[b]	**960**	250 U[b]	--
	MW-17BD-030718	3/5/2018	14.80	3/7/2018	µg/L	**8,700**	**1,080**	**19,400**	**7,770**	50 U[b]	**983**	250 U[b]	--
	MW-17B-060718	6/4/2018	12.05	6/7/2018	µg/L	**8,910**	**1,250**	**20,200**	**9,130**	20 U[b]	**1,230**	**206**	--
	MW-17B-D-060718	6/4/2018	12.05	6/7/2018	µg/L	**9,630**	**1,200**	**21,000**	**8,850**	20 U[b]	**1,230**	**223**	--
	MW-17B-080218	8/1/2018	12.56	8/2/2018	µg/L	**9,470**	**1,190**	**23,200**	**8,530**	200 U[b]	**863**	1,000 U[b]	
	MW-17B-D-080218	8/1/2018	12.56	8/2/2018	µg/L	**9,530**	**1,230**	**23,900**	**8,630**	200 U[b]	**864**	1,000 U[b]	
	MW-17B-091118	9/10/2018	13.74	9/11/2018	µg/L	**8,180**	**1,370**	**20,200**	**9,660**	50 U[b]	**832**	250 U[b]	
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

Table 6. 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	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
	--			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
	--	3/5/2018	18.25	3/5/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	6/4/2018	12.12	6/4/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	9/11/2018	19.56	9/11/2018	--	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
	--	3/5/2018	11.75	3/5/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-19-060618	6/4/2018	7.81	6/6/2018	µg/L	**8.15**	**149**	**385**	**1260**	**1.53**	1 U	250 U[b]	--
	MW-19-071318	7/11/2018	10.5	7/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-19-091318	9/10/2018	10.05	9/13/2018	µg/L	**3.31**	**3.53**	**16**	**96.5**	1 U	1 U	**6.55**	--
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

Table 6. 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	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
	--			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
	--	12/4/2017	14.64	12/4/2017	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	1/8/2018	14.04	1/8/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	2/5/2018	12.57	2/6/2018	µg/L	NS-OL	NS-OL	NS-OL	NS-OL	NS-OL	NS-OL	NS-OL	NS-OL
	--	3/5/2018	10.90	3/6/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	4/5/2018	9.37	4/6/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	5/2/2018	9.7	5/3/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	--	6/4/2018	8.5	6/4/2018	--	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP	NS-FP
	MW-20-071218	7/11/2018	8.83	7/12/2018	µg/L	**5,740**	**1,350**	**18,100**	**14,500**	100 U[b]	**351**	500 U[b]	--
	--	9/10/2018	10.59	9/10/2018	--	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-21-030718	3/5/2018	8.05	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-060718	6/4/2018	12.43	6/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-21-091118	9/10/2018	14.51	9/11/2018	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

Table 6. 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	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-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
	--	1/8/2018	10.01	1/8/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	2/5/2018	9.81	2/6/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-22-030618	3/5/2018	8.05	3/6/2018	µg/L	1 U	1 U	**1.03**	3 U	1 U	1 U	5 U	--
	MW-22-040618	4/5/2018	7.27	4/6/2018	µg/L	1 U	1 U	**1.76**	**46.6**	1 U	1 U	5 U	--
	MW-22-050318	5/2/2018	7.19	5/3/2018	µg/L	**1.43**	**1.79**	**33.1**	**426**	1 U	1 U	1 U	--
	MW-22-060518	6/4/2018	5.72	6/5/2018	µg/L	1 U	1 U	**4.27**	**41.6**	1 U	1 U	5 U	--
	MW-22-071218	7/11/2018	7.9	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-22-091318	9/10/2018	9.57	9/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
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]	--
	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]	--

Table 6. 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	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-23-120617	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-23-010918	1/8/2018	11.02	1/9/2018	µg/L	**127**	10 U	10 U	**137**	10 U[b]	**69.6**	50 U[b]	--
	MW-23-020618	2/5/2018	9.76	2/6/2018	µg/L	**1.1**	1 U	1 U	3 U	1 U	**33.8**	5 U	--
	MW-23-030618	3/5/2018	8.27	3/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**17.5**	5 U	--
	MW-23-040618	4/5/2018	7.52	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**32**	5 U	--
	MW-23-050318	5/2/2018	7.12	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**19.1**	5 U	--
	MW-23-D-050318	5/2/2018	7.12	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**16.9**	5 U	--
	MW-23-060518	6/4/2018	6.33	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**5.28**	5 U	--
	MW-23-071218	7/11/2018	7.15	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**7.05**	5 U	--
	MW-23-080218	8/1/2018	7.56	8/2/2018	µg/L	**17.9**	1 U	1 U	**10.4**	1 U	**5.01**	5 U	--
	MW-23-091118	9/10/2018	5.94	9/11/2018	µg/L	**2.3**	1 U	1 U	3 U	1 U	**11.0**	5 U	--
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-23B-030618	3/5/2018	10.88	3/6/2018	µg/L	1 U	**1.2**	**4.57**	**9.14**	1 U	1 U	5 U	--
	MW-23B-060518	6/4/2018	6.06	6/5/2018	µg/L	1 U	1 U	**1.08**	**4.21**	1 U	1 U	5 U	--
	MW-23B-091118	9/10/2018	5.4	9/11/2018	µg/L	1 U	1 U	**1.24**	3 U	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-24-030818	3/5/2018	4.15	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-24-060618	6/4/2018	4.45	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-24-091218	9/10/2018	5.22	9/12/2018	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-24B-030818	3/5/2018	5.03	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-24B-060618	6/4/2018	5.12	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-24B-091218	9/10/2018	5.85	9/12/2018	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**	--
	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-25-010918	1/8/2018	8.80	1/9/2018	µg/L	**72**	**2.74**	1 U	**111**	1 U	1 U	5 U	--
	MW-25-020618	2/5/2018	8.15	2/6/2018	µg/L	**10.8**	1 U	1 U	**19.3**	1 U	1 U	5 U	--
	MW-25-030818	3/5/2018	7.84	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25-040618	4/5/2018	7.46	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25-050318	5/2/2018	7.02	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-25-060518	6/4/2018	6.73	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25-071218	7/11/2018	7.7	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25-091218	9/10/2018	7.88	9/12/2018	µg/L	1 U	1 U	1 U	3 U	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-25B-030818	3/5/2018	4.12	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-060518	6/4/2018	3.41	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-25B-091218	9/10/2018	4.76	9/12/2018	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	--

Table 6. 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	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-26-010918	1/8/2018	6.68	1/9/2018	µg/L	1 U	**1.79**	**6.2**	**13.8**	1 U	1 U	5 U	--
	MW-26-020618	2/5/2018	4.37	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-030618	3/5/2018	2.94	3/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-040618	4/5/2018	2.88	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-050318	5/2/2018	2.71	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-060518	6/4/2018	2.01	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-071218	7/11/2018	3.67	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26-091118	9/10/2018	2.65	9/11/2018	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-26B-030618	3/5/2018	6.30	3/6/2018	µg/L	1 U	1 U	**1.03**	3 U	1 U	1 U	5 U	--
	MW-26B-060518	6/4/2018	3.66	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-091118	9/10/2018	4.55	9/11/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-26B-D-091118	9/10/2018	4.55	9/11/2018	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
	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-27-030818	3/5/2018	25.29	3/8/2018	µg/L	**14.5**	**29.7**	**62.3**	**227**	1 U	1 U	5 U	--

Table 6. 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	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-27-060518	6/4/2018	22.55	6/5/2018	µg/L	**5.74**	**7.74**	**22.6**	**70.3**	1 U	1 U	5 U	--
	MW-27-091118	9/10/2018	25.17	9/11/2018	µg/L	**2.06**	**2.94**	**7.44**	**25.6**	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-27B-030818	3/5/2018	3.20	3/8/2018	µg/L	1 U	**3.44**	**6.82**	**28.8**	1 U	1 U	5 U	--
	MW-27BD-030818	3/5/2018	3.20	3/8/2018	µg/L	1 U	**4.02**	**7.97**	**30.7**	1 U	1 U	5 U	--
	MW-27B-060518	6/4/2018	28.42	6/5/2018	µg/L	1 U	**3.38**	**6.18**	**26.8**	1 U	1 U	**5.1**	--
	MW-27B-091118	9/10/2018	28.49	9/11/2018	µg/L	1 U	**2.98**	**5.65**	**25**	1 U	1 U	5 U	--
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
	--	1/8/2018	24.15	1/9/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-28-020618	2/5/2018	22.60	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-28-030818	3/5/2018	21.65	3/8/2018	µg/L	**10.1**	**9.92**	**5.27**	**21.2**	1 U	1 U	5 U	--
	MW-28-040618	4/5/2018	20.68	4/6/2018	µg/L	**16.1**	**11.6**	**4**	**23.4**	1 U	1 U	5 U	--
	MW-28-050318	5/2/2018	20.81	5/3/2018	µg/L	**8.25**	**8.8**	**1.55**	**24.5**	1 U	1 U	5 U	--

Table 6. 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	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-28-060518	6/4/2018	19.82	6/5/2018	µg/L	**3.81**	**3.8**	**1.01**	**16.0**	1 U	1 U	5 U	--
	MW-28-071218	7/11/2018	20.92	7/12/2018	µg/L	**3.91**	**5.19**	**1.05**	**8.82**	1 U	1 U	5 U	--
	MW-28-091118	9/10/2018	22	9/11/2018	µg/L	**28.0**	**25.2**	**3.66**	**4.89**	1 U	1 U	5 U	--
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-29-010918	1/8/2018	10.36	1/9/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-020618	2/5/2018	7.80	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-030718	3/5/2018	4.20	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-040618	4/5/2018	5.28	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-D-040618	4/5/2018	5.28	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-050318	5/2/2018	4.72	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-060518	6/4/2018	3.23	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-071218	7/11/2018	6.35	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-29-091118	9/10/2018	8.36	9/11/2018	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
	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]	--

Table 6. 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	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-30-080217			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
	--	1/8/2018	14.59	1/8/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-30-020518	2/5/2018	13.11	2/5/2018	µg/L	**2.2**	1 U	**1.86**	**4.1**	1 U	1 U	5 U	--
	MW-30-030718	3/5/2018	11.43	3/7/2018	µg/L	**22.1**	1 U	**8.94**	**19.1**	1 U	**2.25**	5 U	--
	MW-30-040618	4/5/2018	11.92	4/6/2018	µg/L	**1.9**	1 U	**7.38**	**5.95**	1 U	**2.22**	5 U	--
	MW-30-050318	5/2/2018	11.49	5/3/2018	µg/L	**1.19**	1 U	**3.7**	3 U	1 U	**2.29**	5 U	--
	MW-30-060618	6/4/2018	10.47	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**2.58**	5 U	--
	MW-30-071218	7/11/2018	12.26	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**2.79**	5 U	--
	--	9/11/2018	14.60	9/11/2018	--	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-31-010918	1/8/2018	22.55	1/9/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-020618	2/5/2018	18.90	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-030718	3/5/2018	18.01	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-040618	4/5/2018	18.59	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-050318	5/2/2018	17.35	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-D-050318	5/2/2018	17.35	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-060618	6/4/2018	17.25	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-31-071318	7/11/2018	18.37	7/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-091218	9/10/2018	21.88	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-31-D-091218	9/10/2018	21.88	9/12/2018	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-32-030718	3/5/2018	6.82	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-32-060618	6/4/2018	7.16	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-32-091218	9/10/2018	21.07	9/12/2018	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-33T-030718	3/5/2018	25.23	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-33T-060618	6/4/2018	23.56	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-33T-091218	9/10/2018	25.91	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 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]	--
	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**	**69.9**	10 U[b]	**218**	50 U[b]	--

Table 6. 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	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-34-010918	1/8/2018	2.48	1/9/2018	µg/L	**147**	10 U	**13.1**	**79.8**	10 U[b]	**246**	50 U[b]	--
	MW-34-020618	2/5/2018	2.27	2/6/2018	µg/L	**249**	10 U	**19.2**	**88.3**	10 U[b]	**191**	50 U[b]	--
	MW-34-030818	3/5/2018	2.23	3/8/2018	µg/L	**696**	**7.35**	**51.6**	**180**	1 U	**229**	**5.84**	--
	MW-34-040618	4/5/2018	2.25	4/6/2018	µg/L	**619**	**2.22**	**31.9**	**150**	1 U	**281**	**7.77**	--
	MW-34-050318	5/2/2018	2.31	5/3/2018	µg/L	**342**	10 U	**18.1**	**99.7**	10 U[b]	**278**	50 U[b]	--
	MW-34-060518	6/4/2018	2.34	6/5/2018	µg/L	**63.1**	1 U	**3.28**	**19.2**	1 U	**247**	5 U	--
	MW-34-071218	7/11/2018	2.6	7/12/2018	µg/L	**186**	**2.41**	**9.34**	**33.7**	1 U	**153**	5 U	--
	MW-34-D-071218	7/11/2018	2.6	7/12/2018	µg/L	**303**	**3.82**	**14.9**	**51.3**	1 U	**199**	5 U	--
	MW-34-080218	8/1/2018	2.48	8/2/2018	µg/L	**414**	**5.27**	**32.6**	**53.6**	1 U	**147**	5 U	--
	MW-34-091218	9/10/2018	3.18	9/12/2018	µg/L	**21.8**	1 U	1 U	3 U	1 U	**209**	5 U	--
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-35-010918	1/8/2018	10.57	1/9/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-D-010918	1/8/2018	10.57	1/9/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-020618	2/5/2018	9.00	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-030818	3/5/2018	8.33	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-040618	4/5/2018	8.39	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-050318	5/2/2018	8.37	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-060618	6/4/2018	8.15	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-35-071218	7/11/2018	7.22	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-35-091118	9/10/2018	9.14	9/11/2018	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-36-030718	3/5/2018	18.11	3/7/2018	µg/L	**44.2**	10 U	**75.2**	**38.4**	10 U[b]	10 U	50 U[b]	--
	MW-36-060718	6/4/2018	15.21	6/7/2018	µg/L	**184**	1 U	**208**	**134**	1 U	**2.06**	5 U	--
	MW-36-091318	9/11/2018	16.68	9/13/2018	µg/L	**238**	1 U	**326**	**238**	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-36B-030718	3/5/2018	17.81	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	7W-36B-060618	6/4/2018	14.84	6/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-36B-091318	9/11/2018	16.39	9/13/2018	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-37-030818	3/5/2018	3.28	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**3.71**	5 U	--
	MW-37-060518	6/4/2018	3.26	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**5.06**	5 U	--
	MW-37-091218	9/10/2018	3.29	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**4.30**	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	--

Table 6. 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	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-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	--
	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-38-010918	1/8/2018	1.95	1/9/2018	µg/L	**311**	1 U	**2.31**	**158**	1 U	**49.4**	5 U	--
	MW-38-020618	2/5/2018	1.58	2/6/2018	µg/L	**389**	5 U	5 U	**208**	5 U	**48.8**	25 U	--
	MW-38-030818	3/5/2018	1.25	3/8/2018	µg/L	**364**	5 U	5 U	**202**	5 U	**54.8**	25 U	--
	MW-38-040618	4/5/2018	1.50	4/6/2018	µg/L	**347**	1 U	**2.95**	**221**	1 U	**68.8**	**10.4**	--
	MW-38-D-040618	4/5/2018	1.50	4/6/2018	µg/L	**371**	1 U	**2.61**	**190**	1 U	**67.6**	**9.46**	--
	MW-38-050318	5/2/2018	1.7	5/3/2018	µg/L	**378**	10 U	10 U	**212**	10 U[b]	**62.1**	50 U[b]	--
	MW-38-060518	6/4/2018	1.2	6/5/2018	µg/L	**373**	1 U	**2.49**	**222**	1 U	**75.5**	**9**	--
	MW-38-071218	7/11/2018	1.45	7/12/2018	µg/L	**268**	1 U	**1.27**	**138**	1 U	**52.5**	**7.26**	--
	MW-38-091218	9/10/2018	2.17	9/12/2018	µg/L	**157**	1 U	**1.19**	**66.5**	1 U	**38.8**	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]	--

Table 6. 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	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-39-D-120617	12/4/2017	5.72	12/6/2017	µg/L	**286**	1 U	**31**	**131**	1 U	**353**	5 U	--
	MW-39-010918	1/8/2018	4.86	1/9/2018	µg/L	**23.8**	5 U	5 U	15 U	5 U	**370**	25 U	--
	MW-39-020618	2/5/2018	4.85	2/6/2018	µg/L	**46.9**	5 U	5 U	15 U	5 U	**263**	25 U	--
	MW-39-030818	3/5/2018	4.66	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**304**	5 U	--
	MW-39-040618	4/5/2018	4.54	4/6/2018	µg/L	**1**	1 U	1 U	3 U	1 U	**297**	5 U	--
	MW-39-050318	5/2/2018	4.48	5/3/2018	µg/L	10 U	10 U	10 U	30 U	10 U[b]	**287**	50 U[b]	--
	MW-39-060518	6/4/2018	4.34	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**322**	5 U	--
	MW-39-071218	7/11/2018	4.75	7/12/2018	µg/L	**1**	1 U	1 U	3 U	1 U	**244**	5 U	--
	MW-39-091218	9/10/2018	5.12	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**176**	5 U	--
	MW-39-D-091218	9/10/2018	5.12	9/12/2018	µg/L	**1.84**	1 U	**1.06**	3 U	1 U	**187**	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-40-010918	1/8/2018	2.72	1/9/2018	µg/L	**12,400**	**773**	**22,300**	**10,200**	200 U[b]	**497**	1,000 U[b]	--
	MW-40-020618	2/5/2018	2.75	2/6/2018	µg/L	**11,100**	**777**	**20,300**	**9,350**	200 U[b]	**373**	1,000 U[b]	--
	MW-40-030818	3/5/2018	2.44	3/8/2018	µg/L	**8,450**	**498**	**14,500**	**7,580**	50 U[b]	**337**	250 U[b]	--
	MW-40-040618	4/5/2018	2.32	4/6/2018	µg/L	**6,710**	**212**	**8,350**	**5,460**	100 U[b]	**423**	500 U[b]	--
	MW-40-050318	5/2/2018	2.23	5/3/2018	µg/L	**2,890**	100 U	**3,490**	**3,350**	100 U[b]	**288**	500 U[b]	--
	MW-40-060518	6/4/2018	1.98	6/5/2018	µg/L	**472**	**16.8**	**514**	**1,490**	1 U	**255**	**20.4**	--
	MW-40-071218	7/11/2018	2.44	7/12/2018	µg/L	**148**	**6.85**	**28.7**	**197**	1 U	**152**	**8.62**	--
	MW-40-080218	8/1/2018	2.38	8/2/2018	µg/L	**123**	**4.46**	**9.67**	**93.2**	1 U	**183**	5 U	
	MW-40-091218	9/10/2018	2.77	9/12/2018	µg/L	**28**	**1.67**	**15.3**	**14.0**	1 U	**112**	5 U	

Table 6. 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	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-41-120716			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**	--
	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-41-010918	1/8/2018	4.40	1/9/2018	µg/L	**2.06**	1 U	1 U	3 U	1 U	**1.43**	5 U	--
	MW-41-020618	2/5/2018	3.82	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-41-030818	3/5/2018	3.94	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-41-040618	4/5/2018	4.00	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-41-050318	5/2/2018	3.8	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-41-060518	6/4/2018	3.69	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-41-071218	7/11/2018	4.07	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-41-091218	9/10/2018	4.25	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	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-42-030818	3/5/2018	4.86	3/8/2018	µg/L	**1.02**	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-42-060518	6/4/2018	5.37	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-42-091218	9/10/2018	4.96	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-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-43-010918	1/8/2018	4.35	1/9/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43-020618	2/5/2018	3.70	2/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43-030818	3/5/2018	3.90	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43-040618	4/5/2018	4.18	4/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43-050318	5/2/2018	4.26	5/3/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43-060618	6/4/2018	4.28	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43-071218	7/11/2018	4.74	7/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**4.42**	5 U	--
	MW-43-091218	9/10/2018	5.24	9/12/2018	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-43B-030818	3/5/2018	1.21	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43B-060618	6/4/2018	0.9	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-43B-091218	9/10/2018	1.88	9/12/2018	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-44-030818	3/5/2018	4.00	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-44D-030818	3/5/2018	4.00	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-44-060518	6/4/2018	3.16	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-44-091318	9/10/2018	8.65	9/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
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-44B-030818	3/5/2018	12.10	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-44B-060518	6/4/2018	9.5	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-44B-D-060518	6/4/2018	9.5	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-44B-091118	9/10/2018	12.35	9/11/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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	--			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
	--	12/4/2017	14.22	12/4/2017	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	1/8/2018	14.25	1/8/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	--	2/5/2018	13.95	2/6/2018	--	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW	NS-IW
	MW-45-030618	3/5/2018	12.31	3/6/2018	µg/L	**24.3**	**6.11**	**28.9**	**41.2**	1 U	1 U	5 U	--
	MW-45-040618	4/5/2018	11.30	4/6/2018	µg/L	**21.9**	**3.08**	**19.6**	**36.6**	1 U	1 U	5 U	--
	MW-45-050318	5/2/2018	10.74	5/3/2018	µg/L	**2.65**	1 U	1 U	1 U	1 U	**3.35**	5 U	--
	MW-45-060718	6/4/2018	24.15	6/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45-071318	7/11/2018	10.66	7/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-45-091318	9/10/2018	12	9/13/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**46.3**	5 U	--
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-45B-030618	3/5/2018	14.65	3/6/2018	µg/L	1 U	1 U	**2.75**	3 U	1 U	1 U	5 U	--
	MW-45B-060718	6/4/2018	25.13	6/7/2018	µg/L	1 U	1 U	**1.94**	3 U	1 U	1 U	5 U	--
	MW-45B-091118	9/10/2018	12.84	9/11/2018	µg/L	1 U	1 U	**1.16**	3 U	1 U	1 U	5 U	--

Table 6. 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	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-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-46-030618	3/5/2018	6.33	3/6/2018	µg/L	**173**	**1.76**	**16.5**	**29.5**	1 U	**129**	**7.21**	--
	MW-46-060518	6/4/2018	5.2	6/5/2018	µg/L	**294**	**1** U	**11.8**	**147**	1 U	**184**	5 U	--
	MW-46-080218	8/1/2018	6.67	8/2/2018	µg/L	**1520**	**4.24**	**92.1**	**763**	1 U	**200**	**20.7**	
	MW-46-091118	9/10/2018	7.88	9/11/2018	µg/L	**1510**	**6.81**	**64**	**597**	1 U	**311**	**23.4**	
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-47-030718	3/5/2018	14.74	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-47-060618	6/4/2018	13.92	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-47-091218	9/10/2018	19.42	9/12/2018	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-48B-030718	3/5/2018	16.70	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**2.97**	5 U	--
	MW-48B-060618	6/4/2018	15.91	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**2.12**	5 U	--
	MW-48B-D-060618	6/4/2018	15.91	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**2.11**	5 U	--
	MW-48B-091218	9/10/2018	17.45	9/12/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**1.80**	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-49-030818	3/5/2018	17.68	3/8/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-49-060518	6/4/2018	14.95	6/5/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--
	MW-49-091118	9/10/2018	18.28	9/11/2018	µg/L	1 U	1 U	1 U	3 U	1 U	1 U	5 U	--

Table 6. 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	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-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	--
	MW-50B-030718	3/5/2018	19.10	3/7/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**26.7**	5 U	--
	MW-50B-060618	6/4/2018	18.36	6/6/2018	µg/L	1 U	1 U	1 U	3 U	1 U	**21.8**	5 U	--
	MW-50B-091218	9/10/2018	23.28	9/12/2018	µg/L	**150**	**1.2**	**57.9**	**47.8**	1 U	**87.9**	5 U	--

Notes:

[a] RBSL = Risk-based screening level 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 can not be determined.

*Unable to collect depth to water due to fluctuation of the well from air bubbling.

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

MW = monitoring well

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-OL = sample not collected because it was overlooked in the field

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 7. 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

Table 7. 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-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
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
MW-51	CME 750 HSA	MW-11508	9/5/2018	Still in use	Monitoring Well/Gauging	831.92	828.77	25.34	6.25	2	22.50	809.4	10.45	25.45	7.3	22.3	824.6	809.6	15.00
MW-52	CME 750 HSA	MW-11508	9/4/2018	Still in use	Monitoring Well/Gauging	830.09	826.72	33.43	6.25	2	28.50	801.6	16.37	31.37	13.0	28.0	817.1	802.1	15.00
MW-53	CME 750 HSA	MW-11508	8/28/2018	Still in use	Monitoring Well/Gauging	837.24	837.37	21.32	8.0	2	21.80	815.4	6.00	21.00	6.0	21.0	831.2	816.2	15.00
MW-54	CME 750 HSA	MW-11508	8/30/2018	Still in use	Monitoring Well/Gauging	840.83	840.79	25.58	8.0	2	25.20	815.6	9.80	24.80	9.8	24.8	831.0	816.0	15.00
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-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

Table 7. 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)
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
RS-08	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	852.65	854.24	20.22	NA	4	18.63	834.0	3.59	20.22	2.0	18.6	850.7	834.0	16.63
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-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-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-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-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-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

Table 7. 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-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
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

Table 7. 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-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
VAS-47	CME-750	SCHE03020469M2	8/27/2018	Still in use	Brown's Creek Protection	848.370	NS	NA	8.00	2.00	33.20	NA	NA	NA	30.20	32.20	NA	NA	2.00
VAS-48	CME-750	SCHE03020469M2	8/16/2018	Still in use	Brown's Creek Protection	846.580	NS	NA	8.00	2.00	35.70	NA	NA	NA	32.70	34.70	NA	NA	2.00
VAS-49	CME-750	SCHE03020469M2	8/28/2018	Still in use	Brown's Creek Protection	849.730	NS	NA	8.00	2.00	33.70	NA	NA	NA	30.70	32.70	NA	NA	2.00
VAS-50	CME-750	SCHE03020469M2	8/16/2018	Still in use	Brown's Creek Protection	850.110	NS	NA	8.00	2.00	27.80	NA	NA	NA	24.80	26.80	NA	NA	2.00
VAS-51	CME-750	SCHE03020469M2	8/15/2018	Still in use	Brown's Creek Protection	851.900	NS	NA	8.00	2.00	30.00	NA	NA	NA	27.00	29.00	NA	NA	2.00
VAS-52	CME-750	SCHE03020469M2	8/14/2018	Still in use	Brown's Creek Protection	851.970	NS	NA	8.00	2.00	34.50	NA	NA	NA	31.50	33.50	NA	NA	2.00
VAS-53	CME-750	SCHE03020469M2	8/14/2018	Still in use	Brown's Creek Protection	852.880	NS	NA	8.00	2.00	26.70	NA	NA	NA	23.70	25.70	NA	NA	2.00
VAS-54	Geoprobe 8040 HSA	SCHE03020469M2	8/13/2018	Still in use	Brown's Creek Protection	852.770	NS	NA	4.25	2.00	19.20	NA	NA	NA	16.20	18.20	NA	NA	2.00
VAS-55	CME-750	SCHE03020469M2	9/7/2018	Still in use	Cupboard Creek Protection	854.710	NS	NA	6.25	2.00	28.90	NA	NA	NA	25.90	27.90	NA	NA	2.00
VAS-56	CME-750	SCHE03020469M2	9/7/2018	Still in use	Cupboard Creek Protection	855.730	NS	NA	6.25	2.00	28.20	NA	NA	NA	25.20	27.20	NA	NA	2.00
VAS-57	CME-750	SCHE03020469M2	9/5/2018	Still in use	Cupboard Creek Protection	856.620	NS	NA	6.25	2.00	31.50	NA	NA	NA	28.50	30.50	NA	NA	2.00
VAS-58	CME-750	SCHE03020469M2	9/5/2018	Still in use	Cupboard Creek Protection	855.980	NS	NA	6.25	2.00	31.30	NA	NA	NA	28.30	30.30	NA	NA	2.00
VAS-59	CME-750	SCHE03020469M2	9/6/2018	Still in use	Cupboard Creek Protection	854.740	NS	NA	6.25	2.00	8.80	NA	NA	NA	6.80	8.80	NA	NA	2.00
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
ID = identification
RS = recovery sump
RT = recovery trench
RW = recovery well
TW = temporary well
MW = monitoring well
VAS = vertical air sparging well
VBS = vertical bedrock sparging well

Table 8. BTEX and Naphthalene in Soil

Lewis Drive Release, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Sample ID	Sample Depth (ft)	Estimated Separation Distance[a] (ft)	Zone	Date Collected	Units	Benzene	Ethylbenzene	Toluene	Total Xylenes[b]	Naphthalene
Soil samples collected less than 10 ft above groundwater elevation:										
MW-06B-15'-16'	15-16	0.4	Smear	9/5/2017	mg/kg	0.00358 U[f]	0.00358 U	0.00715 U	0.0107 U	0.0179 U
MW-09B-4'-5'	4-5	0.1	Smear	9/8/2017	mg/kg	**2.05**	**8.27**	**26.3**	**89.1**	**4.09**
MW-46-04'-05'	4-5	3.0	Smear	9/13/2017	mg/kg	0.00314 U[f]	0.00314 U	0.00628 U	0.00941 U	0.0157 U
MW-47-09'-11'	9-11	3.5	Smear	9/14/2017	mg/kg	0.00367 U[f]	0.00367 U	0.00734 U	0.011 U	0.0183 U
MW-48B-09'-11'	9-11	5.0	Smear	10/12/2017	mg/kg	0.00327 U[f]	0.00327 U	0.00654 U	0.0098 U	0.0163 U
MW-50B-14'-16'	14-16	4.2	Smear	10/6/2017	mg/kg	0.00334 U[f]	0.00334 U	0.00667 U	0.01 U	0.0167 U
MW-53-08'-09'	8-9	7.0	Smear	8/29/2018	mg/kg	0.00151 U	0.00377 U	0.00754 U	0.0098 U	0.0189 U
MW-54-08'-09'	8-9	8.5	Smear	8/30/2018	mg/kg	0.00131 U	0.00329 U	0.00657 U	0.00854 U	0.0164 U
MW-51-08'-10'	8-10	8.9	Smear	9/5/2018	mg/kg	0.00119 U	0.00296 U	0.00593 U	0.00771 U	0.0148 U
				Ingestion/Dermal Contact RBSL[c]:	mg/kg	12	7,800	16,000	160,000	3,100
				Leaching RBSL for < 10 ft separation distance[d]:	mg/kg	0.003	1.551	0.627	13.01	0.047
Soil samples collected between 10 and 15 ft above groundwater elevation:										
MW-49-04'-06'	4-6	13	Vadose	9/14/2017	mg/kg	0.00374 U	0.00374 U	0.00747 U	0.0112 U	0.0186 U
MW-49-04'-06'-FD	4-6	13	Vadose	9/14/2017	mg/kg	0.003 U	0.003 U	0.006 U	0.009 U	0.015 U
MW-52-03'-05'	3-5	12	Smear	9/4/2018	mg/kg	0.00116 U	0.0029 U	0.00579 U	0.00753 U	0.0145 U
				Ingestion/Dermal Contact RBSL[c]:	mg/kg	12	7,800	16,000	160,000	3,100
				Leaching RBSL for 10-15 ft separation distance[e]:	mg/kg	0.008	6.168	1.167	22.495	0.069
Soil samples collected at the surface:										
MW-43B-01'-02'	1-2		Vadose	10/18/2017	mg/kg	0.00306 U	0.00306 U	0.00613 U	0.0092 U	0.0153 U
				RBSL for Surficial Soil[c]:	mg/kg	12	7,800	16,000	160,000	3,100

Notes:

[a] Estimated separation distance in the 2017 samples is the difference between the depth to water below ground surface measured on 9/10/17 and the depth to the bottom of the sample interval; in the 2018 samples, the depth to water measured during well drilling in August and September 2018 was used.

[b] Total xylenes is the sum of m&p-xylenes and o-xylene.

[c] RBSL = risk-based screening level identified in SCDHEC Underground Storage Tank (UST) Management Division Programmatic Quality Assurance Program Plan (QAPP), Revision 2, Table C5 "RBSLs for Ingestion or Dermal Contact with Surficial Soil," April 2013. Note RBSL applied to potential exposure of workers.

[d] RBSLs identified in SCDHEC UST QAPP, Rev. 2, Table C3 "RBSLs for Clay-rich Soil," <10 ft separation distance, April 2013.

[e] RBSLs identified in SCDHEC UST QAPP, Rev. 2, Table C3 "RBSLs for Clay-rich Soil," 10-15 ft separation distance, April 2013.

[f] 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.

Samples analyzed by U.S. Environmental Protection Agency (EPA) Method SW8260B

Bold indicates the analyte was detected.

Gray shading indicates the analyte exceeded Leaching RBSLs.

BTEX = benzene, toluene, ethylbenzene, and xylenes

FD = field duplicate

ft = feet

ID = identification

mg/kg = milligram(s) per kilogram

MW = monitoring well

SCDHEC = South Carolina Department of Health and Environmental Control

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

Table 9. 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, NC	3,758
3/3/2017	A&D Archdale, NC	460
3/8/2017	A&D Archdale, NC	500
3/15/2017	A&D Archdale, NC	4,189
4/3/2017	A&D Archdale, NC	458
4/19/2017	A&D Archdale, NC	927
4/19/2017	A&D Archdale, NC	747
5/22/2017	A&D Archdale, NC	50
6/7/2017	A&D Archdale, NC	658
6/29/2017	A&D Archdale, NC	695
8/25/2017	A&D Archdale, NC	566
9/8/2017	A&D Archdale, NC	99
1/8/2018	A&D Archdale, NC	6
9/30/2018	Remaining in poly tanks	11.0
	Total (gallons)	**222,985**
	Total (barrels)	**5,309**

Notes:

Gasoline and water are field-segregated using two 1,550-gallon poly tanks prior to offsite disposal.

A&D = A&D Environmental

gal = gallons

ID = identification

NC = North Carolina

PPL = Plantation Pipe Line Company

Table 10. 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.

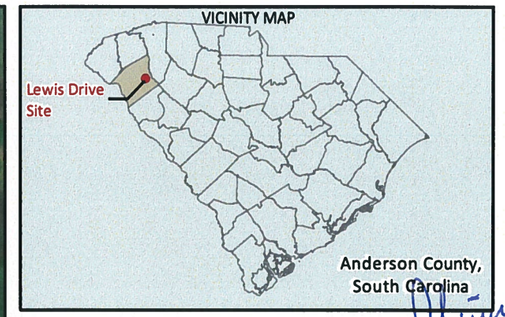
ID = identification

SW = surface water

ft = feet

NS = location not surveyed

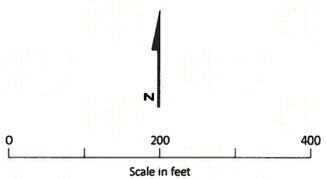
Figures



LEGEND

- Release Point
- Residuum Monitoring Well
- Bedrock Monitoring Well
- Proposed Monitoring Well
- Piezometer
- Recovery Sump
- Recovery Trench Point
- Recovery Well (4" diameter)
- Surface Water Sampling Location
- Seep Location
- Newly Installed Vertical Sparging Well
- Vertical Bedrock Sparging Well
- Vertical Saprolite Sparging Well
- Pipeline
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- National Hydrography Dataset Stream
- Intermittent Stream
- Inspection Route for Sheen or Distressed Vegetation
- Remediation Zone

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)



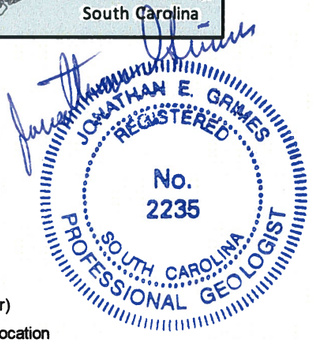
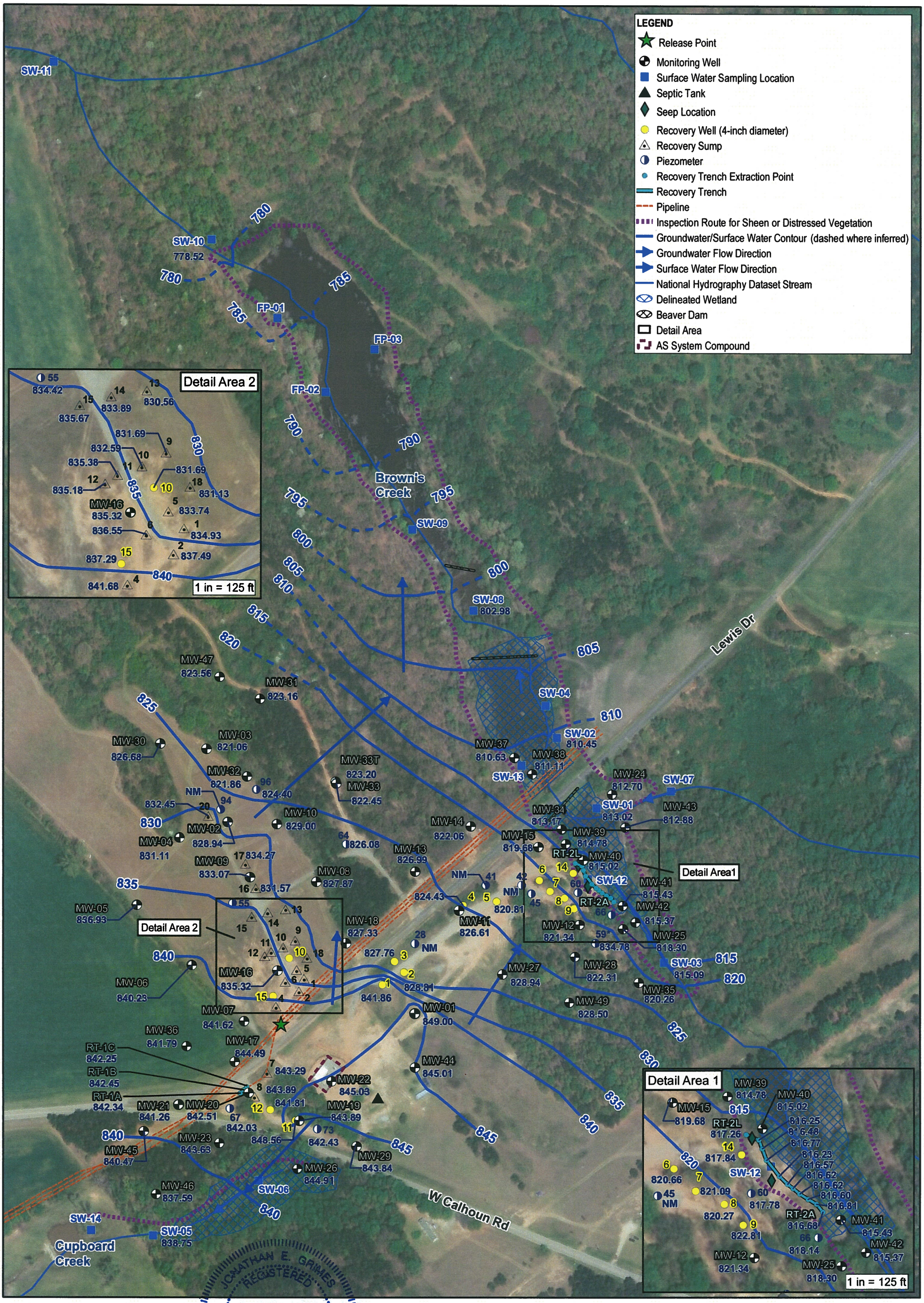


Figure 1. Site Overview
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"



813.17 Corrected Groundwater Elevation as of 9/11/2018 in feet above mean sea level

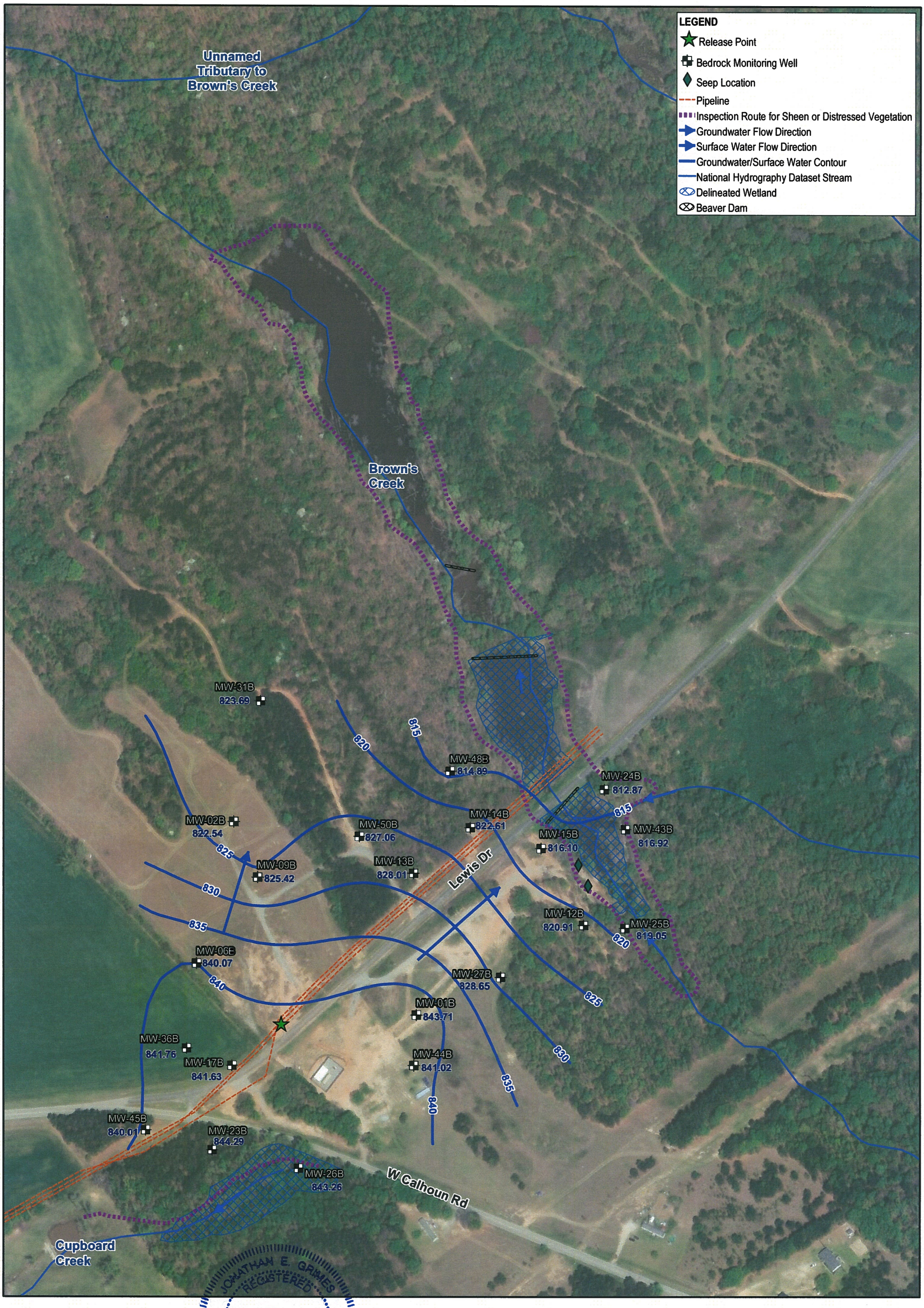
NM Not Measured

* Elevation not used to create contours

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

JONATHAN E. GRAMES REGISTERED No. 2235 SOUTH CAROLINA PROFESSIONAL GEOLOGIST

Figure 2A. Residuum Groundwater and Surface Water Elevation Map
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"



819.05 Corrected Groundwater Elevation as of 9/11/2018 in feet above mean sea level

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

JONATHAN E. GRAMES
REGISTERED
No. 2235
SOUTH CAROLINA
PROFESSIONAL GEOLOGIST

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

JACOBS

\\brooksidefiles\GIS_SHARE\ENBG\00_Proj\K\KinderMorgan\654558LewisDr_ER\GIS\Maps\Quarterly_Reports\QR_Oct2018\Figure2B_Bedrock_GW_Elevation.mxd ag017958 1/10/2019

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 9/11/18 data

0.20 Product thickness in feet as of 9/11/2018
NP No product detected
NM Not measured

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

N

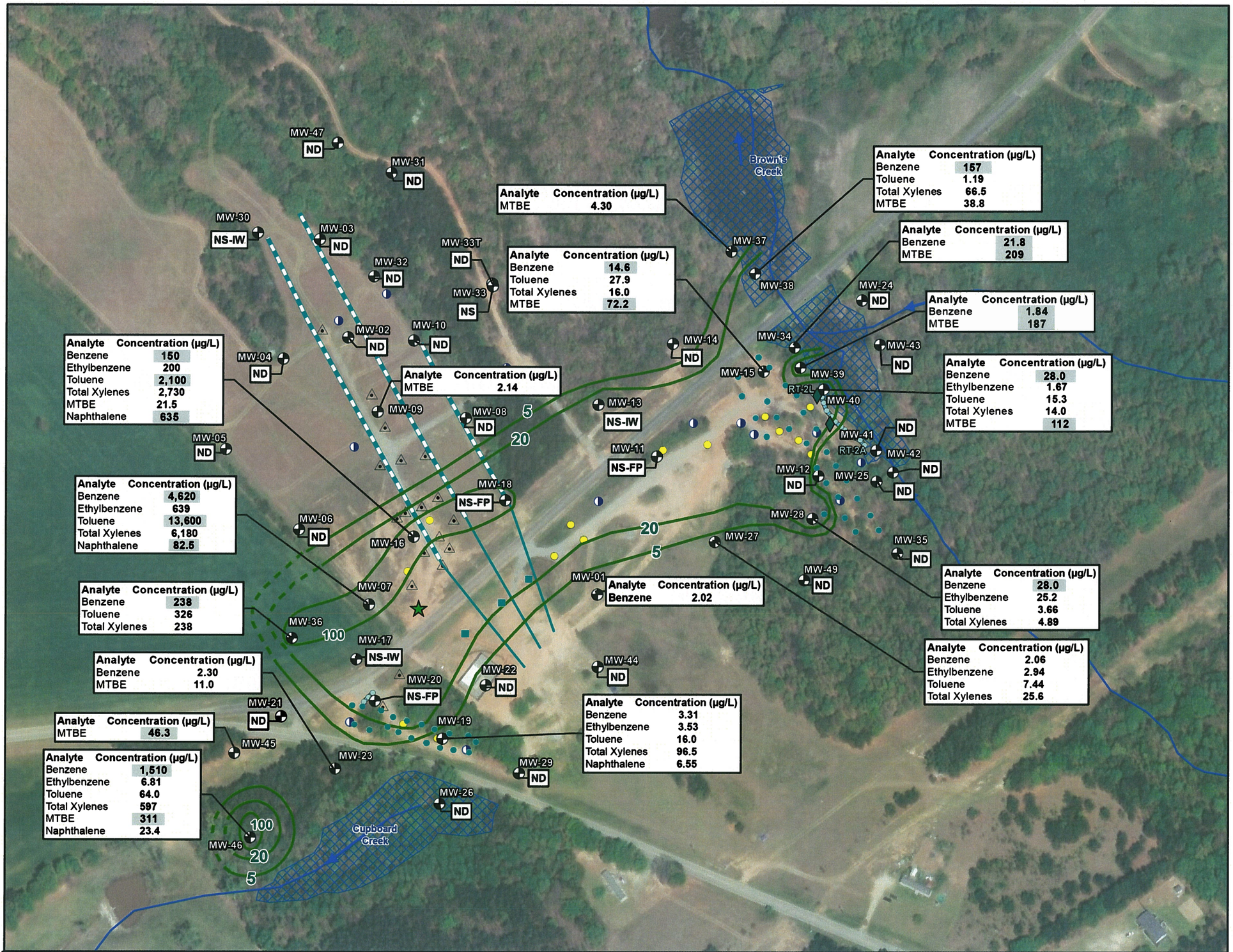
0 175 350

Scale in Feet

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

JONATHAN E. GAMES REGISTERED No. 2235 SOUTH CAROLINA PROFESSIONAL GEOLOGIST

JACOBS



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. 1,2-DCA = 1,2-dichloroethane
4. µg/L = microgram(s) per liter
5. Only detected analytes are shown on map.
6. ND = Groundwater was collected and analyzed, but no analytes were detected above the reported sample quantitation limit.
7. NS = Not scheduled to be sampled for this event
8. NS-FP = Sample not collected due to the presence of free product in the well
9. 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, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

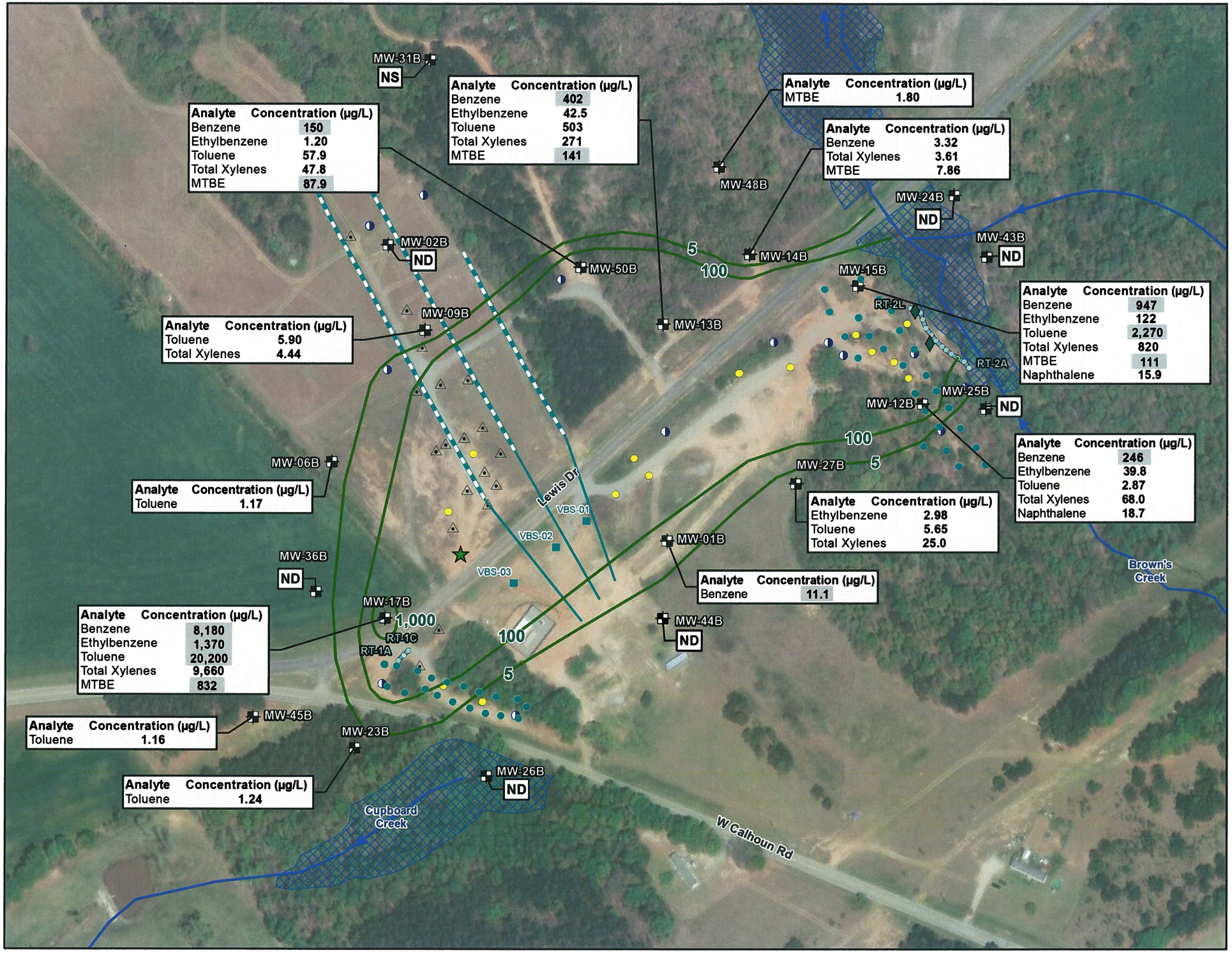
0 200 400
Approximate scale in feet

JONATHAN E. GAMES REGISTERED No. 2235 SOUTH CAROLINA PROFESSIONAL GEOLOGIST

FIGURE 4A. Groundwater Analytical Results in Residuum Aquifer, September 2018
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

JACOBS

\\BROOKSIDEFILES\GIS_SHARE\ENBG\00_PROJ\K\KINDERMORGAN\654558LEWISDR_ER\GIS\MAPS\QUARTERLY_REPORTS\QR_OCT2018\FIGURE4A_GW_RESULTS_RESIDUUM.MXD AG017958 1/8/2019



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, 2017. 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, September 2018
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

JONATHAN E. GRAMES REGISTERED No. 2235 SOUTH CAROLINA PROFESSIONAL GEOLOGIST

\\BROOKSIDEFILES\GIS_SHARE\ENBG\00_PROJ\K\KINDERMORGAN\654558LEWISDR_ER\GIS\MAPS\QUARTERLY_REPORTS\QR_OCT2018\FIGURE4B_GW_RESULTS_BEDROCK.MXD AG017958 12/10/2018

JACOBS

Appendix A
Field Notes, Gauging Sheets, and Purge Logs

94 Location BELTON, SC Date WEDNESDAY 7/11/18

Project / Client LEWIS DRIVE PN: 699858

AUTHOR: M. WARREN

TASK GROUNDWATER GAUGING / SURFACE WATER GAUGING / DECONTAMINATE EQUIPMENT.

STAFF M. WARREN (FTL/SSC), K. SEXTON (GEO/SSC), J. MORGAN (ENV. SCI) E. HARKER (GEO) * ALL JACOBS. ATL

WEATER HIGH 93 / PARTLY CLOUDY 40-70% HUMIDITY

EQUIPMENT: SOLINST MODEL 122 #27682
HERON H.OIL #036800
MINIRAE 1: 19790
MINIRAE 1 LOT NO: JBH-248-100-19
MINIRAE 2: 032731
MINIRAE 2 LOT NO: JBH-248-100-19

CALIBRATIONS:

MINIRAE 1

	BEFORE	AFTER
AIR	0.0	0.0
ISO	~~100.0~~ 0.0	100.0

MINIRAE 2

	BEFORE	AFTER
AIR	0.0	0.0
ISO	0.0	100.0

0700 TEAM ARRIVES ONSITE AND GEARS UP WITH PPE.

Location BELTON, SC Date 7/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0730 TEAM HOLDS PTSP AND DISCUSSES THE BIOLOGICAL HAZARDS OF TICKS, M. WARREN RETURNING TO SITE AFTER TWO MONTHS AWAY, AND HYDRATION IN HEAT.

0745 K. SEXTON AND J. MORGAN BEGIN SITE WIDE GAUGING OF MONITORING WELLS. M. WARREN AND E. HARKER BEGIN SITEWIDE GAUGING OF TEMPORARY WELLS, RECOVERY SUMPS, AND RECOVERY WELLS. ——— MW

0945 M. WARREN & E. HARKER ARRIVE ON SW-03. COLLECT PHOTO FOR PHOTO LOG. WATER LEVEL IS 0.55 FT ABOVE BED. DO = 6.53 MG/L ——— MW

0953 ARRIVE ON SW-12. COLLECT PHOTO FOR PHOTO LOG. — MW DO = 6.71 mg/L. ——— MW

1000 VEGETATION TOO HIGH TO ACCESS SW01 W/O WADERS/SNAKE

Location BELTON, SC Date 7/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1000 cont. CHAPS. M. WARREN AND E. HARLEY MOVE TO THE HAYFIELD ZONE.

1140 TEAM BREAKS FOR LUNCH.

1240 TEAM COMPLETES LUNCH BREAK

1402 RS-14 *DTS = 2.31 ft

*DEPTH TO SKIMMER —

1505 TEAM ARRIVES TO RW-10.

DTS = 6.83 ft

1510 TEAM ARRIVES TO RS-10

DTS = 4.63 ft

1552 TEAM ARRIVES TO RW-15

DTS = 11.47 ft DTW W/SKIMMER = 9.66

1610 TEAM ARRIVES TO RS-02.

DTS = 5.08 ft

1630 TEAM ARRIVES TO RS-17.

DTS = 0.90 ft.

1725 TEAM ARRIVES TO RW-03

DTS - 20.75 ft

1734 TEAM ARRIVES TO RW-02

DTS = 19.64 ft

1742 TEAM ARRIVES TO RW-04

DTP W/SKIMMER = 23.66 Ft

DTW W/SKIMMER = 26.59 Ft

DTS = ~~31.00~~ 24.89 ft.

Location BELTON, SC Date 07/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1752 ARRIVES ON RW-05
DTP = 30.10 ft @ W/ SKIMMER
DTW = 30.45 ft @ W/ SKIMMER
DTS = 32.23 ft

1813 ARRIVES ON RW-02
DTS = 19.85 ft

1927 M. WARREN AND E. HARKEN ARRIVE TO SW-05. SW LOCATION WAS DRY. SEE PHOTO LOG.

1940 M. SEPTON SENDS M. WARREN PHOTOS OF INACCESSIBLE SW-02, AND OTHER SW PHOTOS INCLUDING SW-10, SW-08, SW-03, SW-11, SW-01 (COVERED IN VEGETATION, GAUGING METER INACCESSIBLE), AND SW-13. SEE PHOTO LOG.

2000 TEAM DEPARTS SITE.

NOTE: TEAM DECONTAMINATED EQUIPMENT WITH LIQUINOX AND DI WATER.

07/11/18

Location BELTON, SC Date 07/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK (1) GROUNDWATER / SURFACE WATER SAMPLING (2) PRODUCT RECOVERY (3) TROLL DATA COLLECTION

TEAM M. WARREN (FTL), E. HARKER (GEO), K. SEFTON (GEO)

EQUIPMENT: SOLINST: 27682

MINIRAE: 19790

↳ LOT #: JBH-248-10079

YSI ODO: 14E102184

PERI PUMP: 19062

0645 TEAM ARRIVES ON SITE

WEATHER: HIGH 90°F REAL FEEL 95°F/SUNNY/HUMID

0700 TEAM HOLDS PTSP

0720 CALIBRATION OF YSI ODO:

	PRE	POST	EXP	LOT #
ODO	97.3	100.0	0804	09/30/2099
NTU 0	0.0	0.0	1/23/19	11367
NTU 26	130.00	126.00	2/28/2019	18818044011
COND	1.456	1.413	10/31/2018	
pH4	4.68	4.00	3/31/19	2407910
pH7	7.12	7.00	10/31/18	200234
pH10	9.89	10.00	6/8/19	2701294
ORP	0.00	0.00		

0705 MINI RAE CALIBRATION

Location BELTON, SC Date 07/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0705 CNT CALIBRATION:

	BEFORE	AFTER
AIR	0.0	0.0
ISO	90.0	100.0

0708 TEAM ARRIVES ON RS-01.
DTS: 5.82 FT

0710 TEAM ARRIVES ON RS-05.
~~DTS: WITH PT~~
DTP W/ SLIMMER: 6.53ft
DTP W/ WATER: 6.59 ft
DTS: 6.86 ft.

0800 M. WARREN AND E. HARVEY BEGIN HIKE TO SW-11.

0830	SW11 - 071218	NO SHEEN, ODOR
0840	SW10 - 071218	NO SHEEN, ODOR
0900	FP01 - 071218	NO SHEEN, ODOR
0910	FP02 - 071218	NO SHEEN, ODOR
0915	SW09 - 071218	NO SHEEN, ODOR
0930	SW08 - 071218	NO SHEEN, ODOR
0940	SW13 - 071218	NO SHEEN, ODOR
1030	FP03 - 071218	BIO SHEEN NO ODOR
1140	SW04 - 071218	NO SHEEN, ODOR
1150	SW02 - 071218	NO SHEEN, ODOR

GAUGING DATA = 1.88 ft

100

Location BELTON, SC Date 07/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1050 SW01-071218

GAUGING DATA = 0.75 ft

1105 SW07-071218

0800 COLLECTED TROLL DATA

~~0900~~ 1000 LOW FLOW MW-30

1230 BEGIN MARKINGS FOR

~~1230~~ PROPOSED VAPOR INJECTION WELLS

1300 SW12-071218 BIOSHEEN W/ODOR

1310 SW03-071218 BIOSHEEN

1330 SW14-071218 BIOSHEEN

1305 TEAM BEGINS COLLECTION OF GROUNDWATER SAMPLES

1305 MW-22-071218

1315 MW-29-071218

1325 MW-26-071218

1335 MW-23-071218

1340 MW-20-071218 * FILM OF POSSIBLE PRODUCT.

1405 MW-28-071218

1415 MW-35-071218

1420 MW-25-071218

1428 MW-41-071208

1430 TEAM HEARS THUNDER AND SHELTERS.

1441 TEAM HEARS LOUD THUNDER

Location BELTON, SC Date 07/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

AGAIN. TEAM RESETS CLOCK FOR SHELTER PROTOCOL. AT @1420, A HEAVY THUNDERSTORM WARNING WAS ISSUED FOR SOUTHEAST ANDERSON COUNTY. CLOSEST LIGHTNING STRIKE WAS DOCUMENTED 2.7 MI S OF SOUTH OF CURRENT LOCATION

1458 TEAM HEARS ANOTHER LOUD THUNDER AND RESETS THE 30 MINUTE SHELTER TIMER.

1505 FB-01-071218

1535 TB01-071218 * SURFACE WATER

1550 MW39-071218

1555 MW34-071218

1556 MW34-071218-DUP

1605 MW40-071218

1615 ~~MW-35~~ MW38-071218

1625 MW-~~35~~ 43 (MW) -071218

1640 MW-30-071218 *

1655 MW-03-071218

1705 MW-02-071218

1710 TB01-071218

NOTE ~~MW~~ SW-05 AND SW-06 WERE DRY

Rite in the Rain

102 Location BELTON, SC Date 07/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1715 TEAM DECONTAMINATED EQUIPMENT WITH LIQUINOX AND DEIONIZED WATER (MW)

1720 TEAM LOCKED ALL FENCES AND COMPOUND AND DEPARTED FIELD. TO SHIP SAMPLES VIA FEDEX TO PACE ANALYTICAL NATIONAL 12065 LEBANON PIKE MOUNT JULIET, TN 37122.

07/12/18

Location BELTON, SC Date 07/13/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK (1) GROUNDWATER SAMPLING,
(2) PRODUCT RECOVERY
(3) MARK PROPOSED WELLS AND VAS LOCATIONS.

TEAM M. WARREN (FTL), E. HARKER (GEO)
K. SEXTON (GEO)

EQUIPMENT MINIRAE: 19790
LOT # JBH-248-100-19

0630 TEAM ARRIVES ON SITE

WEATHER: HIGH 85°F (REALFEEL 93°F)
SUNNY AND HUMID. LIGHT SHOWER OCCURED LAST EVENING.

0645 TEAM HOLDS TSP ABOUT COMPLACENCY

0700 ~~(MW-07 071318)~~
MW-07 FORMED A THIN FILM OF PRODUCT AT SURFACE OF HYDRASLEEVE. SAMPLE WAS NOT COLLECTED.

0710 MW-05-071318

0715 ~~0705~~ MW-10-071318

0720 MW-10-D-071318

0730 MW-31-071318

0735 MW-45-071318

Rite in the Rain

Location BELTON, SC Date 07/13/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

✓ 0740 FB01-071318

0745 TB01-071318

0900 MW-19-071318 * NO LOW FLOW LOG, WELL WAS DRY

0845 K. SEXTON AND E. HARKER COMPLETE SOCK PRODUCT RECOVERY.

TIME	WELL	SOCK WEIGHT (g)	SOCK REPLACED	REPLACED SOCK (g) WEIGHT
0800	RT 1C	660	Y	90
0801	RT 1B	755	Y	90
0803	RT 1A	670	Y	90
0806	RS 08	725	N	N/A
0820	RT 2K	540	Y	90

0905 RS-17 PRODUCT RECOVERY = 0.2OZ

0915 RS-14 PRODUCT RECOVERY = 0.2OZ

0920 RW-10 PRODUCT RECOVERY = 30.0OZ

0918 RS-10 PRODUCT RECOVERY = 0.0OZ

0940 RS-5 PRODUCT RECOVERY = 0.5OZ

0945 RS-01 PRODUCT RECOVERY = 4.0OZ

0950 RS-02 PRODUCT RECOVERY = 2.0Z

1000 ~~MW-15~~ RW-05 PRODUCT RECOVERY = 1.0Z

NOTE A MIXTURE OF PRODUCT AND WATER WAS REMOVED FROM ALL SKIMMERS AND APPEARED TO DEVELOP A FILM.

Location BELTON, SC Date 07/13/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN.

1000 NOTE CONT: ONLY PRODUCT THAT SETTLED AT THE TOP OF THE BUCKET WERE MEASURED FOR PRODUCT RECOVERY. —

1005 RW-03 PRODUCT RECOVERY = 0.10Z

1010 RW-02 PRODUCT RECOVERY = 0.10Z

1015 RW-04 PRODUCT RECOVERY = 3.00Z

1020 RW-05 PRODUCT RECOVERY = 0.00Z

1025 RW-07 PRODUCT RECOVERY = DRY

1026 RW-08 PRODUCT RECOVERY = NO SKIMMER

1115 TEAM COMPLETES STAKING ALL PROPOSED MW AND VAS LOCATIONS WITH THE EXCEPTION OF MW-51 AND MW-52. THE TWO MWS WERE INACCESSIBLE DUE TO VEGETATION. —

NOTE: ALL EQUIPMENT WAS DECONTAMINATED WITH LIQUINOX AND DI WATER. —

1130 TEAM DEPARTS FIELD TO SHIP SAMPLES VIA FEDEX TO LOCATION AND ADDRESS ON Pg 102.

07/13/18

Rite in the Rain

Location BELTON, SC Date 08/01/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER / SURFACEWATER GAUGING

WEATHER MID 70'S / HUMID / CLOUDY THUNDERSTORMS.

TEAM M. WARREN (FTL), E. HARILEN (GEO), J. BROWN (BIO), K. SEXTON (GEO)

EQUIPMENT MINIRAE
MINIRAE
SOLINST
SOLINST

CALIBRATION MINIRAE 0.0 → 100.00
MINIRAE 0.0 → 100.00

0900 TEAM ARRIVES ONSITE

0920 TEAM HOLDS PTSP. WEATHER CONCERNS INCLUDE LIGHTNING

0925 TEAM BEGINS GAUGING.

TIME	WELL	DEPTH TO LNAPL	DEPTH TO WATER	TOTAL DEPTH
0930	MW-44B	—	10.92	35.65
0932	MW-44	—	7.72	9.78
0937	MW-01	—	7.49	26.62
0940	MW-01B	—	9.01	22.40
0949	MW-27	—	23.92	29.84
0952	MW-27B	—	28.10	38.68
1002	MW-12	—	12.98	21.15
1003	MW-12B	—	12.88	46.50

Location BELTON, SC Date 08/01/18

Project / Client LEWIS DRIVE

AUTHER: E. HARKER

1006	MW-28	—	21.51	26.10
1011	MW-49	—	17.14	23.34
1018	MW-35	—	8.50	28.50
1022	SW-03 Staff gauging			0.3
1026	MW-25	—	7.41 ERH	18.06
1028	MW-25B	—	4.15	63.72
1032	MW-42	—	4.68	13.39
1036	MW-41	—	3.90	13.19
1040	MW-40	—	2.38	13.19
1045	MW-39	—	4.83	13.06
1048	MW-34	—	2.48	7.82
1050	MW-15B	—	14.61	27.90
1054	MW-15	—	10.96	19.16
1108	MW-38	—	8.50	11.50
1112	MW-37	—	3.10	18.11
1120	SW-08 Staff gauge			0.85
1141	SW-10 Staff gauge		ERH	0.4
1207	MW-24B	—	5.19	23.85
1213	MW-24	—	4.45	15.38
1216	MW-43	—	4.41	10.34
1217	MW-43B	—	1.13	55.35
1221	SW-01 Staff gauge			0.75
1227	SW-02 Staff gauge			1.90
1243	RT-2A	—	0.6	7.60

Rite in the Rain

Location BELTON, SC Date 08/01/18

Project / Client LEWIS DRIVE

AUTHOR: E. HARKER

1244	RT-2B	—	0.80	6.55
1245	RT-2C	—	1.24	9.38
1246	RT-2D	—	1.30	7.24
1247	RT-2E	—	1.42	8.40
1248	RT-2F	—	1.76	9.39
1249	RT-2G	—	2.99	10.06
1251	RT-2I	—	2.63	10.02
1253	RT-2J	—	1.98	10.10
1255	RT-2K	—	0.78	2.19
1256	RT-2L	—	1.52	5.82
1407	RW-09	—	12.11	39.50
1411	RW-06	—	24.40	39.87
1416	RW-14	Bubbling in well, solid beeps starting at 1.7, beeping on & off until 33.85, depth to bottom 50.04 (see photo).		
1423	MW-11	—	27.20	32.23
1428	RW-01	—	14.01	20.88
1434	RS-07	—	10.87	15.68
1523	RS-13	—	5.58	17.78
1525	RS-09	—	6.90	17.25
1529	RS-18	—	7.33	19.34
1531	RS-06	—	7.88	23.89
1535	RS-04	—	8.72	10.02
1620	RW-03	~~H02~~ EH	22.71	34.82

Location BELTON, SC Date 08/01/18

Project / Client LEWIS DRIVE

AUTHOR E. HARKER

1620 RW-03 product recovery 0.5 oz
1624 RW-02 — 21.69 26.34
1624 RW-02 product recovery 2 oz
1632 RW-05 31.61 31.71 39.10
1632 RW-05 product recovery 6 oz, product/water mixture
1640 RW-04 27.39 27.63 36.19
1640 RW-04 product recovery 1 oz
1649 RW-07 — 21.49 40.89
1649 RW-07 product recovery 0.5 oz
1652 RW-08 — 14.70 34.61
1716 MW-36 — 15.78 23.71
1718 MW-36B — 15.50 54.24
1700 E. HARKER AND J. BROWN DEPART FIELD TO ATLANTA
1730 M. WARREN AND K. SEXTON DEPART FIELD. (MW)

NOTE REMAINING GAUGING DATA IS LOCATED ON LEWIS DRIVE MONITORING SHEET 1. (MW)

08/01/18

Rite in the Rain

Location BELTON, SC Date 08/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: GROUNDWATER SAMPLING/ MARK PROPOSED MW-51 AND MW-52

STAFF M. WARREN, K. SEXTON

WEATHER MID 70'S, HUMID, CHANCE OF RAIN/OR THUNDERSTORMS

EQUIPMENT: SOLINST 037063
SOLINST 041957
GEOTECH PUMP 029227
GEOTECH PUMP 037058
GEOTECH CONTROLLER 031997
GEOTECH CONTROLLER 031477
GENERATOR EAAJ-1114541
GENERATOR EAAJ-1115176
(1) PROBSS HANDHELD 039561
(1) PROBSS PROBE 41058
(2) PROBSS HANDHELD 39545
(2) PROBSS PROBE 026599
(1) MINI RAE 032731
(2) MINI RAE 27578
ISO BUTYLENE LOT # BB1-248-100-10
EXP 01/30/2022

0720 TEAM ARRIVES ON SITE AND HOLDS PTSP, GEARS UP AND BEGINS CALIBRATIONS.

Location BELTON, SC Date 08/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

PRODSS #1 CALIBRATION

PH4 → 4.13 → 4.0

PH7 → 7.06 → 7.0

PH10 → 9.89 → 10.0

DO → 99.9 → 100.0

~~COND → 1.410 → 1.413~~ MW

0 FNU → 6.78 → 0.0

124.0 FNU → 133.70 → 124

COND 1.413 ms/cm → 1.410 → 1.413

ORP. → 242.4 → 240.0

PRODSS #2 CALIBRATION

PH4 → 4.14 → 4.0

PH7 → 7.09 → 7.0

PH10 → 9.85 → 10.0

DO → 101.0 → 100.7

~~COND → 1.735 → 1.413~~ MW

0 FNU → 6.6 → 0.0

124.0 FNU → 155.4 → 124

COND 1.413 ms/cm → 1.735 → 1.413

ORP → 235.4 → 240.0

R: (Fluid, Lot#, Exp)(cond, 76L849, 12/18)(0NTU, C800982, 10/18)
(124NTU, 18301907, 02/19)(pH4, 2708G89, 08/19)(pH7, 489J36, 01/20)
(pH10, 2709H29, 03/12/19)(ORP, 3059, 06/23)

MW

112 Location BELTON, SC Date 08/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0810 RT-2K 50K=620g, NA replaced
MiniRae Cal.
#1 032 → 0, 100.2 → 100.1
#2 0.0 → 0.0, 0 → 100.9

0850 BEGIN PUMP SETUP FOR MW-17B. DTW= 12.85

0900 BEGIN PUMPING MW-17B

0945 COLLECT MW-17B-080218
MW-17B-D-080218

1025 COMPLETE DECON OF TYPHOON PUMP W/ LIQUINOX AND DI H_2O.

1035 BEGIN PUMP SETUP FOR MW-46

1105 COLLECT SAMPLE MW-46-080218

1120 BEGIN PUMP SETUP FOR MW-23. DTW= 7.55.

1132 BEGIN PUMPING MW-23

1155 COLLECT MW-23-080218

1220 TEAM BREAKS FOR LUNCH

1255 COLLECT FB01-080218

1300 COLLECT TB01-080218

1310 BEGIN PUMP SETUP ON MW-40. DTW = 2.44

1317 BEGIN PUMPING MW-40

1329 COLLECT MW-40-080218

Location BELTON, SC Date 08/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1335 BEGIN PUMP SETUP FOR MW-34

1350 BEGIN PUMPING MW-34

1350 COLLECT SAMPLE MW-34-080218

1400 TEAM RETURNS TO COMPOUND TO GEAR DOWN.

1500 TEAM MOVES TO WELLS MW-51 AND MW-52.

1515 GPS NOT ACCURATE. NEEDS VEGETATION CLEARANCE.

1520 TEAM MOVES TO COMPOUND.

1525 TEAM DEPARTS FIELD.

08/02/18

Location Belton, SC
Project / Client Lewis Dr.
K. Sexton
Date 8-13-18

0900 Arrive on-site. T. Wiley assisting locators with boring clearings.
0915 Hold PTSP w/ Drill crew (Charles Sloan, Mark Brown, Brian Miller) Sign HSP, ~~M. Brown~~ C. Sloan needs KM safety video.
0930 Communicate work plan with C. Sloan to set up on VAS-54 after locate is complete. Call T. Wiley to check arrival time of roll offs. Confirm before noon. Plan to use temporary plastic.
0950 Review well construction with C. Sloan
1000 Head to compound to get KM safety video set up for ~~M. Brown~~ C. Sloan Internet out. S. Schmida with AT+T service me.
1002 Locator notify K. Sexton that VAS-49 on top of line. Need relocated.
1031 Begin hand auger of VAS-54
1035 Calibrate PID # 32800 0.0 & 100.0, ISO # EBT-248-100-6

Location Belton, SC
Project / Client Lewis Dr.
K. Sexton
Date 8-13-18

1040 Roll offs arrive, placed in field SW of VAS-54 adjacent to roundabout
1100 Complete 3 hand augers to clear utilities
1110 C. Sloan finish KM Safety video
1115 Crew installs plastic liners in roll off
1130 Break for lunch.
1230 Team back onsite. Begin coring VAS-54
1250 T. Wiley finish marking TWs to abandon
1330 Refusal on VAS-54, measured down with tape to 19.5'
1335 Bucket emptied into rolloff
1345 K. Sexton check sand size - wrong size. M. Brown call in to have new sand delivered. T. Wiley offsite
M. Brown call Randy @ AE
1410 Begin hand augering VAS-53 while waiting for sand delivery
1430 Sand delivered. Pipe measured at 19' bgs, to fill sand to 15'.
1440 Auger stuck, pull PVC, trib out
1505 Measure down - covered in to 13'
1510 Cover auger hole, trib back in to remove collapsed dirt.
1530 New bottom = 19.2' bgs

Location Belton, SC Date 8-14-18

Project / Client Curtis Dr

K. Sexton

0645	Onsite, Calibrate PID 0.0, 100.6
0700	Drill crew onsite. Hold PTSP, topic heat stress
0710	Crew unload new rig, prep for VAS-53, begin hand auger of VAS-52
0745	Begin drilling VAS-53
0830	Call in to T. Wiley for advice on screen placement. Refusal at 26' would put screen at 25-23', but There is water at 24'. T. Wiley says to place screen at 25-23'.
0845	Begin trib out
0915	Set screen at 23.7-25.7'.
0930	Add 25 bags of sand to 22.7'
0940	Begin adding bentonite pellets
0945	Drum truck onsite, deliver 40 drums
1000	2 3/4 5gal buckets of bent. added, trib out
1010	5 gal H_2O added, let hydrate
1020	Water break
1025	Move to decon, housekeeping

Location Belton, SC
Project / Client Lewis Dr. Date 8.14.18
K. SEXTON

1050 Set up on VAS-52
1125 At 30' ~~ray~~ strong odor. Pause drilling to let vent. PID = 81ppm. Call T. Wiley for advice. Decide to take lunch and reassess breathing zone
1140 Break for lunch
1230 Team back onsite. Breathing zone = 0.2ppm
1255 Refusal at 34.5'
1305 Water coming into boring, wait for recharge to measure water level. Call T. Wiley to confirm depth + construction. Product visible on solinst probe.
1310 Begin well construction
1330 Sand bridged. Remove PVC & attempt to fix
1405 Begin pouring sand
1430 ~~PVC set at to high (measurement mistake)~~, (KS) ~~pull pvc back out Trib out to clean ben~~ Gap in augers cause bridge. Gap in old augers joint allowed water in. Tribout to fix
1505 Begin Trib in
1530 Begin putting sand in. Insert in 4" lifts to try and prevent bridging.
Sand measured to 30.5, start bentonite.
1550 ~~(KS)~~ 1.5 bags of sand

Date 8.14.18
Location Belton, SC
Project / Client Lewis Dr.
K. SEXTON

1558 Jim Davidson of USIC onsite for utility locate ~~briefing~~ - no conflicts in ~~other~~ any boring locations
1614 Bentonite measured at 24.6' (5.9' seal) used 20, 5 gal buckets
1620 locks put on well caps VAS-52 & 53. Crew begins decon ~~of mas~~ to VAS-51
1700 Team offsite.

KS

90

Location Belton, SC Date 8-15-18

Project / Client Lewis Dr. VAS Instal.

KLSEXTON

0700	Onsite w/ Crew
0705	Hold PTSP, topic is odors, calibrate PID 0.0 +-100.0
0710	Crew set up on VAS-51
0715	Begin boring VAS-51
0750	Hit high PID area, allow to vent
0800	Continue boring
0812	Refusal @ 30'
0815	Begin screen placement & filter placement
0820	Check in call w/ T. Wiley, topics drums, silt fencing, client site visit
0835	Bridge filter pack while using 4' lifts. Trip out
0930	Begin pouring filter sand
0945	Filter to 26' (4' of sand), used 2 bags
0950	Fill bentonite to 21'
1003	Hydrate with 5 gal water
1005	Grounds crew onsite. Instruct drillers on housekeeping, decon, prep for grouting. Go on site walk with Jim.
1115	Lunch
1200	Back onsite. Begin measurement of each VAS well to double check depth, VAS-53 = 13', VAS-52 = 21.6 VAS-54 = 6.8, VAS-51 = 19.5
	Jim collecting silt fences for removal.

Location Belton, SC Date 8-15-18

Project / Client Lewis Dr VAS Distal.

K. SEXTON

1205	Notify M. Brown of cave in depths in each boring. C. Sloan & B. Miller mix grout.
1235	Mixed 35 gal H_2O w/ 10 lbs of bent powder into 10, 46 lbs of cement mix.
1249	Complete mixing, begin pour into VAS-51
1258	Grout at VAS-51 measured at 15' bgs. wait for subsidence
1310	Mix 28 gal H_2O, 6 lbs bent., & 8 46 lbs bags of cement mix for VAS-52
1318	Pour into VAS-52
1324	Mix 5 bags cement, 4 lbs bent. and 16 gal H_2O
1328	VAS-52 grout measured to 5' bgs, will fill after settling
1329	VAS-51 measured to 2' bgs after settling
1340	Pour into VAS-53. Measured to 1.5' bgs.
1350	Mix 14 gal H_2O, 4 bags of cement mix, & 4 lbs bent. Pour in VAS-54. Measured to 6' bgs.

Location Belton, SC Date 8-15-18

Project / Client Lewis DC.

K. SEXTON

1400 ≈8 gallons left in drum. VAS-52 has 7 10' logs to grout. Place excess grout into VAS-52

1415 Take water break.

1420 Rig rob to VAS-50. Begin hand auger. Crew down equipment.

1540 Site cleaned up, rig set up on VAS-50. Crew to head back to shop to supply and pick up parts, offsite.

1545 Check on from DJ GM services. Have removed silt fencing at MW-50B, 48B, 31, 47, 09, and 06.

1620 Jim offsite,

1630 K. SEXTON offsite

Location Belton, SC Date 8-16-18

Project / Client Lewis Dr

K. DEXTON

0700	Onsite hold PTSP
0720	Begin boring VAS-50
0810	Refusal at 27.8
0815	Begin pouring filter pack
0850	Filter pack up to 25.5' (4.3'), begin pouring bentonite
0915	Bent. at 18.7' bgs. Add 5 gal H_2O
	VAS-54, grout 1' bgs, WL dry
	VAS-53, grout 1.9' bgs, WL 26.5 bgs (@ 6.0)
	VAS-52, grout 4.0' bgs, WL 26.35 bgs
	VAS-51, grout 2.2' bgs, WL 26.52 bgs
0920	Jim & Trey of GM onsite. Begin installation of silt fencing along VAS wells
0930	Hand auger at VAS-48, not able to get below 2' because of 3/4" rocks. Mob rig to VAS-48
0955	Use rig to clear rocks, continue hand auger
1045	Pause drilling for water break
1100	Lunch
1145	Back onsite. Continue drilling VAS-48
1210	Refusal @ 36.0 ft
1220	Water collapsing hole, try to clear out hole
1330	Clear out hole and prep for sand, new Depth to bottom = 35.7

Location Belton, SC Date 8-16-18

Project / Client Lewis Dr.

K.SEXTON

1400 Fran & SHME onsite. Have quick meeting. Jim & Fran go on site walk to discuss silt fencing & clearing

1420 Sand Filter placed to 31.4' bgs. (2 bags)

1440 Bent. Chips bridge displaced by water in well. Trib act, clean.

1445 Caved in to 17.5' bgs

1450 Cover hole, move to decon. Clean equip., go on site walk for trash & housekeeping. Drum one (1) 55-gal drum with decon water from pad (≈50 gal.)

1500 Discuss with Fran the silt fence & clearing areas. Relay to T. Wiley in email draft

1600 Crew secure rig

1620 Drill crew offsite

1630 K. SEXTON & GM crew offsite

Location Belton, SC Date 8-17-18

Project / Client Lewis Dr

K. SEXTON

0700 Crew on site, hold PTSP
0710 Crew begin set up on rig to clear hole at VAS-48
0715 PID calibration 0.0, 100.0
0822 Sand Filled in VAS-48 to 31.5' (2 bags)
0835 Begin pulling augers to pour bent.
0845 Bridged, try and use PVC to break bridge
0853 Fixed. Measure depth to bent. = 25.8'
Add 5 gal H_2O, let hydrate. Begin breakdown, move augers to decon
1000 B. Waldron, Jerry, Greg, & Mike onsite
1100 Pour grout @ VAS-48
1120 Pour grout @ VAS-50
1200 Begin packing up for denob.
1230 Stored extra drums in 2nd roll off.
1300 2 Decon water drums stored in compound
1345 All equipment loaded
1400 Offsite

Location Belton, SC Date 8-27-18

Project / Client Lewis Dr.

K. SEXTON

0900	Onsite, Hold TBT with M. Brown, C. Sloan, & B. Miller. Crew begin decon pad construction, set up for VAS-49047 install
	PID Calibrated # 021597, ISO# BGT-248-100-10
	Cal zero/span = 0.0/100.0
1000	Hand auger for utility check @ VAS-47
1100	Refusal @ 34"
1230	2 bags of filter sand to 29.1'
1330	.75 bucket of bent. to 23.2', add 5 gal H_2O
1345	Break for lunch
1415	Return, begin prep of commodity of VAS wells. VAS48 @ 4.5', 50 @ 4.5', 51 @ 2.3', 52 @ 3.5', 53 @ 1.7', 54 @ 1.5'
1520	Mix 35 gal H_2O, 10 bags cement, + 6 lbs bent. powder. ~~Add bottom, mix~~
1600	Decon augers and rods to VAS-49. Hand auger to 5'
1700	Offsite. Rig set up at VAS-49.

Location Belton, SC Date 8-28-18

Project / Client Lewis Dr.

K. SEXTON

0700 Crew onsite, hold PTSR, discuss work plan for today. C. Sloan to begin well completion for VAS wells that need more concrete grout mix while drill crew starts VAS-49.
PID Cal, 0.0 & 100.0

0800 Hit high PID values in breathing zone. Purge work to let aireate. Empty soil cuttings.

0900 Continue drilling

0905 Refusal at 34', wet. Need risers, B. Miller to retrieve from shop. Crew begin work on completing grouting of VAS wells.

0930 Grout added to VAS-52, 50, and 48 up to 2' BGS
Clean out VAS-49 for well construction

1030 Thick mud at bottom, wait to settle for sand

1050 Sand settled. Finish filter placement

1115 Sand placed. Wait to settle & remeasure

1125 Filter measured at 29.6'. Add bent. seal

1150 Bent. seal placed to 24.3', no water added, already in water column. Break for lunch

1330 Onsite. Begin grouting (PREP) of VAS-49

98

Location Belton, SC Date 8-28-18

Project / Client Lewis DC.

K. SEXTON

1405 Grout mixed w/ 3 bbls bent. powder, 30 gal. H_2O, and 8 bags of cement mix

1430 Grout placed. Proceed to locate Piezometers 40, 34, 35, and 30

1520 Abandon Piez 40 via funnel

1545 Abandon Piez 35 via funnel

1610 Abandon Piez 34 via funnel

1630 Abandon Piez 30 via funnel

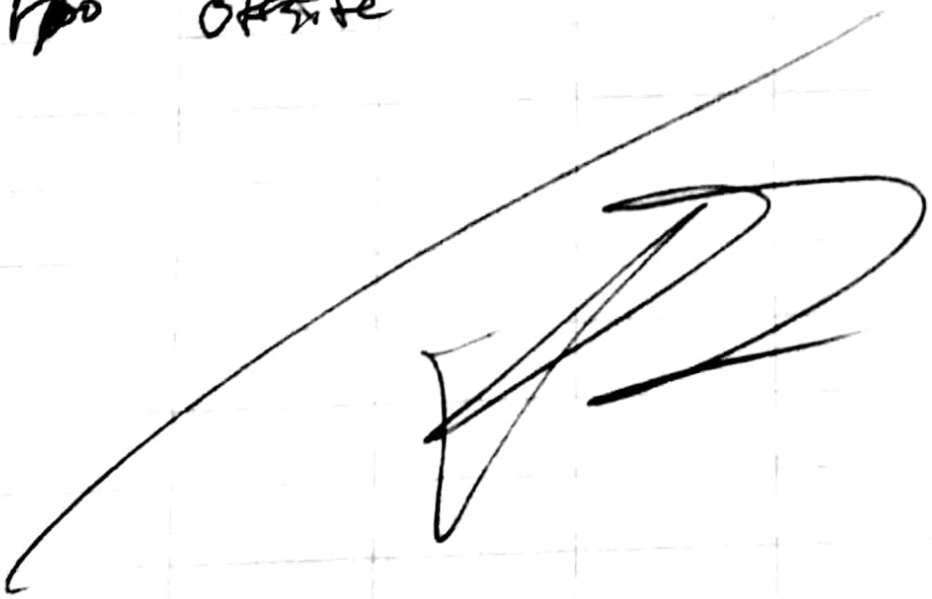
1640 Decon Augers, pump water into drum

1645 Take water level measurements in all VMS wells (bgs)

54 - dry, 53 - 24.45', 52 - 26.72', 51 - 26.80',

50 - 27.13', 49 - 27.6', 48 - 24.6', 47 - 25.80'

1700 Offsite



Location Belton, SC Date 8-29-18

Project / Client Lewis Dr

K. SEXTON

0700 Onsite, hold ptsp, calibrate PID (0.0, 100.0)

0800 Mob to MW-53. Call T. Wiley about additional crews arriving Thursday for help with well development and abandonment

0830 hand auger MW-53, begin drilling

0850 Collect [MW53-0809-082918] & [MW53-0809-082918-dup] @ 8-9'.

0855 Call T. Wiley about screen placement, water table at 18'. Directed to set at 25-10'

0900 Refusal at 21.5'. Call T. Wiley for adjustments. Directed to set 15' screen on top of refusal.

0920 Bottom measured to 21.3'. WL@15.0 bgs

0925 Mud too thick at bottom to introduce sand. Call T. Wiley to ask about water introduction. Told to use city water from compound water source

0930 Fran & SMOE onsite. Drill crew to fill tank with city water from compound water source

0940 Assist S. Shinsida with sponge system

100

Location Belton, SC Date 8-29-18

Project / Client Lewis Dr.

K. SEXTON

0945	Grounds crew onsite. Cutting hayfield.
1010	Go check on AE. Emptying water truck near MW-50 into drainage ditch. Mr. Sexton halt task, conflict of outside water source into creek. Call T. Wiley for instruction. Says to empty along gravel roads by hayfield.
1115	Finish draining water truck north of gate to hayfield. Hook up to compound water valve to fill over lunch.
1215	Return from lunch. Set up water catch, bring over supplies, and check on water truck
1310	Begin introduction of water to thin out mud. Use ≈ 100 gal. H_2O. New depth measured to 21.0 bgs
1330	Weather checked for t-storms in area, closest lightning 63 mi. away
1400	Sand to 4' bgs. Use 10 bags, 30 gal H_2O
1410	Lightning 17 miles away. Pause work. Bent. set to 1.2' bgs.
1440	No lightning within 30 mi. resume work. Begin clean up of MW53, bring water truck to fill yeat compound. Set up MW54.
1700	Crew offsite

Location Belton, SC Date 8-30-18

Project / Client Lewis Dt.

K. SEXTON

0700	Hold PTSP, cal PID (0.0, 100). Crew discon equip. Get bucket tool to carry MW-53 drums to compound. empty settled drums into poly tanks.
0810	Robbie & TJ of AE drilling onsite for well abandonment of piezometers
0835	GM groundscrew onsite
0850	Begin drilling MW-54
0910	Refusal at 15', no water. Talk to T. Wiley for direction. Relocate east-ne.
0940	Backfill hole with drilled cuttings. Mob. to new location east of treeline
1020	Set up on MW-54 offset
1040	Refusal @ 12.5' call T. Wiley for direction. Adjust to MW-30 to try and push 5' past its depth
1120	Begin drilling MW54 (offset #2) after lunch - rig set up
1150	Walk cleared path to MW5/052 w/ GM.
1140	Gary of AE drilling onsite. Explain tank for development

Location Bethune, SC Date 8-30-18

Project / Client Lewis Dr.

K-SEXTON

Hanna Cal.

Handheld #16855, Sensor # 25313

AutoCal Solution # B044181, Exp Feb 2019

pH	~~4.01~~ 4.01
cond	4.51
NTU	0.0
DO(mg/L)	9.09
DO(%)	119.4

1236 Start Geoprobe 7 HED on VAS development

1240 Continue drilling MW54 (offset #2)

1310 Collect MW54-0809-083018

1430 Stop at 48'. No refusal. Call T. Wiley to discuss screen placement. Set to 24-9'. Bent. up to 25'. Let bent. bar sit overnight before setting screen + Filter.

1540 Bent getting stuck due to water. Decide to offset and redrill to 25' to save time. Backfill MW54 (offset #2)

1615 Arrive S Schmidt w/ auger bent off

1630 Check on Geoprobe & HED. Has developed VAS-52 @ 51, 53 dry

1640 Drill crew fill MW54 (#2) w/ 13 bags (50lb) Hydrated to 0'

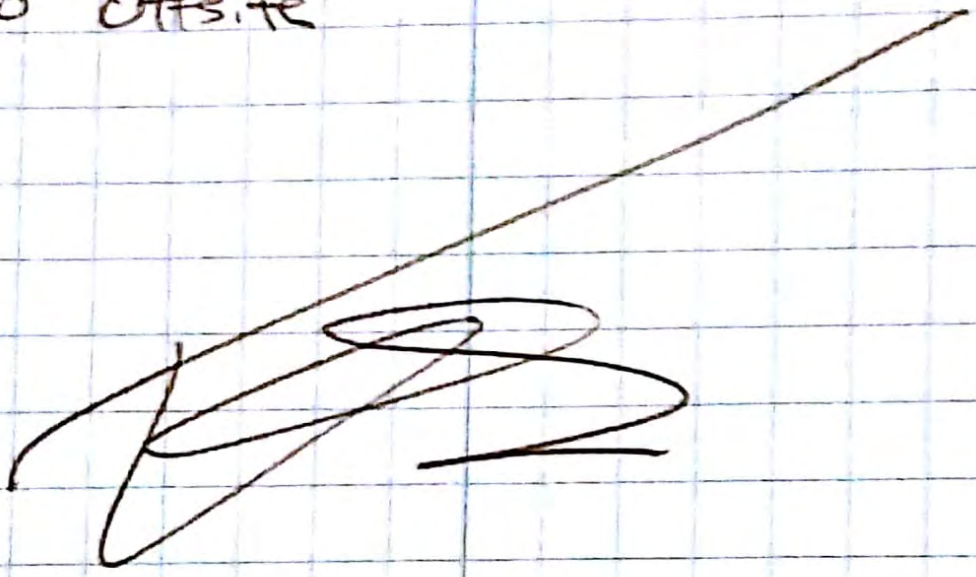
Location Baton, SC Date 8-30-18

Project / Client Lewis DC

K. SEXTON

1645 Crew to move RSW Rigids to compound for setting overnight. Offset drill rig for redrill of clean hole for MW54. Move equip to clean up site for the day

1700 Offsite



Well Abandonment 8/30/18

TW-	Depth
34 -	Grouted
30 -	" "
35 -	" "
40 -	" "
65 -	44.81
68 -	29.95
69 -	51.91
70 -	45.05
85 -	Blowing Air
90 -	Blowing Air
76 -	51.9
4 -	5.5
14 -	6.5
15 -	5.0
86 -	6.0
5 -	8.8
81 -	7.0
82 -	9.0
83 -	17.0
84 -	13.5
87 -	7.0
21 -	12.71

Location Belton, SC Date 8-31-18

Project / Client Lewis Dr.

K SEXTON

0700 Crew onsite. Hold HASP, plan today's tasks. Development crew to start VAS-51, drill crew decon & prep for MW-54 installation.
PID cal (0.0, 100.0)
Horiba Cal: PH = 3.98, cond = 4.45,
NTU = 0, DO(mg/L) = 10.01
DO(%) = 117.8

0810 MW-53 grouted. I of Portland cement type I/II

0900 Set well in MW54 at 25.2'

0930 Sand up to 8.2' (9.5 bags) screen at 24.8' to 9.8'. Add sand to 7.4 (bag tot. = 11.5)
used ≈ 35 gal H_2O to place sand

1000 Bent. hole plug 3/8 to 5.1', let hydrate.
Prep for grouting, decon, construct MW53 flush mount

1120 lunch

1210 back onsite, continue tasks above

1300 Take GPS pts off MW54 offsets and of relsed VAS wells

1330 Begin abandonment of RW-13, TW-85 + 90

1600 Stage water drums in compound, clean site, offsite

Location Belton SC Date 9/4/18

Project / Client Lewis Dr

Present: M Kavetski/ATC, T Wiley /ATC
AE Mark Brown, Brian Miller, Charles Sloan
Gary Winbourne
weather: P Cloudy Hi 88°
Objective: Continue MW well Install & development
1158 M Kavetski onsite - AE Drilling Crew onsite
1215 H&S / HASP Tailgate
1217 T. Wiley onsite
1220 Calibrate Horiba U-52 Pine TN1C80 w/ Autocal solution Lot #18044181 Exp 2/19
pH: 4.0 / 4.01
Cond 4.49 ms/cm / 4.48
Turb 0 NTU / 0.00
1230 Site walk w/ T Wiley
- Drillers set up rig at
- Developer gets water & sets up to develop Air Sparge Loc
1315 Calibrate MiniRae 3000 Pine 21579
Fresh Air 0.0 ppm
Isobutylene 100 ppm / 100.0 ppm

Location Belton SC Date 9/4/18

Project / Client Lewis Dr

1330 Start on MW-52 w/ HSA & SPT
* Note Hammer not used due to leak - pushing spoons

1415 Drillers terminate boring on MW-52 at 28 ft WL ≈ 20 ft bgs

1420 Collect sample MW52-0305-090418 for BTEX & Naphth. 1 40oz WA + Total Solids 4oz Jar

1425 Set well in MW52 at 28 ft bgs w/ 10 ft of screen

1430 Turkey had a call w/ HSM Bill Buckley about moving AS locations closer to the road. Bill was ok w/ it as long as Traffic warning devices (signs & cones are used)

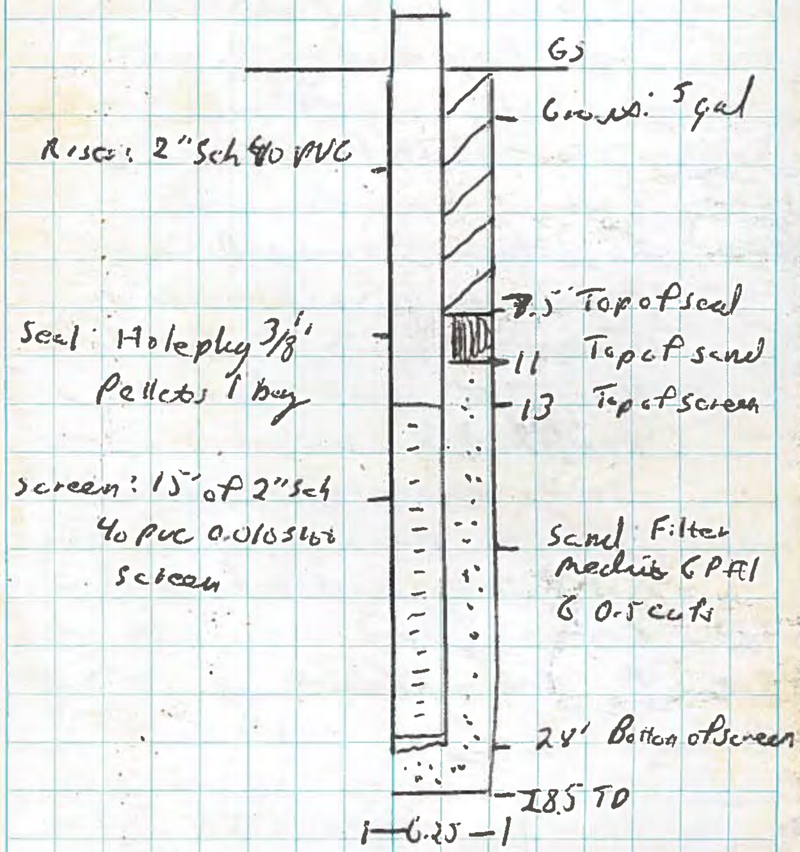
1435 Drillers have silt & mud in augers ≈ 10-12'
-will pull out augers & add a knock out plug & clean out boring for MW ~~25~~ 52

1510 Drillers install 2 in sch 40 PVC 0.010 slot screen at 28 ft bgs (15 ft) & 2 in sch 40 PVC riser

Location Belton SC Date 9/4/18

Project / Client Lewis Dr

MW-52 WCD



9/4/18

Location Belton SC Date 5/4/18

Project / Client Lewis Dr

MW52 Cont:
Sand Pack Filter Media GP#1 28.5' to 11 Ft bgs used 6 0.5 cu ft bags
Seal: Hole plug 3/8" pellets, hydrated seal to 7.5 Ft bgs

1535 T Storm in area stop work
1640 Break between storms Drillers hydrate bentonite & secure rig
- Well Development: checked both USW 53 254 both ports dry pumped clean water into both surge and pumped water out multiple times
- Pump develop water to Frac Tank
1650 Drillers offsite
1710 M Leach offsite

Location Belton SC Date 9/5/18

Project / Client Lewis Dr

Present: M. Leach / ATL
Weather: P Cloudy Lo 75° Hi 98 T Storms
Objective: Continue well installation
AE onsite: M Brown, C. Sloan, B. Miller
0615 onsite at equip near Compound
0650 Load equipment
0700 AE onsite HAS mtg
0715 Drillers set up for Hourly
0735 Calibrate PID Monitor 3000
Pine ID 21575
Fresh Air Check: 0.0 ppm
Isobutylene 10 ppm / 100.0 ppm
0775 Drillers move rig to MW-51 location
- & hand auger to 4' bgs
0800 Drillers start on MW52 see boring log
0945 Drillers hit refusal on MW51 at ~ 23 Ft bgs
0850 Collect soil sample MW54-0810-090518 for BTEX / Naphth (40 mL VOA) & Total Solids (4oz glass jar)
0905 Drillers install MW51 to 22.5 w/ 15 Ft of 2in sch 40 PVC Screen 0.010 slot & 2in sch 40 PVC riser

Location Belton SC Date 5/4/18

Project / Client Lewis Dr

MW52 Cont:
Sand Pack Filter Media GP#1 28.5' to 11 Ft bgs used 6 0.5 cu ft bags
Seal: Hole plug 3/8" pellets, hydrated seal to 7.5 Ft bgs

1535 T Storm in area stop work
1640 Break between storms Drillers hydrate bentonite & secure rig
- Well Development: checked both USW 53 254 both ports dry pumped clean water into both surge and pumped water out multiple times
- Pump develop water to Frac Tank
1650 Drillers offsite
1710 M Leach offsite

Location Belton SC Date 9/5/18

Project / Client Lewis Dr

Present: M. Leach / ATL
Weather: P Cloudy Lo 75° Hi 98 T Storms
Objective: Continue well installation
AE onsite: M Brown, C. Sloan, B. Miller
0615 onsite at equip near Compound
0650 Load equipment
0700 AE onsite HAS mtg
0715 Drillers set up for Hourly
0735 Calibrate PID Monitor 3000
Pine ID 21575
Fresh Air Check: 0.0 ppm
Isobutylene 10 ppm / 100.0 ppm
0775 Drillers move rig to MW-51 location
- & hand auger to 4' bgs
0800 Drillers start on MW52 see boring log
0945 Drillers hit refusal on MW51 at ~ 23 Ft bgs
0850 Collect soil sample MW54-0810-090518 for BTEX / Naphth (40 mL VOA) & Total Solids (4oz glass jar)
0905 Drillers install MW51 to 22.5 w/ 15 Ft of 2in sch 40 PVC Screen 0.010 slot & 2in sch 40 PVC riser

Location Belton SC Date 9/5/18

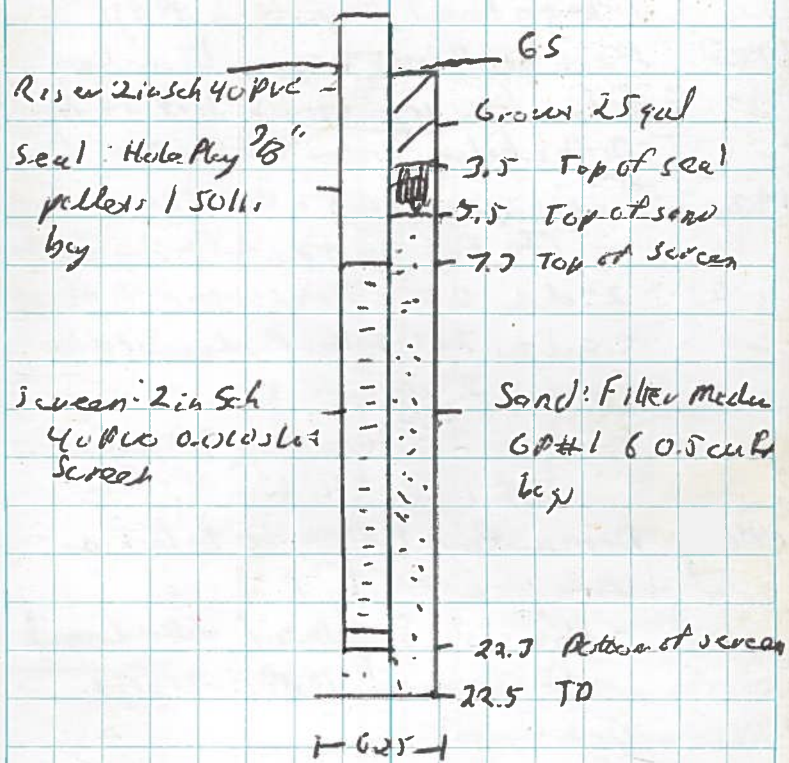
Project / Client Lewis Dr

MW51 cont:
Sand to 5.5 ft bgs Filter Media used
6 0.5 cu ft bags
Seal: Holeplug 3/8" pellets uncoated
1 50 lb bag seal 3.5 - 5.5 ft bgs
0930 Break down rig move off hole
1000 B. Miller ~~C. Sloan~~ offsite to pick up traffic signs
1045 - Drillers hydrate seal ~~water~~ on MW51 & perform housekeeping
- Drillers work on removing surface completion on abandoned TW well
1145 B Miller onsite w/ traffic signage
1150 Offsite for lunch
1220 Drillers onsite from lunch
- Drillers setting up traffic signs
1230 Grounds management onsite cutting grass
1255 Century Link personnel onsite to look at Comm Line & Sewage Location
- Officially Couldnot tell me any thing
1305 Century Link offsite

Location Belton SC Date 9/5/18

Project / Client Lewis Dr

MW51 WCD:



9/5/18

Location Belton SC Date 9/5/18

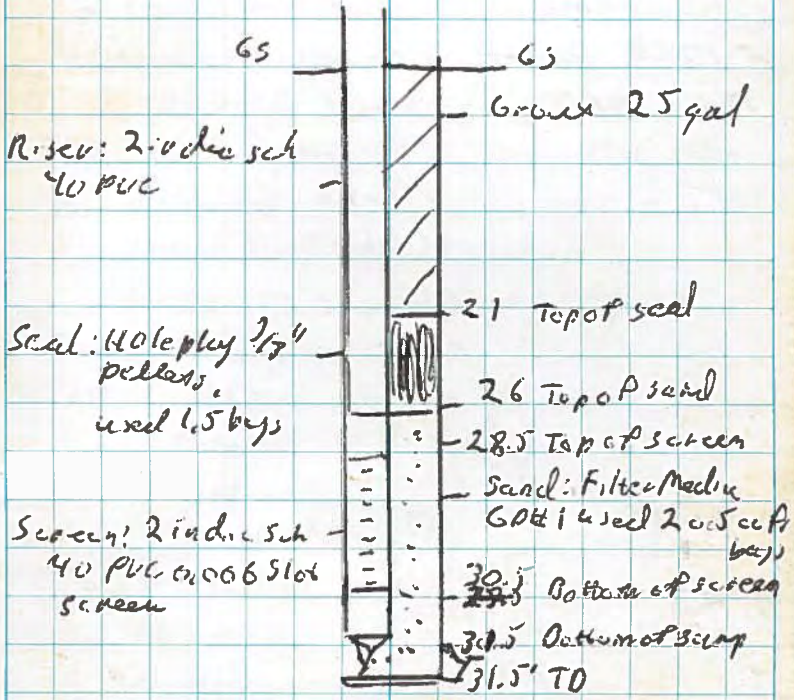
Project / Client Lewis Dr

1307	Drillers set up on 57 C space & ~~post~~ Hand Auger to 5 ft bgs
1320	Start on USW57 see boring Log
1415	Refusal on USW57 at 31.5 ft bgs
/	- Driller helper grout MW51 & MW52
1430	Drillers set USW57 casing in boring w/ 1 ft PVC sump, 2 ft sch 40 pvc 2" dia 0.006 slot screen & riser
	Sand to 26' Filter Media GP#1 used 2 0.5 cuft bags
	Seal to 21 Holeplug 3/8" pellets used 1.5 50 lbs bags
1440	Denise from KM onsite to look at USW locations by Pipeline - She was good w/ USW Locs do not need KM oversite
1445	Denise offsite
1515	Drillers break down rig & move to decon. Rig set up on USW58
1520	Drillers hand auger USW58 to 5 ft bgs
1600	Drillers start on USW58 see boring log
1620	Drillers ~~tech~~ hit refusal on USW58 at 32.5 ft bgs.

Location Belton SC Date 9/5/18

Project / Client Lewis Dr

USW 57 WCD: (KK)



166.25-1

9/5/18

Location Belton SC Date 4/5/18

Project / Client Lewis Dr

1045 Boring is wet and silty will need to clean out to set well
- Drillers will set equip to set well in morning

1720 Drillers secure site for the day

1735 offsite

/ 4/5/18

Location Belton SC Date 4/6/18

Project / Client Lewis Dr

Present: M Karafa / ATL

AE: M Brown, C Sloan, B Miller, G Winbourne

Weather: P Cloudy Lo 74° Hi 88°

Objective: Continue MW MSW well installation or development

0640 Onsite in field truck

0655 calibrate PID mini Rae 3000
Pine ID 21579
Fresh Air (zero): 0.0 ppm
Isobutylene 100 ppm) 100 ppm

0700 Load Equip

0710 Calibrate Horiba U53
Pine ID: 16855
pH: 4.01
Cond: 4.40
Turb: Turb not cal

0720 H&S MSP

0730 Drillers set up traffic signs

0735 change batteries on Horiba & recal
pH: 4.0 / 4.01 NTA
Cond: 4.49 / 4.50 NTA
Turb: 0.0 / 0.0 NTL

0745 Drillers set up to develop well & set USW-5K casing

Location Belton SC Date 4/5/18

Project / Client Lewis Dr

1045 Boring is wet and silty will need to clean out to set well
- Drillers will set equip to set well in morning

1720 Driller secure site for the day

1735 Offsite

[illegible] 4/5/18

Location Belton SC Date 4/6/18

Project / Client Lewis Dr

Present: M Karaffa / ATL

AE: M Brown, C Sloan, B Miller, G Winbourne

Weather: P Cloudy Lo 74° Hi 88°

Objective: Continue MW MSW well installation or development

0640 Onsite in field truck

0655 calibrate PID mini Rae 3000
Pine ID 21579
Fresh Air (zero): 0.0 ppm
Isobutylene 100 ppm) 100 ppm

0700 Load Equip

0710 Calibrate Horiba U53
Pine ID: 16855
pH: 4.01
cond: 4.40
Tech: Turb not cal

0720 H&S PTSP

0730 Drillers set up traffic signs

0735 change batteries on Horiba + recal
pH: 4.0 / 4.01 NTA
Cond: 4.49 / 4.50 NTA
Turb: 0.0 / 0.0 NTL

0745 Drillers set up to develop well & set MSW-5R casing

Location: Dalton SC Date: 9/6/18
Project / Client: Lewis Dr

0830	Drillers flush sediment out of Augers
0840	Drillers install casing in USW58 w/ 2 ft 2 inch dia sch 40 PVC 0.006 slot screens + 2 inch sch 40 riser (screen has 1 ft sump) set 31'3" sand pack: Sand to 27 Filter Media GP #1 used 26.5 0.5 cu ft bags
0910	Tom Wiley (ATC called + said there was a miscommunication between Mr. Odell and Kim. The so we will stop pull offsite + standdown until issue is resolved - Drillers packing up
0940	seal to 22 ft bgs - Holeplug 3/8" pellets used 2-50 lbs bag
1040	Drillers have all equip off O'Dell property + site cleaned up
1045	Drillers build pad on MW-54
1125	offsite to Lunch
1145	Onsite from Lunch
1150	Driller cont. develop + clean up
1330	Drillers load drums (empty) + cut off USW points below grade + sand

Location: Dalton Date: 9/6/18
Project / Client: Lewis Dr

1425	Tom Wiley ATC called + said we were cleared to install USWs on South side of Lewis Drive
1445	Set up on USW59 Post hole to 4-5'
1500	Start on USW59 see Boring Log
1520	Refusal on USW59 at Talked to T Wiley and will use screen w/o sump due to shallow refusal
1545	Set USW59 well casing at 8'8" bgs w/ 2 ft of 0.010 screen 2 in sch 40 pvc *Note 1' sump removed due to shallow depth 2 in sch 40 PVC Riser
1	Sand Pack: Sand to 5.6" Filter Media GP #1 0.5 of .5 cu ft bag Seal: to 1 ft bgs Hole Plug 3/8" pellets used
1615	Drillers cut USW59 off 1' bgs + cover w/ sand - seal 1' bgs
1620	Drillers ~~not have~~ Hole hand auger to 4.5' off At USW55 + set casing

Location Belton SC Date 9/6/18

Project / Client

1700 Drillers clean up & secure site
Driller helper developed MW53
& MW54

1720 Offsite,
-MKeenorte ship samples at FedEx

9/6/18

Location Belton SC Date 9/7/18

Project / Client Lewis Dr

Present: M. Keenorte/ADC
AE: M Brown, C Sloan, B Miller, G Windham
Weather: P cloudy 80°
Objective: Continue Drilling well
install, well development
0650 Onsite
0700 Calibrate PID MiniRae 3000
Pine 21579
Fresh Air (zero): 0.5
Isobutylene 100ppm/100.1ppm
0710 H&S PDSP
0715 Drillers set up traffic signs
& decon
0720 Calibrate ~~PID Minirae~~ Horiba U53
Pine ID 25313
pH: 4.00/4.01
Cond: 4.49/4.49 ms/cm
Turb: 0.00/0.00 NTU
0730 Drillers set up rig on USW55
& start drilling see boring log
- Driller Helper starts developing
MW51 & 52
0825 Auger refusal at USW55 at 30.5'
bgs

Location Belton SC Date 9/6/18

Project / Client

1700 Driller: Clean up & secure site
Driller helper developed MW53
& MW54

1720 Offsite,
- MKearfott ship sampler at FedEx

9/6/18

Location Belton SC Date 9/7/18

Project / Client Lewis Dr

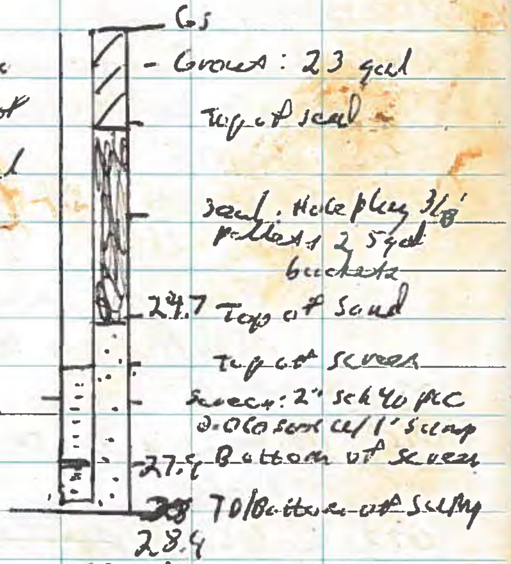
Present: M. Kearfott/ATC
AE: M Brown, C Sloan, B Miller, G Windborn
Weather: P cloudy 80°
Objective: Continue Drilling well
install, well development
0650 Onsite
0700 Calibrate PID MiniRae 3000
Pine 21578
Fresh Air (zero): 0.5
Isobutylene 100ppm/100.1ppm
0710 H&S PDSP
0715 Driller, setup traffic signs
& decon
0720 Calibrate ~~PID Monitor~~ Horiba U52
Pine ID 25313
pH: 4.00/4.01
Cond: 4.49/4.49 ms/cm
Turb: 0.00/0.00 NTU
0730 Drillers set up rig on USW55
& start drilling see boring log
- Driller Helper starts develop
MW51 & 52
0825 Auger refusal at USW55 at 30.5'
bgs

Location Belton SC Date 9/7/17

Project / Client Lewis Dr

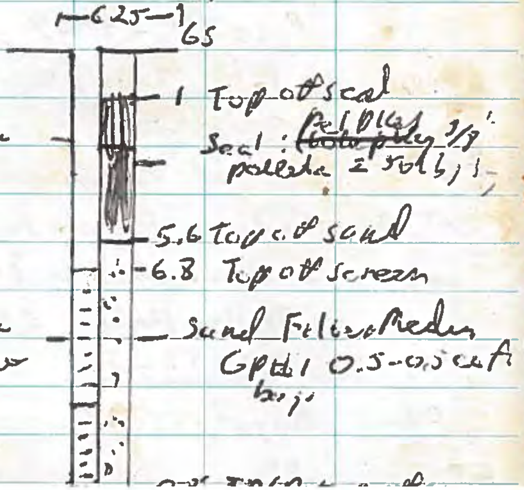
USW 55WCD:

Grout mix: 6 bag type I/II portland, 4-5 lbs of bentonite gel, 20 gal H_2O



Sand: Filter Media GP#1 2 0.5 cu ft bags

USW 59WCD



Riser: Sch 40 2" dia PVC

Screen Sch 40 2" dia PVC 0.060 slot

Location Belton SC Date 9/7/17

Project / Client Lewis Dr

0840	Drillers set up to set well casing at USW55
0930	Drillers have obstruction in bottom of auger & can't set well. - Pulling auger to inspect
0940	Drillers confirm ~~rod wedged~~ sil packed (wk) in bottom auger
0950	Drillers clean out auger, install plug & 2 per auger. back down boring to clean out. ± 4-5' of sloughed soil in bottom of boring
1015	Drillers install well casing in USW55 w/ 2 ft of sch 40 PVC 0.060 slot screen & 1 ft sump to 28.4 ft bgs. Sand to ~~...~~ 24.7 Filter Media GP#1 used ≈ 2 - 0.5 cu ft bgs. Seal to 19.9' Pel Plug 3/8" pellets used 2 5 gal bucket
1155	Drillers pull augers
1200	Drillers stop for lunch
1240	Drillers back onsite
1300	Drillers set up on USW 56 & hand ~~auger~~ 4-5' bgs
1330	Drillers start on USW 56 see boring Log

Location Belton SC Date 9/7/18

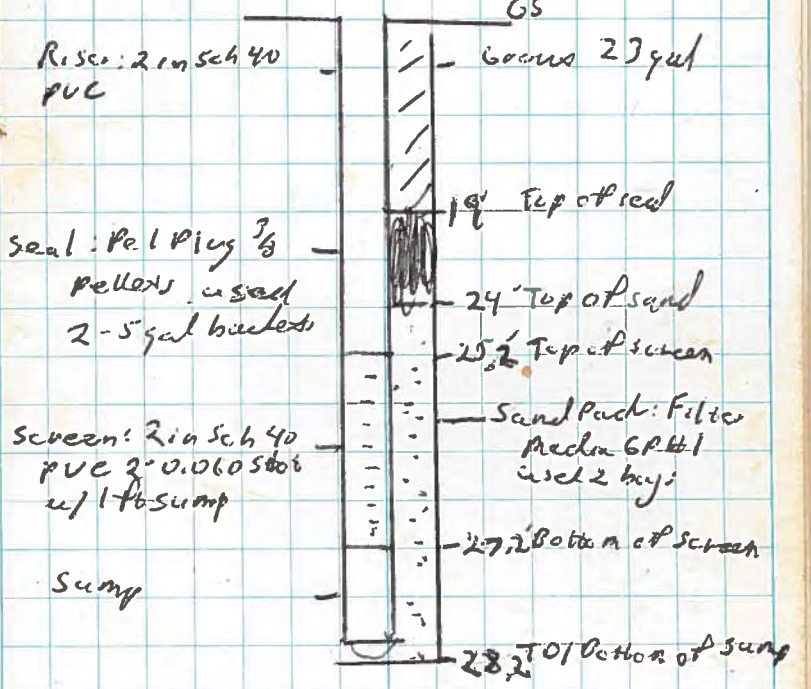
Project / Client Lewis Dr

1415	Driller hit refusal @ 28 ft bg. on USW 56
1420	Driller set up to set well casing in USW56 - Flush augers due to silt
1425	Set well casing in USW56 w/ 2 Ft sch 40 2 in dia PVC 0.060 slot screen and 1 Ft sump + 2 in sch 40 riser
	Sand Pack: Sand to 24' - Filter Media GP #1 used 2 0.5 cuft bags
	Seal: Seal to used Pel Plug 3/8" pellets. 50lb bags
1540	Bentonite hydrating
1650	Driller start grouting USW56
1654	USW 55 - grout vol 23 gal
1705	Move to USW58
1720	USW-58 - 28 gal
1725	Move to USW57
1735	~~USW~~ USW-57 - 25 gal
1740	Move to USW 56
1750	USW56 - 23 gal
1800	Drillers move equip to staging area

Location Belton SC Date 9/7/18

Project / Client Lewis Dr

USW 56 w/CD:



625-1

1820 Driller Load up CME 750 on Low Boy

1645 Offsite

9/7/18

114 Location BELTON, SC Date MONDAY 09/10/18

Project / Client LEWIS DRIVE PN: 699858

AUTHOR: M. WARREN

TASK GROUNDWATER/SURFACE WATER GAUGING / PRODUCT RECOVERY

STAFF M. WARREN (FTL/BO), K. SEXTON (GEO), KIRILL CHERNOFF (

WEATHER MID 80'S, CLOUDY, POTENTIAL THUNDERSTORMS, HUMID

EQUIPMENT SOLINST # 27681
SOLINST #01913
MINIRAE #
LOT #

CALIBRATION MINIRAE 0 → 100.0 ppm

0855 TEAM ARRIVES ONSITE AND BEGINS TO GEAR UP FOR DAY.

0915 TEAM HOLDS PTSP. DISCUSS YELLOWJACKET, THUNDERSTORM AND ERGONOMIC HAZARDS

0926 TEAM BEGINS GAUGING

1240 TEAM BEGINS LUNCH BREAK

1340 TEAM RETURNS FROM LUNCH BREAK

1455 TEAM HEARS THUNDER AND SHELTERS IN PLACE.

1553 TEAM RESUMES WORK

1622 TEAM HEARS THUNDER AND

Location BELTON, SC Date 09/10/18

Project / Client LEWIS DRIVE

AUTHOR: M WARREN

1622 CONT SHELTERS IN PLACE.

1700 TEAM RETURNS TO COMPOUND TO GEAR DOWN FOR DAY. TEAM DEPARTS FIELD.

09/10/18

Location BELTON, SC Date 09/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER / SURFACE WATER GAUGING / SAMPLING AND PRODUCT RECOVERY

STAFF: M. WARREN (ETL/BIO), K. CHENNOT (ENV. SCI), K. SEXTON (GEO)

WEATHER MID 80's, HUMID, CLOUDY, POTENTIAL THUNDERSTORMS. HURRICANE FLORENCE APPRX. 2 DAYS AWAY FROM LANDFALL

EQUIPMENT SEE PAGE 114.

CALIBRATION MINIRAE # 036935
LOT #
CAL: 0 — 100.0 ppm

0645 TEAM ARRIVES ONSITE AND HOLDS PTSP. DISCUSSES RUSHING AND TAKING THE TIME TO DO A GOOD JOB W/ HURRICANE NOT FAR AWAY. TEAM WILL FOLLOW THUNDER PROTOCOL.

NOTE ON 09/10/18, SW-05 AND SW-06 WERE DRY.

0700 TEAM BEGINS GAUGING.

1145 K. SEXTON AND K. CHENNOT LEAVE

Location BELTON, SC Date 09/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1225	K. SEXTON AND K. CHENEY - RETURN
1310	MW-29-091118
1320	MW-26B-091118
1321	MW-26B-D-091118
1328	MW-26-091118
1340	MW-23-091118
1345	MW-23B-091118
1355	MW-46-091118
1400	MW-45-B-091118
1410	MW-21-091118
1415	MW-17B-091118
1445	MW-44B-091118
1455	MW-01B-091118
MNA 1500	MW-01-091118 $Fe^{2+} = 0.5 \frac{mg}{L}$
1505	MW-27B-091118
1510	MW-27-091118
1530	MW-12B-091118
MNA 1535	MW-12-091118 $Fe^{2+} = 0.25 \frac{mg}{L}$
1555	MW-28-091118 $Fe^{2+} = 1.0 \frac{mg}{L}$
1630	MW-35-091118 $Fe^{2+} = 0.0 \frac{mg}{L}$
1610	MW-49-091118
1602	FB01-091118
1603	TB01-091118
1620	TEAM BEGINS LEAVING DOWN

Rite in the Rain

118 Location BELTON, SC Date 09/11/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1700 TEAM DEPARTS FIELD

Location BELTON, SC Date 09/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: GROUNDWATER SAMPLING

STAFF: M. WARREN (FTL/BIO), K. CHENOFF, K. SEXTON (GEO)

WEATHER: MID 80'S, HUMID, CLOUDY, POTENTIAL THUNDERSTORMS, HURRICANE FLORENCE APPX 2 DAYS AWAY FROM LANDFALL

EQUIPMENT: SEE PAGE 114

0650 TEAM ARRIVES ONSITE AND HOLDS PTSP. DISCUSSES TAKING BREAKS IF NECESSARY BECAUSE TEAM DID NOT TAKE REST BREAKS YESTERDAY

0655 TEAM MOVES TO BROWNS CREEK TO BEGIN GW SAMPLING

0715	MW-25B-091218	
0720	MW-25-091218	Fe^{2+} = 0.0 mg/L
0730	MW-42-091218	Fe^{2+} = 0.0 mg/L
0735	MW-41-091218	
0745	MW-40-091218	Fe^{2+} = 1.0 mg/L
0755	MW-39-091218	
0756	MW-39-D-091218	
0800	MW-34-091218	
0810	MW-15B-091218	

120

Location BELTON, SC Date 09/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0815	MW-15-091218	$Fe^{2+} = 0.0 \frac{mg}{L}$
0840	MW-38-091218	
0850	MW-37-091218	
0900	MW-24-091218	
0905	MW-24B-091218	
0910	MW-43-091218	
0915	MW-43B-091218	
0930	MW-13B-091218	
0935	MW-14-091218	
0945	MW-14B-091218	
1000	MW-50B-091218	
1010	MW-48B-091218	
1020	MW-33T-091218	
1030	MW-31-091218	
1031	MW-31-D-091218	
1035	MW-47-091218	
1055	MW-10-091218	$Fe^{2+} = 0.0 \frac{mg}{L}$
1105	MW-32-091218	$Fe^{2+} = 0.0 \frac{mg}{L}$
1120	MW-02B-091218	
1125	MW-02-091218	$Fe^{2+} = 0.0 \frac{mg}{L}$
1140	TEAM BREAKS FOR LUNCH	
1240	TEAM RETURNS FROM LUNCH	
1240	TEAM BEGINS YSI CALIBRATION AND SAMPLE COCs.	

Location BELTON, SC Date 09/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1245 FB01-091218

1250 TB01-091218

YSI Cal Log

Sensor# 30192, Handheld/# 036636

DO	103.7	100.4	—	—
cond	1.22	1.413	#06E030	05/2019
FNU0	2.36	0.0	#1818944	05/2019
FNU124	109.35	124.0	#18B18641411	2/2019
pH4	4.04	4.0	#284502	03/2020
pH7	7.07	7.0	#K001536	01/2020
pH10	10.01	10.0	#270240	06/2019
ORP	213.2	240	#3654	06/2023

1335 BEGIN LOW FLOW SETUP FOR MW-19.

1401 WELL PUMPED DRY. WILL MONITOR FOR RECHARGE.

1430 BEGIN LOW FLOW SETUP FOR MW-17

1431 WELL WAS ORIGINALLY DRY. TEAM MOVES TO MW-07.

1445 BEGIN LOW FLOW SETUP FOR MW-07.

1454 START PUMP ON MW-07

1511 MW-07-091218

Rite in the Rain

122 Location BELTON, SC Date 09/12/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1530 TEAM GEARS DOWN.

1400 TEAM DEPARTS FIELD TO SHIP SAMPLES.

09/12/18

Location BELTON, SC Date 09/13/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER SAMPLING

STAFF M. WARREN (FTL/BIO), K. CHERNOFF, K. SEXTON

WEATHER MID 80'S, HUMID, CLOUDY, HURRICANE FLORENCE 1 DAY AWAY (MW)

EQUIPMENT SEE PAGE ~~112~~ 114.

0700 TEAM ARRIVES ON SITE AND HOLDS PTSP. TEAM DISCUSSES RUSHING AND SLIPS, TRIPS AND FALLS. (MW)

EXO Cal

DO	97.7, 100.4
cond	1.345, 1.413
FNU0	-1.03, 0.0
FNU124	115.3, 124.0
pH4	4.22, 4.0
pH7	7.30, 7.0
pH10	9.99, 10.0
ORP	217.2, 240.0

0740 BEGIN LOW FLOW SETUP ON MW-22.

0753 BEGIN PUMPING MW-22.

0822 MW-22 BECAME DRY. WILL RETURN TO SAMPLE. (MW)

Rite in the Rain

Location BELTON, SC Date 09/13/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

✓0926	MW-45-091318	
0930	TEAM MOVES TO MW-44 TO BEGIN LOW FLOW SETUP	
0950	TEAM BEGINS LOW FLOW SETUP	
1004	BEGIN PUMP ON MW-44	
✓1022	MW-44-091318	
1042	DTW= 10.39 @ MW-19 TD= 12.15	
✓1055	MW-19-091318	
1112	TEAM BREAKS FOR LUNCH	
1212	TEAM RETURNS FROM LUNCH BREAK.	
✓1240	MW-04-091318	Fe^{2+} = 0.0 mg/L
✓1255	MW-05-091318	
✓1305	MW-06-091318	
✓1310	MW-06B-091318	
✓1320	MW-16-091318	Fe^{2+} = 0.0 mg/L
✓1340	MW-09B-091318	
✓1355	MW-09-091318	Fe^{2+} = 0.0 mg/L
✓1356	MW-09-D-091318	*VOCs ONLY
✓1420	MW-36B-091318	
✓1425	MW-36-091318	
1415	RADIOFFS REMOVED FROM SITE.	
✓1455	FB01-091318	

Location BELTON, SC Date 09/13/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1500 TB01 - 091318

1525 BEGIN LOW FLOW SETUP ON MW-03.

1605 MW-08-091318 Fe^{2+} = 0.0 mg/L TEAM WAS ONLY ABLE TO COLLECT 1/3 OF THE ALKALINITY SAMPLE BOTTLES.

1610 MW-03-091318 Fe^{2+} = 0.0 mg/L

1640 MW-22 DTW = 9.69 FT

1645 MW-22-091318 Fe^{2+} = 1.25 mg/L

1702 M. WARREN DEPARTS FIELD TO SHIP SAMPLES

1730 M. SEXTON AND M. CHERNOFF DEPART FIELD

1730 M. SEXTON AND M. CHERNOFF COMPLETE SECURING THE COMPOUND FOR HURRICANE FLORENCE.

09/13/18

Rite in the Rain

126

Location BELTON, SC Date 08/14/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK SURFACE WATER SAMPLING, TROLL DATA COLLECTION

STAFF M. WARREN (FTL/BIO), K. SEXTON (GEO), K. CHERNOFF

WEATHER MID 80's / HUMID / CLOUDY

0650 TEAM ARRIVES ON SITE AND HOLDS PTSP. TEAM DISCUSSES COMPLACENCY.

0700 K. SEXTON AND K. CHERNOFF MOVE TO SW-11 TO COLLECT SW SAMPLES. M. WARREN MOVES TO SW-05.

0715 SW-05 IS DRY.

0720 SW-06 IS DRY

0730 SW14-091418

0754 FP03-091418

0813 SW04-091418

0817 SW02-091418

0845 SW01-091418

~~SW12-091418~~

~~0850 SW07-091418~~

~~SW03-091418~~

0735 SW11-091418

~~0730~~ SW10-091418 0731

Location BELTON, SC Date 09/14/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

✓0705	SW13-091418
✓0710	SW08-091418
✓0715	SW09-091418
✓0720	FP02-091418
✓0725	FP01-091418
✓0740	SW12-091418
✓0745	SW03-091418

NOTE: FP-02 AND FP-02, FP-03, SW-04 STAKES WERE REPLACED

0840 K. SEXTON BEGINS TROLL DATA COLLECTION.

0850 SW-07 IS DRY.

0915 TB01-091418

0920 TEAM RETURNS TO COMPOUND TO GEAR DOWN.

0930 K. SEXTON DEPARTS FIELD

1000 M. WARREN AND K. CHERNOFF DEPART FIELD.

09/14/18

Rite in the Rain.

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** clear L73°F / H 93°F

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: J Morgan, K. Sexton, M. Warren, E. Harker **Date:** 7/11/2019

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
Brown's Creek Protection Zone							
MW-12	1335	111.0	—	12.94	21.03	7.98	has TROLL
MW-12B	1330	1.80	—	12.88	44.31	0.31	TD = 45.08
MW-15	1405	19.7	—	10.30	19.18	10.20	has TROLL
MW-15B	1400	0.80	—	14.53	80.90	0.45	
MW-25	1308	0.00	—	7.70	18.08	6.41	has TROLL TD = 17.93
MW-25B	1312	0.00	—	3.91	53.13	0.88	
MW-28	1250	1.40	—	20.92	26.08	0.94	
MW-34	1355	1.90	—	2.60	7.82	—	
MW-35	1305	2.90	—	7.22	26.26	—	28.22 = TD
MW-38	1448	1.10	—	1.45	11.51	—	
MW-39	1350	2.10	—	4.75	13.03	—	has TROLL, moved from MW-15
MW-40	1345	9.50	—	2.44	13.15	—	has TROLL
MW-41	1326	0.00	—	4.07	13.19	—	
MW-43	1500	1.60	—	4.74	10.30	—	
SW-01	1505	—	—	5.69	—	0.35	GAUGING METER COVERED BY VEGETATION / NO SAFE ACCESS
SW-03	1510	—	—	0.59	—	6.04	0.55'
SW-12	1515	—	—	—	—	6.80	
SW-13	1445	—	—	—	—	0.95	
TW-59	1631	0.5	—	13.36	22.00	6.95	
TW-60	1846	0.2	—	8.86	40.50	8.50	
TW-66	1839	0.4	—	1.46	23.70	6.00	
Cupboard Creek Protection Zone							
MW-19	0852	460.0	—	10.50	12.15	0.82	
MW-20	0942	1372.0	—	8.83	19.40	N/A	Do not sampled due to product smell + residue
MW-23	0810	5.7	—	7.15	23.21	—	TD = 23.20
MW-26	0800	2.7	—	3.67	17.12	—	
MW-29	0745	50.4	—	6.35	14.95	3.70	has TROLL, moved from MW-20 TD 14.40
TW-67	1131	0.5	—	9.19	26.46	9.06	
TW-73	1125	0.2	—	4.77	14.07	8.70	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** clear/hot L73°F/H 93°F

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: J. Morgan, K Sexton, M. WARREN, E. HARKLER **Date:** 7/11/2018

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
Hayfield Zone							
MW-02	1736	15.80	—	15.25	~~20.58~~	11.41	has TROLL TD = 19.52
MW-02B	1740	0.90	—	5.58	~~81.72~~	3.24	TD = 82.15
MW-03	1745	0.04	—	0.0	~~20.28~~	11.30	TD = 20.06 HIGH PRESSURE, BUBBLING OVER
MW-04	0927	6.40	—	5.27	~~19.56~~	7.01	TD = 19.45
MW-05	0922	0.20	—	11.70	~~19.90~~	--	TD = 19.50
MW-07	0910	961.00	—	9.55	~~14.34~~	--	TD = 13.60
MW-08	1005	0.00	—	9.30	19.84 ✓	9.90	
MW-09	1730	2.0	—	0.0	20.21	10.62	WELL WITH WATER AT 0.0 DEPTH
MW-10	0957	0.00	—	10.75	23.21 ✓	8.00	has BaroTROLL
MW-16	1755	311.0	~~NP~~	6.00	20.58	N/A	PRODUCT IN WELL BUT AIR SYSTEM TOO STRONG
MW-18	1802	174.0	16.60	18.00	20.11	N/A	← PRODUCT
MW-30	0940	0.40	—	12.26	14.70	0.72	* LOW FLOW
MW-31	1104	0.20	—	18.37	28.03	--	
MW-45	0825	0.50	—	10.66	14.45	--	
TW-55	1345	0.3	—	0.0	27.33	9.86	Well bubbling over TD = 41.96
TW-64	1021	0.3	—	15.56	52.85	3.25	
TW-96	1257	0.2	—	0.0	27.33	9.90	Well bubbling over
Shallow Bedrock Zone							
MW-01	1653	0.60	—	6.64	16.58	0.12	has BaroTROLL
MW-01B	1658	1.90	—	7.20	44.52	0.10	
MW-11	1645	561.00	—	26.64	32.40	3.64	STRONG ODOR, BUT NO PRODUCT DETECT
MW-22	1710	2.70	—	7.90	10.34	0.69	

BTOC - below top of casing

ft - feet

PN - Project Number

[1]Total depths collected 4/5/18

ppm - parts per million

SM - Site Manager

- wells historically found to have product

Lewis Drive Monitoring Sheet 1

Name(s): M. WARREN (ATL), K. SEATON (LEO), E. HALLER (LEO), J. MORGAN (ENTSO)
Date: 07/11/18
Weather: HIGH 93°F (REAL FEEL 105°F) SUNNY/HUMID

Contractor	# Personnel
Jacobs	
A&D/ECS	
Kinder Morgan	

Weekly Gauging

* Confirm all instances of LNAPL with a bailer.

Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
RS-01	6.78	6.80	22.63
RS-05	6.57	6.58	25.99
RT-1A	—	10.75	18.69
RT-1B	—	10.22	17.79
RT-1C	—	10.24	18.95
RT-2A	—	0.50	1.70
RT-2B	—	0.08	7.20
RT-2C	—	1.20	9.35
RT-2D	—	1.53	7.21
RT-2E	—	1.42	8.42
RT-2F	—	1.80	9.36
RT-2G	—	2.10	10.00
RT-2H	—	damaged	—
RT-2I	—	2.25	10.00
RT-2J	—	0.80	10.00
RT-2K	—	0.95	2.20
RT-2L	—	1.40	5.86
RW-02	20.86	20.87	26.56
RW-04	26.70	26.81	29.89
RW-05	31.25	31.32	39.39
RW-06	—	24.31	40.64
RW-07	21.03	21.03	40.79
RW-09	—	12.44	38.99
RW-11	—	9.71	19.42
RW-12	—	10.70	16.57
RW-15	10.21	10.22	40.42

These features only gauged once a month

RS-02	—	5.68	19.49
RS-04	—	7.95	10.02
RS-06	—	6.70	23.80
RS-07	—	10.21	15.82
RS-08	—	10.50	19.31
RS-09	—	6.23	17.33
RS-10	5.38	5.40	20.11
RS-11	—	5.35	17.15
RS-12	—	5.70	20.20
RS-13	—	4.66	18.00
RS-14	3.85	3.86	19.13
RS-15	—	4.15	17.54
RS-16	—	3.63	18.67
RS-17	—	3.52	18.97
RS-18	—	6.50	19.31
RS-19	—	damaged	—
RS-20	—	4.95	10.61
RW-01	—	13.97	20.85
RW-03	—	21.72	34.00
RW-08	—	14.66	36.17
RW-10	9.29	9.24	38.36
~~RW-13~~	DO NOT GAUGE		
RW-14	—	10.02	49.46
~~MW-01~~			
~~MW-01B~~			

= locations with skimmers
= locations with socks
Red ID needs DO measurement

This column only gauged once per month

Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
~~MW-02~~			
~~MW-03B~~			
~~MW-03~~			
~~MW-04~~			
~~MW-05~~			
** MW-06	—	10.31	19.20
MW-06B	—	10.06	68.00
~~MW-07~~			
~~MW-08~~			
~~MW-09~~**			
MW-09B	—	6.65	137.00
~~MW-10~~			
~~MW-11~~			
~~MW-12~~			
~~MW-12B~~			
MW-13	—	19.41	22.20
MW-13B	—	20.10	58.00
MW-14	—	15.02	22.22
MW-14B	—	16.10	82.80
~~MW-15~~			
~~MW-15B~~			
~~MW-16~~			
MW-17	—	10.85	11.20
MW-17B	—	17.10	24.20
~~MW-18~~			
~~MW-19~~			
~~MW-20~~			
MW-21	—	13.07	20.20
~~MW-22~~			
~~MW-23~~			
MW-23B	—	8.60	54.75
MW-24	—	4.67	15.35
MW-24B	—	5.35	22.70
~~MW-25~~			
~~MW-25B~~			
~~MW-26~~			
MW-26B	—	5.42	42.00
MW-27	—	23.30	29.45
MW-27B	—	28.09	50.45
~~MW-28~~			
~~MW-29~~			
~~MW-30~~			
~~MW-31~~			
MW-31B	—	18.24	17.00
MW-32	—	11.00	28.90
MW-33	—	22.87	28.28
MW-33T	—	24.09	99.80
~~MW-34~~			
~~MW-35~~			
MW-36	—	15.24	23.66
MW-36B	—	14.97	43.25
MW-37	—	3.26	18.10
~~MW-38~~			
~~MW-39~~			
~~MW-40~~			

**well plug blown out last month, use caution
*gauging not needed, only DO

This column only gauged once per month

Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
~~MW-41~~			
MW-42	—	4.85	13.40
~~MW-43~~			
MW-43B	—	0.95	35.10
MW-44	—	6.78	9.75
MW-44B	—	10.05	34.54
~~MW-45~~			
MW-45B	—	12.20	21.60
MW-46	—	6.35	17.10
MW-47	—	16.08	22.55
MW-48B	—	16.40	97.35
MW-49	—	16.39	23.33
MW-50B	—	19.53	107.5
TW-04R	—	3.30	5.28
TW-05R	SEALED PVC PIPE NO ACCESS		
TW-14R	—	4.40	5.00
TW-15R	—	DRY	1.64
TW-21	—	2.89	9.65
TW-28	—	20.50	28.58
TW-30	—	19.55	23.32
TW-34	—	22.11	22.29
TW-35	—	22.63	23.02
TW-40	—	26.15	31.37
TW-41	—	24.40	31.60
TW-42	23.25	23.76	27.70
TW-45	—	24.91	34.10
TW-46	—	damaged	—
~~TW-55~~			
~~TW-59~~			
~~TW-60~~			
~~TW-64~~			
TW-65	—	19.21	42.60
~~TW-66~~			
~~TW-67~~			
TW-68	—	20.87	26.79
TW-69	—	13.18	49.30
TW-70	—	16.73	42.07
~~TW-73~~			
TW-76	—	9.55	38.91
TW-81	—	2.90	6.21
TW-82	—	2.80	9.35
TW-83	—	3.52	14.97
TW-84	—	4.19	12.84
* TW-85	—	0.00	30.51
TW-86	—	5.28	6.04
TW-87	—	5.14	6.82
* TW-90	—	0.00	45.82
* TW-94	—	0.00	39.51
~~TW-98~~			
~~SW-01~~			
SW-02	NO ACCESS DUE TO VEGETATION		
~~SW-03~~			
SW-05	DRY (SEE PHOTO LOG)		
SW-08	—	0.84'	
SW-10	—	0.40'	
~~SW-12~~*			
~~SW-13~~*			

" ~~WELL ID DATA~~" DATA ON DO GAUGING SHEET
* NEEDS WELL STOPPER AND LOCK REPLACED
** NEEDS 1 BOLT AND TWO WASHES

Lewis Drive Monitoring Sheet 1

Name(s): KYLE SEXTON; JESSE BROWN

Date: 8/1/2018

Weather: CLEAR MT

Contractor	# Personnel
Jacobs	
A&D/ECS	
Kinder Morgan	

This column only gauged once per month

	Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)
	CC			
09:23	MW-29		7.18	14.89
9:28	MW-26		3.78	17.15
9:29	MW-26B		6.18	41.28
9:33	MW-23		7.56	23.18
9:35	MW-23B		8.47	32.05
10:12	~~MW-46~~*		6.67	17.07
9:48	MW-45		11.22	14.47
9:46	MW-45B		12.36	21.60
9:51	MW-21		13.53	20.75
10:05	MW-20	9.02	9.04	19.4
9:56	MW-17		10.85	11.20
9:59	MW-17B		12.56	27.55
10:17	MW-19		8.74	12.16
12:58	MW-22		2.45	10.35
	HFZ			
10:41	MW-13		20.05	22.17
10:37	MW-13B		20.75	58.70
10:44	MW-14		15.60	22.22
10:44	MW-14B		16.70	72.90
10:52	MW-50B		22.43	104.25
10:57	MW-48B		16.70	98.40
11:06	MW-33		23.65	28.30
11:08	MW-33T		24.83	99.90
11:13	MW-31		19.25	27.03
11:14	MW-31B		18.95	71.25
11:17	MW-47		16.84	22.90
11:25	MW-09**		0 (SS**)	19.80
11:28	MW-09B		4 (SS**)	60.60
11:30	MW-02		5.5 (SS)	19.75
11:41	MW-02B		9.13	82.15
11:47	MW-10		12.12	23.26
11:49	MW-32		12.90	28.70
11:55	MW-03		13.00 (SS)	20.90
11:59	MW-30		13.10	14.68
12:03	MW-04		9.27	19.65
12:11	MW-05		12.70	19.80
12:15	MW-06		10.96	19.12
12:17	MW-06B		10:58	85.82
12:25	MW-07		10:06	13.34
12:27	MW-16		0 (SS)	20.10
12:37	MW-08		10.53	19.82
12:41	MW-18	16.61	16.64	19.75
	~~MW-36~~			
	~~MW-36B~~			

This column only gauged once per month

	Well ID	Depth to LNAPL* (ft BTOC)	Depth to Water (ft BTOC)	Total Depth (if requested)	SOCK (WEIGHT(S))
	CC				
2:18	RW-11	8.90	8.91	19.35	
2:15	RW-12	12.53	12.54	16.70	685 g NR
2:28	RS-08		11.24	19.10	750 g R. 115(g)
2:39	RT-1A		10.80	18.00	690 g NR
2:33	RT-1B		10.78	17.73	685 g NR
2:31	RT-1C		11.39	18.59	
	~~RS-07~~				
	HFZ				
2:50	RS-16		4.85	18.56	SKIMMER EMPTY
2:55	RS-17		3.28	19.00	
3:05	RS-20		5.22	10.40	
3:10	RS-15		84.28	17.98	
3:12	RS-14	3.24	3.85	19.00	< 1oz
	~~RS-13~~				
	~~RS-09~~				
3:15	RS-10		6.16	20.03	< 1oz
3:23	RS-11		5.89	16.90	
3:26	RS-12		6.21	20.10	
3:30	RW-10		10.4	57.8	< 1oz
	~~RS-18~~				
3:41	RS-05	8.51	8.56	27.77	~3oz
	~~RS-06~~	~~rocks~~	~~8.88~~	22.54	~2oz
3:48	RS-01	7.87	6.71	19.51	~~3oz~~ 2.0 oz
3:55	RS-02				
	~~RS-16~~				
	~~RS-04~~				
3:57	RW-15		11.39	40.43	ALL WATER

" — " DENOTES WELL DATA LOCATED IN LOG BOOK 0

1259 SW - ~~0.0~~ 0.3
0560

RW-10 – PRODUCT ON OUTSIDE OF SKIMMER.
RS-17 – STRONG PRODUCT ODOR
RT-1C – PRODUCT FILM ON SOCK AT BOTTOM FLOW MARK, SOCK HALFWAY OUT OF CAGE UPON GUAGING; TOP OF CAGE AT 15 FT.

= locations with skimmers
= locations with socks
Red ID needs DO measurement

**well plug blown out last month, use caution
*gauging not needed, only DO

* MW-46 WASPS
** - SPARGE SYSTEM ON (SS)

NR - NOT REPLACED

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** M:D 80's/HUM:D/ POSSIBLE THUNDERSTORM

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: M.WARREN, K.SEATON, K.CHERNOFF **Date:** 09/10/18

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-29	0930	1.0	—	8.36	14.95	5.32	has TROLL
TW-73	0936	0.1	—	8.10	14.07	5.70	
MW-19	0939	1796	—	10.05	12.15	2.15	
RW-11	0942	--	—	~~7.32~~ 4.41 (DTW)	16.57	--	DTW = 4.41
RW-12	0946	--	—	12.68	24.22	--	
RS-08	0950	--	—	10.35	17.79	--	Sock Weight = 545g
MW-20	0951	153.0	10.29	10.59	19.40	PRODUCT	
RS-07	0957	--	—	11.79	15.75	--	
RT-1A	1004	--	—	11.72	18.60	--	Sock Weight = 485g
RT-1B	1002	--	—	11.70	17.62	--	Sock Weight = 670g
RT-1C	1000	--	—	12.30	18.50	--	Sock Weight = 400g
TW-67	1007	3.2	—	10.68	~~26.46~~	9.72	TD = 24.74
MW-26	1015	0.6	—	2.65	17.12	--	
MW-26B	1016	--	—	4.55	41.05	--	
SW-06	1018	--	—	—	—	--	DRY
MW-23	1022	0.4	—	5.94	23.21	--	
MW-23B	1021	--	—	5.40	53.45	--	
MW-46	1130	--	—	7.88	17.08	--	GAUGED ON 9/11
SW-05	1020	--	—	—	--	—	WL= DRY
MW-45	1032	0.0	~~12~~ —	12.00	14.45	--	
MW-45B	1033	--	—	12.84	21.96	--	
MW-21	1039	--	—	14.51	20.66	--	
MW-17	1044	--	—	10.86	11.22	--	
MW-17B	1044	--	—	13.74	27.42	--	
MW-22	1050	0.8	—	9.57	10.34	6.87	
MW-44	1110	--	—	8.65	9.76	--	
MW-44B	1110	--	—	12.35	34.54	--	
MW-01	1115	4.2	—	~~6.72~~ 4.07 (DTW)	16.58	1.17	has BaroTROLL DTW = 4.07
MW-01B	1115	0.6	—	9.28	44.52	1.34	
RW-01	1119	--	—	10.06	20.75	--	
MW-27	1123	--	—	25.17	29.58	--	

Table 2 - DO Measurement List

SM: Tom Wiley
Client: Plantation Pipe Line
Weather: MID 80'S/HUMID/CLOUDY POSSIBLE THUNDERSTORM
PN: 699858.LD.MR.GW
Project: Monthly Monitoring
Measuring Method: YSI proODO, Oil/Water Interface Probe
Technicians: M. WARREN, K. SEXTON, K. CHERNOFF
Date: 09/10/18

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-27B	1123	--	--	28.49	50.50	--	
MW-11	1132	0.4	29.01	29.03	32.40	PRODUCT	
RW-06	1136	--	~~--~~	25.55	38.80	--	
RW-08	1141	--	--	15.21	34.39	--	
RW-09	1143	--	--	12.31	38.02	--	
MW-12	1145	0.4	--	13.19	✓ 21.03	8.45	has TROLL
MW-12B	1146	0.5	--	14.07	~~44.31~~	1.66	TD = 49.15
TW-59	1154	0.2	--	0.0	✓ 22.00	11.45	BUBBLING OVER CASING
MW-28	1155	0.7	--	22.0	✓ 26.08	1.99	
MW-49	1205	--	--	~~18.28~~	23.28	--	
MW-35	1208	0.4	--	9.14	26.26	--	TD = 28.27
SW-03	1210	--	--	--	--	7.53	WL= 0.0' (BELOW GAUGING METER
MW-25	1216	0.1	--	7.88	✓ 18.08	5.55	has TROLL
MW-25B	1216	0.1	--	4.74	61.52 ~~53.13~~	1.95	
MW-42	1221	--	--	4.96	13.39	--	
MW-41	1223	0.1	--	4.25	✓ 13.19	--	
TW-~~68~~ 56	1226	0.5	--	2.17	~~40.50~~	7.23	TD = 23.74
TW-~~86~~ 60	1236	0.9	--	10.25	40.55 ~~23.70~~	8.10	
RT-2A	1347	--	--	0.8	7.35	--	
RT-2B	1348	--	--	0.0	7.13	--	
RT-2C	1349	--	--	1.46	9.32	--	
RT-2D	1350	--	--	1.5	7.26	--	
RT-2E	1355	--	--	1.63	8.38	--	
RT-2F	1356	--	--	2.00	9.30	--	
RT-2G	1358	--	--	3.84	10.05	--	
RT-2I	1359	--	--	2.74	10.00	--	
RT-2J	1400	--	--	1.15	10.00	--	
RT-2K	1402	--	--	1.15	2.20	--	Sock Weight =
RT-2L	1403	--	--	2.28	5.82	--	
SW-12	1355	--	--	--	--	9.45	
MW-40	1405	0.1	~~--~~	2.77	✓ 13.15	--	has TROLL

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** M.D 80's / SUNNY / HUMID T-STORMS

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: M. WARREN, K. SEXTON, K. CHERNOFF **Date:** 09/10/18 (MW-10, 32 AND TW-96 GAUGED ON 9/11/18)

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
RW-14	1409	--	—	9.70	51.12	--	
MW-39	1410	0.2	—	5.12	✓ 13.03	--	has TROLL
MW-34	1415	0.2	—	3.18	✓ 7.82	--	
MW-15	1418	1.5	—	11.35	19.18	6.20	
MW-15B	1419	3.1	—	15.19	~~80.90~~	2.44	TD = 94.49
MW-38	1427	0.2	—	2.17	✓ 11.51	--	
MW-37	1431	--	—	3.29	18.03	--	
SW-02	1453	--	--	--	--		WL= 1.80'
SW-08	1450	--	--	--	--		WL= 0.94'
SW-10	1441	--	--	--	--		WL= 0.43'
MW-24	1441	--	—	5.22	15.50	--	
MW-24B	1440	--	—	5.85	42.49	--	
SW-01	1443	--	--	--	--	—	WL= 0.20' DO= 5.83
MW-43	1455	0.2	—	5.24	✓ 10.30	--	
MW-43B	1455	--	—	1.88	56.55	--	~~ET~~ THUNDER
MW-13	1553	--	—	21~~.85~~	22.15	--	
MW-13B	1553	--	—	21.81	55.05	--	
MW-14	1557	--	—	16.64	22.22	--	
MW-14B	1557	--	—	17.59	85.34	--	
~~SW-13~~	—	--	--	--	--	—	DO= 3.53
TW-64	1603	0.4	—	19.80	✓ 52.85	2.72	
MW-50B	1604	--	—	23.28	102.20	--	
MW-48B	1607	--	—	17.45	74.07	--	
MW-33	1614	--	—	26.75	~~99.85~~	--	TD = 28.50
MW-33T	1614	--	—	25.91	99.89	--	
MW-31	1618	0.3	—	21.88	✓ 28.03	--	
MW-31B	1619	--	—	21.25	67.18	--	
MW-47	1622	--	—	19.47	22.86	--	
MW-10	0745	0.0	—	16.41	✓ 23.21	5.5	has BaroTROLL
TW-96	0744	0.8	—	16.00	✓ 27.33	9.85	
MW-32	0741	--	—	21.07	26.85	--	

NEED SG

NEED SG

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** M.O 80's / HUMID / CLOUDY POSSIBLE T-STORMS

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: M. WARREN, K. SEXTON, K. CHERNOFF **Date:** 09/11/18

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-03	7:31	0.0	—	17.~~80~~30	20.0 20.28	12.02	
MW-30	7:29	0.5	—	14.60	14.61 14.70	N/A	NO DO - DRY
MW-04	7:20	0.00	—	15.31	19.47 19.56	7.17	
MW-05	7:14	0.00	—	14:18	19.90	--	
RS-20	~~7:44~~	-	—	10.24	10.44	--	
MW-02	0752	1.2	—	~~12.10~~ 12.10	✓20.58	~~8.76~~	has TROLL DO = 6.90
MW-02B	0750	1.2	—	18.65	✓ 81.72	8.16	
MW-09	0808	2.7	—	~~10.57~~	✓20.21	10.57	DTW = 10.56
MW-09B	0809	-	—	1850	151.00	--	
TW-55	0817	1.7	—	11.51	~~27.33~~	11.20	TD = 40.90
MW-06	0823	-	—	12.69	19.39	--	
MW-06B	0824	-	—	12.50	85.61	--	
MW-07	0827	264.3	—	11.40	~~14.34~~	--	TD = 13.60 DO = 3.74
RS-04	0833	-	—	9.79	10.12	--	
RS-06	0835	-	—	12.92	24.31	--	
MW-16	0838	29.6	—	12.35	✓20.58	POTENTIAL PRODUCT ON SOLINST	
RS-12	0841	-	—	12.56	29.10	--	
RS-11	0843	-	—	12.06	16.82	--	
RS-09	0844	—	—	15.91	16.11	—	
RS-18	0845	-	—	16.76	19.25	--	
MW-18	0852	454.17	—	19.56	~~20.11~~	POTENTIAL	PRODUCT ON PROBE END TD = 19.93
MW-08	0855	0.9	—	16.85	19.84	9.07	
RS-13	0859	-	—	15.42	17.70	--	
RS-15	0903	-	—	10.74	17.55	--	
0916 RS-16	0816	-	—	13.87	18.46	--	MOVE LINE TO AFTER MB
MW-36	0930	-	—	16.~~68~~	23.84	--	
MW-36B	0930	-	—	16.39	42.81	--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** MID 80's / CLOUDY / HUMID
POSSIBLE T-STORM
PN: 699858.LD.MR.GW
Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe
Technicians: M. WARREN, K. SEXTON, K. CHERNOFF **Date:** 09/11/18

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
Skimmers	--	--	--	--	--	--	--
RS-17	0942	--	—	9.95	18.97	--	Prod. Rec = DRY
RS-14	0947	--	—	12.08	19.04	--	Prod. Rec = DRY
RS-10	0951	--	—	14.83	19.99	--	Prod. Rec = 0.2 OZ
RW-10	0954	--	16.82	16.90	57.46	--	Prod. Rec = 0.0 OZ (ALL WATER)
RS-05	1018	--	14.57	14.58	24.97	--	Prod. Rec = 2.0 OZ
RS-01	1001	--	14.19	14.21	22.46	--	Prod. Rec = 1.0 OZ
RS-02	1012	--	—	12.03	19.38	--	Prod. Rec = 0.0 OZ (ALL WATER)
RW-15	1018	--	—	14.35	38.67	--	Prod. Rec = 0.2 OZ
RW-02	1033	--	23.88	23.89	26.50	--	Prod. Rec = 3.0 OZ
RW-03	1034	--	24.57	24.61	33.81	--	Prod. Rec = 0.8 OZ
RW-04	1045	--	29.45	29.65	38.65	--	Prod. Rec = 0.0 OZ (ALL WATER)
RW-05	1053	--	32.67	32.87	37.53	--	Prod. Rec = 4.0 OZ
RW-07	1102	--	—	22.10	42.78	--	Prod. Rec = 0.1 OZ

-- Locations with Socks
-- Locations with skimmers
- wells historically found to have product

BTOC - below top of casing
ft - feet
PN - Project Number
[1]Total depths collected 4/5/18
WL - Water Level
ppm - parts per million
SM - Site Manager
Prod. Rec = Product Recovered

ch2m·

PROJECT NUMBER

WELL NUMBER MW30

SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW30
Field Crew: K. Sexton
Well Depth (ft): 14.70
DTW (ft): 12.35
Water Column (ft): 2.35
Well Diameter (in): 2
Gal. Per ft: .163
Well volume (gal): .383
Depth of Screen (ft): NA

Purge Methodology: low flow

Site: Lewis Dr.
Date: 7.12.18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2)	(0.163)	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: Solinst, 27682
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 19062

PID reading: opening well .39 after venting, if initially high .27 middle of sampling closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. [Surface] (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4" & <5% of wc,	100-500	NA	±0.1 SU	±1°C	±10%	±10 mV	±10%	±10% or < 10	NA
1030	12.35									start purging
1035	12.78	100	.1	6.39	25.30	.066	56.0	1.57	113	gas odor, clear
1040	13.33	100	.2	5.47	19.74	.039	65.1	0.51	7.65	
1045	13.97	100	.3	5.06	19.98	.036	97.2	1.16	4.69	
1050	14.70	100	.4	5.02	20.64	.028	84.4	3.49	5.24	dry

Remarks:
could not purge slow enough to maintain water level, purge dry, wait for recharge (~.08'/min), then sample

SAMPLING INFORMATION:

Depth to Water Before Sampling: Depth sample was acquired: 14.50
Sample Methodology: straw
Sample Date/Time: 7.12.18
Signed Sampler:
Filtered Metals Collected: Y / N Filter Size: —
Sample Observations: clear, slight gas odor
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER MW-17B
699858.LD.MR.GW	SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-17B		Site: Lewis Drive Site, Belton, SC	
Field Crew: M. WARREN, K. SEXTON		Date: 08/02/18	
Well Depth (ft): 27.55	Purge Methodology:	Diameter / Gal. Per Foot	Diameter / Gal. Per Foot
DTW (ft): 12.85		2" 0.163	5" 1.02
Water Column (ft): 14.70		3" 0.367	6" 1.469
Well Diameter (in): 4		4" 0.653	8" 2.611
Gal. Per ft: 0.653		Water level indicator, serial number: 037063	
Well volume (gal): 9.59		Pump type (please circle): TYPHOON Peristaltic Bladder	
Depth of Screen (ft): 17.0 ft → 27.0		Pump serial number: 029227	

PID reading: opening well 6.6 after venting, if initially high middle of sampling 44.0 closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
9:00	13.0	18	0.5	5.97	19.4	0.124	67.0	1.40	116.0	TURBID/
9:03	12.90	18	0.75	5.88	19.4	0.124	38.7	0.64	95.7	SLIGHT ODOR
9:06	12.95	18	1.4	5.88	19.3	0.123	23.8	0.53	72.6	
0909	12.97	18	2.25	5.88	19.3	0.122	13.3	0.48	59.3	SLIGHT ODOR
0912	13.12	32	3.00	5.87	19.1	0.119	3.4	0.44	47.9	CLEAR
0915	13.39	32	5.50	5.84	19.1	0.114	-3.9	0.43	35.3	
0918	13.50	32	6.50	5.83	19.0	0.109	-20.7	0.43	18.6	~~2.7 GAL~~
0921	13.54	32	8.50	5.83	19.0	0.104	-29.9	0.43	10.6	2.7 gal → 3.5
0924	13.59	32	9.50	5.79	19.0	0.101	-35.9	0.43	5.9	
0927	13.87	53	12.5	5.77	19.0	0.101	-40.7	0.44	3.2	2 gal + NEW
0930	13.94	53	15.75	5.77	19.0	0.101	-48.6	0.44	0.9	2.25 GAL + NEW
0933	14.04	53	18.00	5.74	19.00	0.100	-50.1	0.45	-0.4	
0936	14.04	53	22.00	5.74	19.00	0.099	-52.4	0.45	-0.4	CLEAR
0939	14.03	53	25.00	5.75	19.00	0.098	-55.3	0.46	-1.8	
0942	14.08	53	28.00	5.74	19.00	0.096	-66.0	0.46	-2.60	
0945	COLLECT	MW-17B-080218 / MW-17B-D-080218								

(Margin notes: .5 ~~NEW~~ .8 NEW 0.0)

Remarks: CONTROL # 031997
GENERAL # EAAJ-1147541
3 WELL VOLUMES = 28.77
5 WELL VOLUMES = 47.95
TOTAL PURGED = 31 GALLONS
18 UNIT PUMP SPEED ~ 0.5 gal/min
= 0.75 GAL/MIN

SAMPLING INFORMATION:

Depth to Water Before Sampling: 14.08 Depth sample was acquired: 25 ft

Sample Methodology: ~~STRAW~~ GRAB

Sample Date/Time: 08/02/18 0945 SAMPLE ID # MW-17B-080218 / MW-17B-D-080218

Signed Sampler: [signature]

Filtered Metals Collected: Y / (N) Filter Size:

Sample Observations: TURBID AT BEGINNING, SLIGHT ODOR

Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

0912 → INCREASED SPEED TO 32 UNITS
0924 → INCREASED SPEED TO 53 UNITS ~ 1 GAL/MIN
PID READINGS INCREASED TO 103 ppm DURING PUMPING

JACOBS

PROJECT NUMBER	WELL NUMBER MW-23
699858.LD.MR.GW	SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-23
Field Crew: M.W
Well Depth (ft): 23.20
DTW (ft): 7.55
Water Column (ft): 15.65
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 2.55
Depth of Screen (ft): 7.91 - 22.90
PID reading: 0.0 opening well

Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 08/02/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 037063
Pump type (please circle): TYPHOON Peristaltic Bladder
Pump serial number: 037058
after venting, if initially high middle of sampling closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1132	BEGIN	PUMPING	MW-23							
1135	7.90	22	.25	5.12	17.7	0.048	65.6	4.19	110.5	CLOUDY/NO ODOR INCREASED FLOW RATE TO 33 UNITS
1138	7.97	22	1.5	5.06	17.4	0.050	70.3	4.66	30.6	
1141	8.15	33	3.5	5.04	17.5	0.051	73.7	5.06	16.5	CLEAR 5GAL + NEW
1144	8.14	33	5.75	5.04	17.4	0.051	76.0	5.05	13.8	CLEAR
1147	8.10	33	7.25	5.04	17.4	0.051	77.7	5.09	14.7	CLEAR INCREASED FLOW RATE TO 43 UNITS
1150	8.34	43	9.00	5.03	17.4	0.050	83.2	5.02	4.6	
1153	8.34	43	12.00	5.03	17.4	0.050	86.4	5.02	3.8	
1155	COLLECT SAMPLE	MW-23-080218								

08/02/18

Remarks:
1 WELL VOL = 2.55
3 WELL VOL = 7.65
5 WELL VOL = 12.75

FLOW RATE
22 UNITS = 0.5 GAL/MIN
33 UNITS = 0.8 GAL/MIN
CONTROL # 031997
GENERATOR # EAAJ-114254

43 UNITS = 1.0 GPM

SAMPLING INFORMATION:

Depth to Water Before Sampling: 8.34
Depth sample was acquired: 21.70 ft
Sample Methodology: GRAB
Sample Date/Time: 08/02/18 @ 1155
SAMPLE ID # MW-23-080218
Signed Sampler:
Filtered Metals Collected: Y / N Filter Size:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

TOTAL PURGED = 14.00 GALLONS

JACOBS

PROJECT NUMBER	WELL NUMBER MW-46
699858.LD.MR.GW	SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-46
Field Crew: M. WARREN, K. SEXTON
Well Depth (ft): 17.10
DTW (ft): 6.60
Water Column (ft): 10.50
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 1.71
Depth of Screen (ft): 12.1 – 17.1
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 08/02/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 037063
Pump type (please circle): TYPHOON Peristaltic Bladder
Pump serial number: 029227

PID reading: 0.0 opening well; after venting, if initially high; middle of sampling; closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1050	BEGIN PUMPING MW-49									
1052	7.80	17	0.75	5.08	18.0	0.029	50.7	0.63	8.7	CLEAR/NO ODOR
1055	8.02	17	1.25	5.04	17.8	0.028	41.3	0.54	Ø	CLEAR/NO ODOR
1058	9.0	31	4.0	5.03	17.8	0.028	35.9	0.49	Ø	CLEAR/NO ODOR
~~1101~~	9.45	31	7.0	5.04	17.8	0.029	31.0	0.48	Ø	CLEAR/NO ODOR
1104	9.56	31	10.0	5.04	17.7	0.029	27.7	0.49	Ø	
1105	COLLECT SAMPLE MW-46-080218									

08/02/18

Remarks: 1 WELL VOL = 1.71
3 WELL VOL = 5.1
5 WELL VOL = 8.5
CONTROL # 031997
GENERATOR # EAAJ-114754
1052: INCREASED SPEED TO ~~15~~ 31 UNITS (APPROXIMATELY 1 GAL/MIN)
TOTAL PURGED = 11 GALLONS

SAMPLING INFORMATION:

Depth to Water Before Sampling: 9.56
Depth sample was acquired: 15.60
Sample Methodology: GRAB
Sample Date/Time: 08/02/18 @ 1105 SAMPLE ID # MW-23-080218
Signed Sampler:
Filtered Metals Collected: Y / (N)
Filter Size:
Sample Observations: ~~St~~ CLEAR/NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER MW-40
699858.LD.MR.GW	SHEET OF

SAMPLING LOG

Well Number: MW-40	Site: Lewis Drive Site, Belton, SC
Field Crew: M. WARREN, K. SEXTON	Date: 08/02/18
Well Depth (ft): 13.20	Purge Methodology:
DTW (ft): 2.44	
Water Column (ft): 10.76	
Well Diameter (in): 2	
Gal. Per ft: 0.163	
Well volume (gal): 1.74	
Depth of Screen (ft): 7.18 – 12.2	

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: C87063
Pump type (please circle): TYPHOON Peristaltic Bladder
Pump serial number: 032058

PID reading: 1.5 opening well | after venting, if initially high | middle of sampling | closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1317	BEGIN	PUMP	N/A	MW-40						YELLOW/NO ODOR
1319	6.93	26	1.1	5.51	21.0	0.057	53.3	1.40	6.8	
1322	8.60	26	2.6	5.50	20.5	0.060	39.3	1.42	2.1	CLEAR/NO ODOR
1325	8.90	26	4.0 4.2	5.40	19.8	0.061	33.0	0.53	1.0	
1328	9.50	26	5.5	5.42	19.6	0.061	29.3	0.55	6.8	
★ 1329	9.50	26	~~6.2~~	COLLECT [MW-40-080218]						

08/02/18

Remarks:
1 WELL VOL = 1.74 CONTROL #03,997 26 UNITS = 0.75 GAL/MIN
3 WELL VOL = 5.22 GENERATOR # EAAJ-114754
5 WELL VOL = 8.70 TOTAL PURGED = 6.5 GALLONS

SAMPLING INFORMATION:

Depth to Water Before Sampling: 9.5 ft Depth sample was acquired: 11.20 ft
Sample Methodology: GRAB
Sample Date/Time: 08/02/18 @ 1329 [MW-40-080218]
Signed Sampler:
Filtered Metals Collected: Y (N) Filter Size:
Sample Observations: CLEAR/NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

★ COLLECTED SAMPLE BEFORE DTW GOT TOO LOW.

JACOBS

PROJECT NUMBER
699858.LD.MR.GW

WELL NUMBER MW-34
SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-34
Field Crew: M. WARREN, K. SEXTON
Well Depth (ft): 7.82 Purge
DTW (ft): 2.44 Methodology:
Water Column (ft): 5.38
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.877
Depth of Screen (ft): 5.36 - 7.86

Site: Lewis Drive Site, Belton, SC
Date: 08/02/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 037063
Pump type (please circle): TYPHOON Peristaltic Bladder
Pump serial number: 029227

PID reading: 0.5 opening well after venting, if initially high middle of sampling closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1350	START	PUMPING	MW-34							
1351	WELL	WENT	DRY. COLLECTED	1 VOC VIAL	SAMPLE ID # MW-34-080218a					
1353	6.15									
1355	START	REPUMPING	WELL W/	DTW = 6.15	COLLECTED SECOND VOC					
1355	WELL	WENT	DRY	COLLECTED	2ND VOC SAMPLE ID # MW-34-080218b					
1355	LET	WELL	RECHARGE							
1359	DTW = 6.77									
1400	PUMPED	WELL	DRY	AND	COLLECTED 3RD VOC SAMPLE ID # MW-34-080218c					
1401	COMPLETED	SAMPLE	COLLECTION	[MW-34-080218]						

08/02/18

Remarks:
1 = 0.877 1351: PUMPED WELL DRY AND COLLECTED 1 VOC BOTTLE
3 = 2.63 LET WELL RECHARGE.
5 = 4.38 PUMPED AT LOWEST SPEED (14 UNITS), WELL KEPT GOING DRY

SAMPLING INFORMATION:

Depth to Water Before Sampling: 6.80 Depth sample was acquired: 7.00
Sample Methodology: GRAB
Sample Date/Time: 08/02/18 @ 1350 SAMPLE ID # [MW-34-080218]
Signed Sampler:
Filtered Metals Collected: Y (N) Filter Size:
Sample Observations: SEDIMENT / NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

CONTROL # 031997
GENERATOR # EAAJ-114754

TOTAL PURGED = 1.0 GALLON

MW-07

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET | OF |

SAMPLING LOG

Well Number: MW-07
Field Crew: M. WARREN, K. SEXTON, K. CHEANG
Well Depth (ft): 13.60 ft
DTW (ft): 11.46
Water Column (ft): 2.14
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.35
Depth of Screen (ft):

Site: Lewis Drive Site, Belton, SC
Date: 09/12/18
Purge Methodology:

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 07681
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034010

PID reading: opening well 153.5 after venting, if initially high middle of sampling closing well 0.0

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1454	START PUMP									
1457	11.57	120	0.0	7.17	34.03	0.051	118.6	3.77	21.09	CLEAR, ODOR
1500	11.66	120	0.2	5.28	24.57	0.038	177.3	1.00	3.35	CLEAR, ODOR
1503	11.74	120	0.4	5.05	24.60	0.037	192.7	0.76	1.78	CLEAR, ODOR
1506	11.47	120	0.5	5.05	24.56	0.037	195.3	0.70	1.68	CLEAR, ODOR
1509	11.82	120	0.6	5.04	24.55	0.036	199.2	0.63	1.67	CLEAR, ODOR
1511	COLLECTED	MW-07-091218								

Remarks:
MW-07-091218

SAMPLING INFORMATION:

Depth to Water Before Sampling: 11.82 ft
Depth sample was acquired: 13.00 ft
Sample Methodology: STRAW METHOD / LOW FLOW
Sample Date/Time: ~~13:00~~ 09/12/18 @ 1511
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR, ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1 — MW-19

SAMPLING LOG

Well Number: MW-19
Field Crew: M. WARREN, K. SEXTON, K. CHENOFF
Well Depth (ft): 12.15
DTW (ft): 10.12
Water Column (ft): 2.03
Well Diameter (in): 2"
Gal. Per ft: 0.163
Well volume (gal): 0.33
Depth of Screen (ft): 4.5 - 9.5'
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 09/12/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2")	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 27681
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034010

PID reading: opening well 1503 after venting, if initially high 902.7 middle of sampling closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1335	BEGIN LOW FLOW SETUP									
1346	10.12	BEGIN PUMPING WELL								
1348	10.70	150	0.0	6.45	25.70	0.282	-49.2	1.23	104	YELLOW, ODOR
1351	11.16	150	0.1	6.08	24.29	0.187	10.3	4.24	161.5	YELLOW, ODOR
1354	11.44	100	0.2	6.05	24.43	0.171	17.9	4.98	153.32	YELLOW, ODOR
1357	11.68	100	0.3	6.15	24.64	0.181	5.1	4.46	118.3	YELLOW, ODOR
1400	11.77	100	0.4	6.15	24.88	0.229	7.2	4.26	127.2	YELLOW, ODOR
1401	WELL PUMPED DRY,									

09/12/18

Remarks: WELL PUMPED DRY, BEGAN PULLING UP SEDIMENT.

SAMPLING INFORMATION:

Depth to Water Before Sampling: Depth sample was acquired:
Sample Methodology:
Sample Date/Time:
Signed Sampler:
Filtered Metals Collected: Y / N Filter Size:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

MW-22-091318

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-22
Field Crew: M. WARREN, K. SEFTON, K. CHEANEY
Well Depth (ft): 10.34
DTW (ft): 10.71
Water Column (ft): 0.63
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.102
Depth of Screen (ft):
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 09/13/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 27681
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034010

PID reading: opening well 0.6 after venting, if initially high middle of sampling 0.5 closing well 0.5

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
0753	BEGIN PUMPING MW-22									
0809	10.80	100	0.0	5.70	25.18	0.185	69.4	3.31	39.04	CLEAR, ODOR
0812	9.86	100	0.2	5.13	24.755	0.152	103.9	1.12	7.46	CLEAR, ODOR
0815	9.91	100	0.3	5.07	24.839	0.144	104.5	1.13	20.71	CLEAR, ODOR
0818	9.10.18	100	0.3	5.06	24.933	0.143	106.0	1.65	14.28	CLEAR, ODOR
0821	10.18	100	0.4	5.07	25.018	0.145	95.6	1.99	16.41	CLEAR, ODOR
0822	WELL PUMPED DRY.									

09/13/18

Remarks:
0822: WELL BECAME DRY. TEAM WILL RETURN TO SAMPLE AFTER RECHARGE
1645: COLLECTED MW-22-091318

SAMPLING INFORMATION:

Depth to Water Before Sampling: 10.18 Depth sample was acquired: 10.00
Sample Methodology: LOW FLOW (STRAW METHOD
Sample Date/Time: 09/13/18 @ 1645
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR, ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other: MNA)

ch2m

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-44
Field Crew: MW, KC
Well Depth (ft): 9.77
DTW (ft): 8.79
Water Column (ft): 9.77 0.98
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.1598
Depth of Screen (ft):

Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 09/13/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 27681
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034010

PID reading: 0.4 opening well | after venting, if initially high | middle of sampling 0.4 | closing well 0.1

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1004	BEGIN PUMP									
1007	8.99	100	0.0	5.45	25.18	0.061	195.2	2.93	15.01	CLEAR, NO ODOR
1010	9.07	100	0.2	5.23	24.162	0.054	230.9	2.17	12.67	CLEAR, NO ODOR
1013	9.15	100	0.3	5.06	24.471	0.054	251.2	1.77	7.52	CLEAR, NO ODOR
1016	9.25	100	0.35	4.98	24.909	0.052	258.6	1.59	5.91	CLEAR, NO ODOR
1019	9.43	100	0.45	4.91	25.512	0.052	273.1	1.58	6.75	CLEAR, NO ODOR
1021	9.58	100	0.5	4.91	25.469	0.052	279.6	1.69	6.27	CLEAR, NO ODOR
1022	COLLECTED		MW-44-091318				BEFORE	WELL	BECAME	DRY

09/13/18

Remarks: MW-44-091318

SAMPLING INFORMATION:

Depth to Water Before Sampling: 9.58 Depth sample was acquired: 9.65
Sample Methodology: LOW FLOW / STRAW METHOD
Sample Date/Time: 09/13/18 @ 1022
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR, NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

ch2m·

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW45
Field Crew: KC MW
Well Depth (ft): 15.04 ft 14.4 Purge
DTW (ft): 12.13 Methodology:
Water Column (ft): 2.32
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.378
Depth of Screen (ft):

Site: Lewis Drive Site, Belton, SC
Date: 09/13/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 27681
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034010

PID reading: 0.5 opening well ~~0.4~~ after venting, if initially high middle of sampling closing well 0.4

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
~~8:59~~ 9:	8:59 KC	Begin	Pumping	Well						
9:02	12.32	100	0	5.27	22.48	0.056	115.6	29.6	20.32	clear/NO
9:05	12.31	100	0.175	4.62	21.902	0.042	194.9	1.20	22.13	clear/NO
9:08	12.32	100	0.25	4.67	22.071	0.046	181.7	1.11	30.91	clear/NO
9:11	12.35	100	0.425	4.63	22.194	0.039	201.7	1.08	24.91	clear/NO
9:14	12.36	100	0.50	4.45	22.131	0.036	14.75	0.~~87~~	14.50	clear/NO
9:17	12.36	120	0.675	4.44	22.046	0.035	230.4	0.88	7.21	clear/NO
9:20	12.37	120	0.850	4.44	22.068	0.035	233.6	0.82	4.44	clear/NO
9:23	12.38	120	0.850	4.45	22.766	0.035	231.5	0.75	4.~~88~~5	clear/NO
9:26	collected	SAMPLE		MW-45-091318						

09/13/18

Remarks: COLLECTED SAMPLE MW-45-091318

SAMPLING INFORMATION:

Depth to Water Before Sampling: 12.38 ft Depth sample was acquired: 14.00 ft
Sample Methodology: LOW FLOW STRAW METHOD
Sample Date/Time: 9:26 09/13/18
Signed Sampler: KC
Filtered Metals Collected: Y (N) Filter Size:
Sample Observations: clear/ NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-03
Field Crew: M. WARREN, K. SEXTON, K. CHENNAULT
Well Depth (ft): 20.00 Purge
DTW (ft): 17.30 * WITHOUT SPARGE ON Methodology:
Water Column (ft): 2.70
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.4401
Depth of Screen (ft):

Site: Lewis Drive Site, Belton, SC
Date: 09/13/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 27681
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034010

PID reading: opening well 0.7 after venting, if initially high middle of sampling closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1541	BEGIN PUMPING WELL									
1545	—	100	0.0	7.28	30.387	0.050	170.3	8.06	29.52	CLEAR, NO ODOR
1548	—	100	0.2	6.03	28.184	0.045	201.5	8.34	27.93	CLEAR, NO ODOR
1551	12.25 SPARGE ON	100	0.3	5.66	26.206	0.042	218.4	8.46	31.72	CLEAR, NO ODOR
1554	—	100	0.4	5.52	24.58	0.040	233.3	8.37	31.56	CLEAR, NO ODOR
1557	13.00	100	0.5	5.50	24.26	0.040	237.1	8.29	29.47	CLEAR, NO ODOR
1600	—	100	0.6	5.47	24.13	0.040	241.8	8.13	32.63	CLEAR, NO ODOR
1603	—	100	0.7	5.45	23.71	0.040	245.3	7.99	32.80	CLEAR, NO ODOR
1606	—	100	0.8	5.45	22.98	0.039	249.4	7.98	36.50	CLEAR, NO ODOR
1609		100	0.9	5.46	22.92	0.039	251.6	7.95	36.10	CLEAR, NO ODOR
1610	COLLECT V MW-03-091318									

09/13/18

Remarks: SPARGE SYSTEM WAS INCREASED ON 09/12/18 AFTER GAUGING WAS COLLECTED. WATER LEVEL WILL NOT BE ABLE TO BE COLLECTED ACCURATELY. 3x WELL VOL = 1.32
COLLECTED MW-03-091318

SAMPLING INFORMATION:

Depth to Water Before Sampling: ~14.90 Depth sample was acquired: 19.5
Sample Methodology: LOW FLOW (STRAW METHOD
Sample Date/Time: 09/13/18 @ 1610
Signed Sampler:
Filtered Metals Collected: Y (N) Filter Size:
Sample Observations: CLEAR, NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other: MNA)

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1 — MW-19

SAMPLING LOG

Well Number: MW-19
Field Crew: M. WARREN, K. SEXTON, K. CHENOFF
Well Depth (ft): 12.15
DTW (ft): 10.12
Water Column (ft): 2.03
Well Diameter (in): 2"
Gal. Per ft: 0.163
Well volume (gal): 0.33
Depth of Screen (ft): 4.5-9.5'

Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 09/12/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2")	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 27681
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 034010

PID reading: opening well 1503 after venting, if initially high 902.7 middle of sampling closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1335	BEGIN LOW FLOW SETUP									
1346	10.12	BEGIN PUMPING WELL								
1348	10.70	150	0.0	6.45	25.70	0.282	-49.2	1.23	104	YELLOW, ODOR
1351	11.16	150	0.1	6.08	24.29	0.187	10.3	4.24	161.5	YELLOW, ODOR
1354	11.44	100	0.2	6.05	24.43	0.171	17.9	4.98	153.32	YELLOW, ODOR
1357	11.68	100	0.3	6.6	24.64	0.181	5.1	4.46	118.3	YELLOW, ODOR
1400	11.77	100	0.4	6.15	24.88	0.229	7.2	4.26	127.2	YELLOW, ODOR
1401	WELL PUMPED DRY									

09/12/18

Remarks: WELL PUMPED DRY, BEGAN PULLING UP SEDIMENT. COLLECTED MW-19-091318 ON 09/13/18 @ 1055

SAMPLING INFORMATION:

Depth to Water Before Sampling: 11.77 ft
Depth sample was acquired: 12.00 ft
Sample Methodology: LOW FLOW / STRAW METHOD
Sample Date/Time: 09/13/18 @ 091318
Signed Sampler:
Filtered Metals Collected: Y / (N)
Filter Size:
Sample Observations: YELLOW, ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals (Other) N/A

Appendix B
Analytical Laboratory Reports

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 18, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1009327
Samples Received:	07/13/2018
Project Number:	699858.LD.ME.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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

SW-11-071218 L1009327-01 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 08:30 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 05:43	07/14/18 05:43	JHH

SW-10-071218 L1009327-02 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 08:40 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 06:02	07/14/18 06:02	JHH

FP-01-071218 L1009327-03 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 09:00 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 06:22	07/14/18 06:22	JHH

FP-02-071218 L1009327-04 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 09:10 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 06:42	07/14/18 06:42	JHH

SW-09-071218 L1009327-05 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 09:15 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 07:01	07/14/18 07:01	JHH

SW-08-071218 L1009327-06 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 09:30 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 07:21	07/14/18 07:21	JHH

SW-13-071218 L1009327-07 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 09:40 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 07:40	07/14/18 07:40	JHH

FP-03-071218 L1009327-08 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 10:30 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 08:00	07/14/18 08:00	JHH

SW-04-071218 L1009327-09 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 11:40 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 08:20	07/14/18 08:20	JHH

SW-02-071218 L1009327-10 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 11:50 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 08:39	07/14/18 08:39	JHH

SW-01-071218 L1009327-11 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 10:50 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 08:59	07/14/18 08:59	JHH

SW-07-071218 L1009327-12 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 11:05 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 09:18	07/14/18 09:18	JHH

SW-12-071218 L1009327-13 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:00 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 09:38	07/14/18 09:38	JHH

SW-03-071218 L1009327-14 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:10 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 09:58	07/14/18 09:58	JHH

SW-14-071218 L1009327-16 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:30 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 10:17	07/14/18 10:17	JHH

TB02-071218 L1009327-17 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 15:35 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137857	1	07/14/18 05:23	07/14/18 05:23	JHH

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

Chris McCord
Project Manager

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	07/14/2018 05:43	WG1137857
Toluene	ND		1.00	1	07/14/2018 05:43	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 05:43	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 05:43	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 05:43	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 05:43	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 05:43	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 05:43	WG1137857
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 05:43*	WG1137857
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/14/2018 05:43*	WG1137857
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*07/14/2018 05:43*	WG1137857
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 05:43*	WG1137857

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	07/14/2018 06:02	WG1137857
Toluene	ND		1.00	1	07/14/2018 06:02	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 06:02	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 06:02	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 06:02	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 06:02	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 06:02	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 06:02	WG1137857
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 06:02*	WG1137857
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/14/2018 06:02*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 06:02*	WG1137857
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*07/14/2018 06:02*	WG1137857

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	07/14/2018 06:22	WG1137857
Toluene	ND		1.00	1	07/14/2018 06:22	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 06:22	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 06:22	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 06:22	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 06:22	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 06:22	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 06:22	WG1137857
(S) Toluene-d8	*107*		*80.0-120*		*07/14/2018 06:22*	WG1137857
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 06:22*	WG1137857
(S) a,a,a-Trifluorotoluene	*102*		*80.0-120*		*07/14/2018 06:22*	WG1137857
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 06:22*	WG1137857

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	07/14/2018 06:42	WG1137857
Toluene	ND		1.00	1	07/14/2018 06:42	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 06:42	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 06:42	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 06:42	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 06:42	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 06:42	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 06:42	WG1137857
(S) Toluene-d8	*106*		*80.0-120*		*07/14/2018 06:42*	WG1137857
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 06:42*	WG1137857
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*07/14/2018 06:42*	WG1137857
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*07/14/2018 06:42*	WG1137857

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	07/14/2018 07:01	WG1137857
Toluene	ND		1.00	1	07/14/2018 07:01	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 07:01	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 07:01	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 07:01	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 07:01	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 07:01	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 07:01	WG1137857
(S) Toluene-d8	*103*		*80.0-120*		*07/14/2018 07:01*	WG1137857
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 07:01*	WG1137857
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*07/14/2018 07:01*	WG1137857
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 07:01*	WG1137857

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	07/14/2018 07:21	WG1137857
Toluene	ND		1.00	1	07/14/2018 07:21	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 07:21	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 07:21	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 07:21	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 07:21	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 07:21	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 07:21	WG1137857
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 07:21*	WG1137857
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/14/2018 07:21*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 07:21*	WG1137857
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*07/14/2018 07:21*	WG1137857

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	07/14/2018 07:40	WG1137857
Toluene	ND		1.00	1	07/14/2018 07:40	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 07:40	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 07:40	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 07:40	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 07:40	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 07:40	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 07:40	WG1137857
(S) Toluene-d8	*106*		*80.0-120*		*07/14/2018 07:40*	WG1137857
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/14/2018 07:40*	WG1137857
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*07/14/2018 07:40*	WG1137857
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*07/14/2018 07:40*	WG1137857

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	07/14/2018 08:00	WG1137857
Toluene	ND		1.00	1	07/14/2018 08:00	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 08:00	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 08:00	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 08:00	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 08:00	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 08:00	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 08:00	WG1137857
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 08:00*	WG1137857
(S) Dibromofluoromethane	*100*		*76.0-123*		*07/14/2018 08:00*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 08:00*	WG1137857
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 08:00*	WG1137857

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	07/14/2018 08:20	WG1137857
Toluene	ND		1.00	1	07/14/2018 08:20	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 08:20	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 08:20	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 08:20	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 08:20	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 08:20	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 08:20	WG1137857
(S) Toluene-d8	*109*		*80.0-120*		*07/14/2018 08:20*	WG1137857
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 08:20*	WG1137857
(S) a,a,a-Trifluorotoluene	*102*		*80.0-120*		*07/14/2018 08:20*	WG1137857
(S) 4-Bromofluorobenzene	*140*	J1	*80.0-120*		*07/14/2018 08:20*	WG1137857

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	07/14/2018 08:39	WG1137857
Toluene	ND		1.00	1	07/14/2018 08:39	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 08:39	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 08:39	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 08:39	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 08:39	WG1137857
Methyl tert-butyl ether	1.15		1.00	1	07/14/2018 08:39	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 08:39	WG1137857
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 08:39*	WG1137857
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/14/2018 08:39*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 08:39*	WG1137857
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*07/14/2018 08:39*	WG1137857

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	07/14/2018 08:59	WG1137857
Toluene	ND		1.00	1	07/14/2018 08:59	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 08:59	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 08:59	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 08:59	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 08:59	WG1137857
Methyl tert-butyl ether	1.09		1.00	1	07/14/2018 08:59	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 08:59	WG1137857
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 08:59*	WG1137857
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/14/2018 08:59*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 08:59*	WG1137857
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*07/14/2018 08:59*	WG1137857

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	07/14/2018 09:18	WG1137857
Toluene	ND		1.00	1	07/14/2018 09:18	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 09:18	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 09:18	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 09:18	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 09:18	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 09:18	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 09:18	WG1137857
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 09:18*	WG1137857
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 09:18*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 09:18*	WG1137857
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*07/14/2018 09:18*	WG1137857

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.79		1.00	1	07/14/2018 09:38	WG1137857
Toluene	ND		1.00	1	07/14/2018 09:38	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 09:38	WG1137857
o-Xylene	2.15		1.00	1	07/14/2018 09:38	WG1137857
m&p-Xylene	3.81		2.00	1	07/14/2018 09:38	WG1137857
Xylenes, Total	5.96		3.00	1	07/14/2018 09:38	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 09:38	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 09:38	WG1137857
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 09:38*	WG1137857
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/14/2018 09:38*	WG1137857
(S) a,a,a-Trifluorotoluene	*102*		*80.0-120*		*07/14/2018 09:38*	WG1137857
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 09:38*	WG1137857

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	07/14/2018 09:58	WG1137857
Toluene	ND		1.00	1	07/14/2018 09:58	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 09:58	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 09:58	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 09:58	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 09:58	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 09:58	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 09:58	WG1137857
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 09:58*	WG1137857
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/14/2018 09:58*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 09:58*	WG1137857
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 09:58*	WG1137857

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	07/14/2018 10:17	WG1137857
Toluene	ND		1.00	1	07/14/2018 10:17	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 10:17	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 10:17	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 10:17	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 10:17	WG1137857
Methyl tert-butyl ether	1.33		1.00	1	07/14/2018 10:17	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 10:17	WG1137857
(S) Toluene-d8	*103*		*80.0-120*		*07/14/2018 10:17*	WG1137857
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 10:17*	WG1137857
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 10:17*	WG1137857
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 10:17*	WG1137857

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	07/14/2018 05:23	WG1137857
Benzene	ND		1.00	1	07/14/2018 05:23	WG1137857
Bromodichloromethane	ND		1.00	1	07/14/2018 05:23	WG1137857
Bromoform	ND		1.00	1	07/14/2018 05:23	WG1137857
Bromomethane	ND		5.00	1	07/14/2018 05:23	WG1137857
Carbon disulfide	ND		1.00	1	07/14/2018 05:23	WG1137857
Carbon tetrachloride	ND		1.00	1	07/14/2018 05:23	WG1137857
Chlorobenzene	ND		1.00	1	07/14/2018 05:23	WG1137857
Chlorodibromomethane	ND		1.00	1	07/14/2018 05:23	WG1137857
Chloroethane	ND		5.00	1	07/14/2018 05:23	WG1137857
Chloroform	ND		5.00	1	07/14/2018 05:23	WG1137857
Chloromethane	ND		2.50	1	07/14/2018 05:23	WG1137857
1,2-Dibromo-3-Chloropropane	ND		5.00	1	07/14/2018 05:23	WG1137857
1,2-Dibromoethane	ND		1.00	1	07/14/2018 05:23	WG1137857
1,2-Dichlorobenzene	ND		1.00	1	07/14/2018 05:23	WG1137857
1,3-Dichlorobenzene	ND		1.00	1	07/14/2018 05:23	WG1137857
1,4-Dichlorobenzene	ND		1.00	1	07/14/2018 05:23	WG1137857
1,1-Dichloroethane	ND		1.00	1	07/14/2018 05:23	WG1137857
1,2-Dichloroethane	ND		1.00	1	07/14/2018 05:23	WG1137857
1,1-Dichloroethene	ND		1.00	1	07/14/2018 05:23	WG1137857
cis-1,2-Dichloroethene	ND		1.00	1	07/14/2018 05:23	WG1137857
trans-1,2-Dichloroethene	ND		1.00	1	07/14/2018 05:23	WG1137857
1,2-Dichloropropane	ND		1.00	1	07/14/2018 05:23	WG1137857
cis-1,3-Dichloropropene	ND		1.00	1	07/14/2018 05:23	WG1137857
trans-1,3-Dichloropropene	ND		1.00	1	07/14/2018 05:23	WG1137857
Di-isopropyl ether	ND		1.00	1	07/14/2018 05:23	WG1137857
Ethylbenzene	ND		1.00	1	07/14/2018 05:23	WG1137857
2-Butanone (MEK)	ND		10.0	1	07/14/2018 05:23	WG1137857
2-Hexanone	ND		10.0	1	07/14/2018 05:23	WG1137857
Methylene Chloride	ND		5.00	1	07/14/2018 05:23	WG1137857
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	07/14/2018 05:23	WG1137857
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 05:23	WG1137857
Naphthalene	ND		5.00	1	07/14/2018 05:23	WG1137857
Styrene	ND		1.00	1	07/14/2018 05:23	WG1137857
1,1,2,2-Tetrachloroethane	ND		1.00	1	07/14/2018 05:23	WG1137857
Tetrachloroethene	ND		1.00	1	07/14/2018 05:23	WG1137857
Toluene	ND		1.00	1	07/14/2018 05:23	WG1137857
1,1,1-Trichloroethane	ND		1.00	1	07/14/2018 05:23	WG1137857
1,1,2-Trichloroethane	ND		1.00	1	07/14/2018 05:23	WG1137857
Trichloroethene	ND		1.00	1	07/14/2018 05:23	WG1137857
Vinyl chloride	ND		1.00	1	07/14/2018 05:23	WG1137857
o-Xylene	ND		1.00	1	07/14/2018 05:23	WG1137857
m&p-Xylene	ND		2.00	1	07/14/2018 05:23	WG1137857
Xylenes, Total	ND		3.00	1	07/14/2018 05:23	WG1137857
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	07/14/2018 05:23	WG1137857
1,2,3-Trimethylbenzene	ND		1.00	1	07/14/2018 05:23	WG1137857
(S) Toluene-d8	*106*		*80.0-120*		*07/14/2018 05:23*	WG1137857
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 05:23*	WG1137857
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*07/14/2018 05:23*	WG1137857
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*07/14/2018 05:23*	WG1137857

Method Blank (MB)

(MB) R3325832-3 07/14/18 01:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00

Method Blank (MB)

(MB) R3325832-3 07/14/18 01:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Trichloroethene	U		0.398	1.00
1,2,3-Trimethylbenzene	U		0.321	1.00
Vinyl chloride	U		0.259	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	*102*			*80.0-120*
(S) Dibromofluoromethane	*101*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*108*			*80.0-120*

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

(LCS) R3325832-1 07/14/18 00:23 • (LCSD) R3325832-2 07/14/18 00:43

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 %
Acetone	125	131	132	105	105	70.0-130			0.654	23.9
Benzene	25.0	25.4	24.9	102	99.5	70.0-130			2.10	20
Bromodichloromethane	25.0	23.8	23.3	95.2	93.1	70.0-130			2.21	20
Bromoform	25.0	24.1	24.3	96.6	97.3	70.0-130			0.735	20
Bromomethane	25.0	21.9	22.9	87.6	91.5	70.0-130			4.34	20
Carbon disulfide	25.0	23.3	23.1	93.0	92.5	70.0-130			0.602	20
Carbon tetrachloride	25.0	24.6	23.4	98.3	93.7	70.0-130			4.73	20
Chlorobenzene	25.0	26.4	25.1	106	100	70.0-130			5.06	20
Chlorodibromomethane	25.0	24.7	23.8	98.7	95.1	70.0-130			3.74	20
Chloroethane	25.0	24.7	24.4	98.8	97.4	70.0-130			1.34	20
Chloroform	25.0	24.1	24.2	96.4	96.7	70.0-130			0.381	20
Chloromethane	25.0	24.5	24.1	98.0	96.5	70.0-130			1.58	20
1,2-Dibromo-3-Chloropropane	25.0	22.4	23.6	89.5	94.3	70.0-130			5.18	20
1,2-Dibromoethane	25.0	26.0	24.7	104	98.6	70.0-130			5.11	20
1,2-Dichlorobenzene	25.0	25.3	25.6	101	102	70.0-130			1.26	20
1,3-Dichlorobenzene	25.0	24.6	24.6	98.2	98.3	70.0-130			0.120	20
1,4-Dichlorobenzene	25.0	24.1	24.3	96.2	97.1	70.0-130			0.913	20
1,1-Dichloroethane	25.0	25.2	24.8	101	99.0	70.0-130			1.60	20
1,2-Dichloroethane	25.0	25.7	25.5	103	102	70.0-130			1.01	20
1,1-Dichloroethene	25.0	24.0	23.8	95.9	95.2	70.0-130			0.738	20
cis-1,2-Dichloroethene	25.0	24.3	23.9	97.2	95.7	70.0-130			1.61	20
trans-1,2-Dichloroethene	25.0	23.6	23.5	94.3	94.0	70.0-130			0.324	20
1,2-Dichloropropane	25.0	25.8	25.2	103	101	70.0-130			2.12	20

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

(LCS) R3325832-1 07/14/18 00:23 • (LCSD) R3325832-2 07/14/18 00:43

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 %
cis-1,3-Dichloropropene	25.0	25.0	24.2	100	96.8	70.0-130			3.26	20
trans-1,3-Dichloropropene	25.0	26.7	25.9	107	103	70.0-130			3.30	20
Di-isopropyl ether	25.0	24.9	25.0	99.6	99.9	70.0-130			0.239	20
Ethylbenzene	25.0	25.8	24.8	103	99.2	70.0-130			3.91	20
2-Hexanone	125	135	132	108	106	70.0-130			2.16	20
2-Butanone (MEK)	125	134	135	107	108	70.0-130			0.795	20
Methylene Chloride	25.0	22.6	22.6	90.6	90.5	70.0-130			0.0840	20
4-Methyl-2-pentanone (MIBK)	125	131	127	105	102	70.0-130			2.88	20
Methyl tert-butyl ether	25.0	23.9	24.2	95.7	97.0	70.0-130			1.40	20
Naphthalene	25.0	22.8	24.0	91.4	95.8	70.0-130			4.73	20
Styrene	25.0	26.3	26.9	105	108	70.0-130			2.14	20
1,1,2,2-Tetrachloroethane	25.0	22.3	23.0	89.0	92.0	70.0-130			3.32	20
Tetrachloroethene	25.0	25.9	24.5	104	98.0	70.0-130			5.58	20
Toluene	25.0	24.7	23.5	98.7	93.9	70.0-130			4.95	20
1,1,2-Trichlorotrifluoroethane	25.0	25.0	24.0	100	96.0	70.0-130			4.23	20
1,1,1-Trichloroethane	25.0	24.6	24.2	98.4	97.0	70.0-130			1.45	20
1,1,2-Trichloroethane	25.0	24.0	23.7	95.8	94.7	70.0-130			1.18	20
Trichloroethene	25.0	26.4	25.8	105	103	70.0-130			2.25	20
1,2,3-Trimethylbenzene	25.0	24.5	24.3	98.0	97.4	70.0-130			0.650	20
Vinyl chloride	25.0	24.5	24.1	97.9	96.2	70.0-130			1.71	20
Xylenes, Total	75.0	75.1	71.4	100	95.2	70.0-130			5.05	20
o-Xylene	25.0	25.0	23.8	99.9	95.1	70.0-130			4.92	20
m&p-Xylenes	50.0	50.1	47.6	100	95.1	70.0-130			5.19	20
(S) Toluene-d8				*105*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*99.7*	*102*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*103*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*105*	*105*	*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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

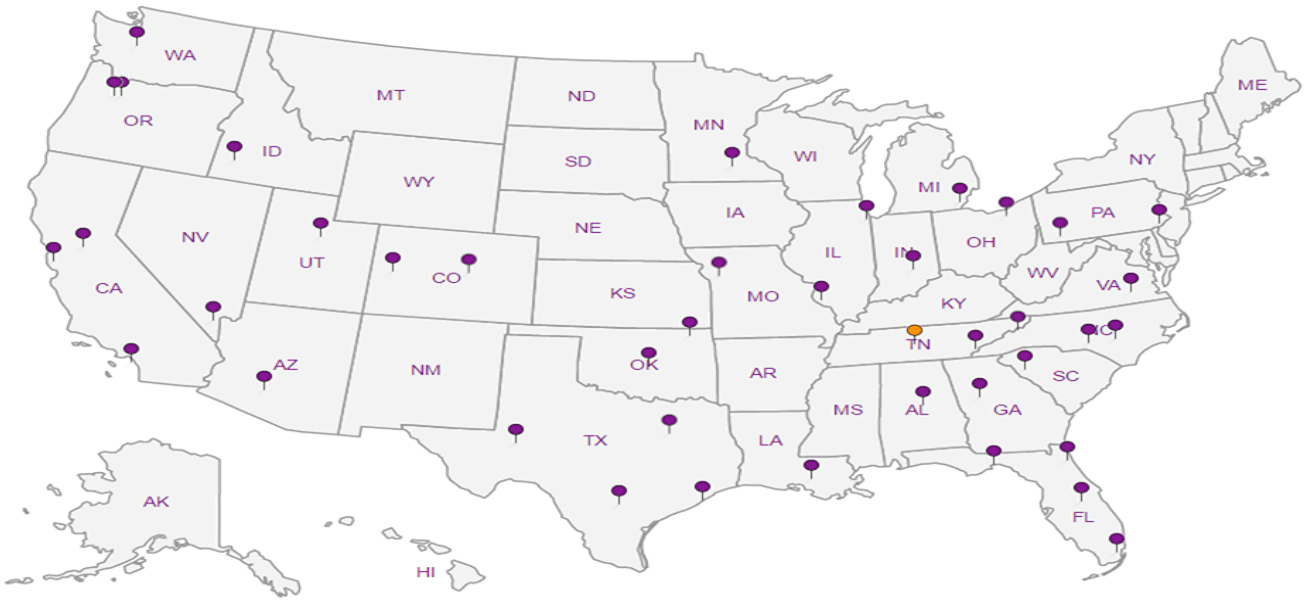
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Report to: Bethany Garvey

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

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

Project Description: Lewis Drive Surface Water

Phone: 770-604-9182
Fax:

Client Project # 699858.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 ___ Y X

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

Quote #

Date Results Needed

City/State Collected: BELTON, SC

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA					Remarks	Sample # (lab only)
SW11-071218	GRAB	GW	N/A	07/12/18	0830	3	X		X	X	X	X						
SW10-071218		GW			0840	3	X											
FP01-071218		GW			0900	3	X											
FP02-071218		GW			0910	3	X											
SW09-071218		GW			0915	3	X											
SW08-071218		GW			0930	3	X											
SW13-071218		GW			0940	3	X											
FP03-071218		GW			1030	3	X											
SW04-071218		GW			1140	3	X											
SW02-071218		GW			1150	3	X											

* 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 # 4492 6217 9948

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 0.4 °C Bottles Received: 45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	07/12/18	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Date: 7/13/18 Time: 8:45

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# 1009327
B157

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P655549
TSR: 526 - Chris McCord
PB: 5/31-18G
Shipped Via: FedEX Ground

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

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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 # 699858, LD, MR, SW

Lab Project # KINCH2MGA-LEWIS

Collected by (print): MELISSA NARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	BTEX	MTBE	NAPHTHALENE	1,2-DCA						Remarks	Sample # (lab only)
SW01-071218	GRAB	GW	N/A	07/12/18	1050	3	X	X	X	X	X							
SW07-071218		GW			1105	3	X		X	X								
SW12-071218		GW			1300	3	X											
SW03-071218		GW			1310	3	X											
SW14-071218		GW			1330	3	X											
~~FB01~~		~~GW~~				~~3~~	~~X~~											
TB01-071218	GRAB	GW	N/A	7/12/18	1535	3	X	X	X	X	X							TRIP
		GW				3	X											
		GW				3	X											
		GW				3	X											

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

Remarks: V8260BTEXMNSC=BTEX,Naphthalene,MTBE

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 7492 6214 9948

Relinquished by : (Signature) — Date: 07/12/18 — Time: 1730
Received by: (Signature)

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: °C Bottles Received: 45

Date: 7/13/18 Time: 8:45

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

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

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 #

Table #

Acctnum: KINCH2MGA
Template: T132193
Prelogin: P662162
TSR: 526 - Chris McCord
PB: 7-6-18

Shipped Via: FedEX Ground

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 21, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1017336
Samples Received:	08/14/2018
Project Number:	699858
Description:	Lewis Drive Surface Water
Site:	KM-LEWIS DR
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SW-13-081318 L1017336-01 GW

Collected by	Collected date/time	Received date/time
TW	08/13/18 13:30	08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1152282	1	08/14/18 23:59	08/14/18 23:59	PP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

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	08/14/2018 23:59	WG1152282
Toluene	ND		1.00	1	08/14/2018 23:59	WG1152282
Ethylbenzene	ND		1.00	1	08/14/2018 23:59	WG1152282
o-Xylene	ND		1.00	1	08/14/2018 23:59	WG1152282
m&p-Xylene	ND		2.00	1	08/14/2018 23:59	WG1152282
Total Xylenes	ND		3.00	1	08/14/2018 23:59	WG1152282
Methyl tert-butyl ether	ND		1.00	1	08/14/2018 23:59	WG1152282
Naphthalene	ND		5.00	1	08/14/2018 23:59	WG1152282
(S) Toluene-d8	*103*		*80.0-120*		*08/14/2018 23:59*	WG1152282
(S) Dibromofluoromethane	*97.5*		*76.0-123*		*08/14/2018 23:59*	WG1152282
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*08/14/2018 23:59*	WG1152282

Method Blank (MB)

(MB) R3333853-3 08/14/18 17:19

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	*101*			*80.0-120*
(S) Dibromofluoromethane	*98.8*			*76.0-123*
(S) 4-Bromofluorobenzene	*106*			*80.0-120*

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

(LCS) R3333853-1 08/14/18 16:19 • (LCSD) R3333853-2 08/14/18 16:39

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	26.2	25.7	105	103	70.0-130			2.04	20
Ethylbenzene	25.0	27.3	28.2	109	113	70.0-130			3.47	20
Methyl tert-butyl ether	25.0	25.8	26.0	103	104	70.0-130			0.655	20
Naphthalene	25.0	25.2	25.4	101	102	70.0-130			0.923	20
Toluene	25.0	25.4	26.3	102	105	70.0-130			3.21	20
Xylenes, Total	75.0	79.8	84.1	106	112	70.0-130			5.25	20
o-Xylene	25.0	26.6	28.4	107	114	70.0-130			6.53	20
m&p-Xylenes	50.0	53.2	55.7	106	111	70.0-130			4.62	20
(S) Toluene-d8				*102*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*100*	*97.9*	*76.0-123*				
(S) 4-Bromofluorobenzene				*99.9*	*99.7*	*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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

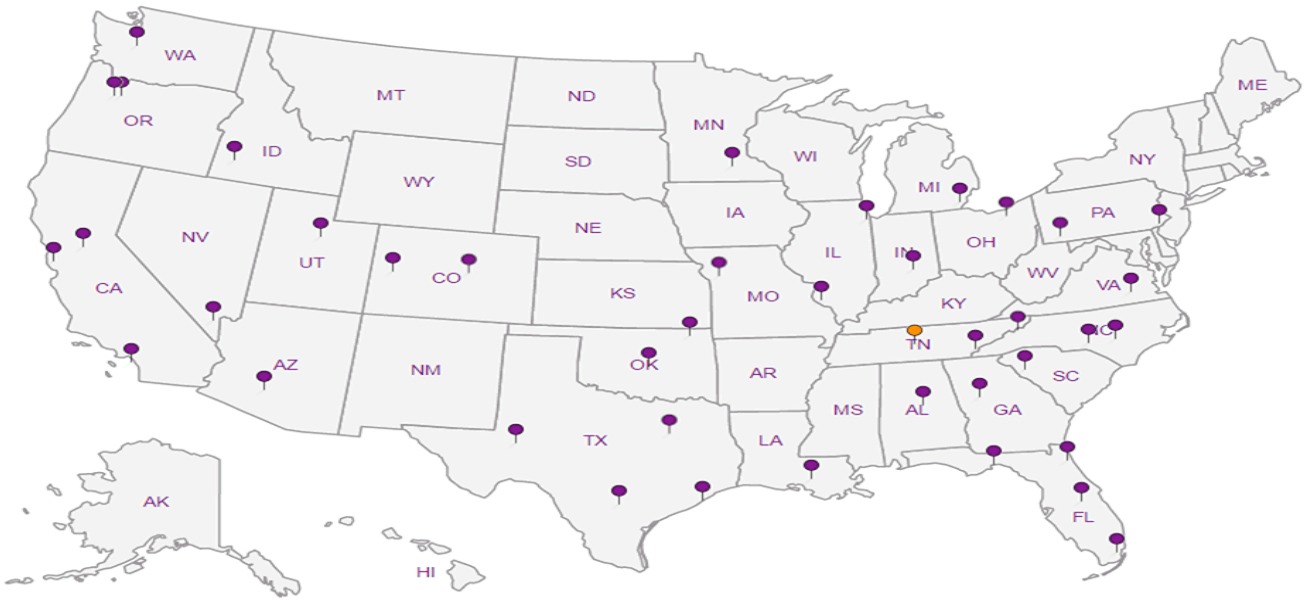
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Attention: Celithia Ball
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Pres Chk

Email To: bgarvey@jacobs.com
TOM.WILKYE@JACOBS.COM

Report to: Bethany Garvey

Project Description: Lewis Drive Surface water

City/State Collected: Belton, SC

Phone: 770-604-9182
Fax:

Client Project # 699858

Lab Project # KINCH2MGA-Lewis12

Collected by (print): TW

Site/Facility ID # KM - Lewis Dr

P.O. #

Collected by (signature): [signature]
Immediately
Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ 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	BTEX + Naphthalene + MTBE										Remarks	Sample # (lab only)
SW-13-08318	Grab	SW	—	8/13/18	1330	3	X											01

Chain of Custody Page 1 of 1

ESC LABORATORIES
a subsidiary of Accelerated

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

L# 1617336
E186

Acctnum: KINCH2MGA
Template:
Prelogin:
TSR: 526 - Chris McCord
PB:
Shipped Via:

* 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 # 7822 7962 7090

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
LOT MR/HR

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR	
[signature]	8/13/18	1540			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 5.1 °C	Bottles Received: 3
[signature]					If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/14/18	Time: 8:45
			[signature] SCL		Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 21, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1026400
Samples Received:	09/15/2018
Project Number:	699858.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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SW14-091418 L1026400-01 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:30 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 14:05	09/16/18 14:05	LRL

FP03-091418 L1026400-02 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:54 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 14:25	09/16/18 14:25	LRL

SW04-091418 L1026400-03 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 08:13 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 14:46	09/16/18 14:46	LRL

SW02-091418 L1026400-04 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 08:17 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 15:06	09/16/18 15:06	LRL

SW01-091418 L1026400-05 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 08:45 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 15:26	09/16/18 15:26	LRL

SW11-091418 L1026400-06 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:35 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 15:46	09/16/18 15:46	LRL

SW10-091418 L1026400-07 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:31 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 16:06	09/16/18 16:06	LRL

SW13-091418 L1026400-08 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:05 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 16:26	09/16/18 16:26	LRL

SW08-091418 L1026400-09 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:10 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 16:47	09/16/18 16:47	LRL

SW09-091418 L1026400-10 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:15 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 17:07	09/16/18 17:07	LRL

FP02-091418 L1026400-11 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:20 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 17:27	09/16/18 17:27	LRL

FP01-091418 L1026400-12 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:25 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 17:47	09/16/18 17:47	LRL

SW12-091418 L1026400-13 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:40 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 18:07	09/16/18 18:07	LRL

SW03-091418 L1026400-14 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 07:45 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 18:27	09/16/18 18:27	LRL

TB01-091418 L1026400-15 GW

Collected by: Melissa Warren | Collected date/time: 09/14/18 09:15 | Received date/time: 09/15/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167092	1	09/16/18 13:25	09/16/18 13:25	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1169250	1	09/20/18 21:53	09/20/18 21:53	BMB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Sample Handling and Receiving

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1026400-01	SW14-091418	8260B
L1026400-02	FP03-091418	8260B
L1026400-03	SW04-091418	8260B
L1026400-04	SW02-091418	8260B
L1026400-05	SW01-091418	8260B
L1026400-06	SW11-091418	8260B
L1026400-07	SW10-091418	8260B
L1026400-08	SW13-091418	8260B
L1026400-09	SW08-091418	8260B
L1026400-10	SW09-091418	8260B
L1026400-11	FP02-091418	8260B
L1026400-12	FP01-091418	8260B
L1026400-13	SW12-091418	8260B
L1026400-14	SW03-091418	8260B
L1026400-15	TB01-091418	8260B

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	09/16/2018 14:05	WG1167092
Toluene	ND		1.00	1	09/16/2018 14:05	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 14:05	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 14:05	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 14:05	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 14:05	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 14:05	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 14:05	WG1167092
(S) Toluene-d8	*108*		*80.0-120*		*09/16/2018 14:05*	WG1167092
(S) Dibromofluoromethane	*97.8*		*75.0-120*		*09/16/2018 14:05*	WG1167092
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*09/16/2018 14:05*	WG1167092

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	09/16/2018 14:25	WG1167092
Toluene	ND		1.00	1	09/16/2018 14:25	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 14:25	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 14:25	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 14:25	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 14:25	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 14:25	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 14:25	WG1167092
(S) Toluene-d8	*107*		*80.0-120*		*09/16/2018 14:25*	WG1167092
(S) Dibromofluoromethane	*99.1*		*75.0-120*		*09/16/2018 14:25*	WG1167092
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*09/16/2018 14:25*	WG1167092

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	09/16/2018 14:46	WG1167092
Toluene	ND		1.00	1	09/16/2018 14:46	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 14:46	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 14:46	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 14:46	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 14:46	WG1167092
Methyl tert-butyl ether	1.13		1.00	1	09/16/2018 14:46	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 14:46	WG1167092
(S) Toluene-d8	*107*		*80.0-120*		*09/16/2018 14:46*	WG1167092
(S) Dibromofluoromethane	*96.8*		*75.0-120*		*09/16/2018 14:46*	WG1167092
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*09/16/2018 14:46*	WG1167092

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	09/16/2018 15:06	WG1167092
Toluene	ND		1.00	1	09/16/2018 15:06	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 15:06	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 15:06	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 15:06	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 15:06	WG1167092
Methyl tert-butyl ether	2.94		1.00	1	09/16/2018 15:06	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 15:06	WG1167092
(S) Toluene-d8	*106*		*80.0-120*		*09/16/2018 15:06*	WG1167092
(S) Dibromofluoromethane	*94.9*		*75.0-120*		*09/16/2018 15:06*	WG1167092
(S) 4-Bromofluorobenzene	*99.9*		*77.0-126*		*09/16/2018 15:06*	WG1167092

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	09/16/2018 15:26	WG1167092
Toluene	ND		1.00	1	09/16/2018 15:26	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 15:26	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 15:26	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 15:26	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 15:26	WG1167092
Methyl tert-butyl ether	1.51		1.00	1	09/16/2018 15:26	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 15:26	WG1167092
(S) Toluene-d8	*110*		*80.0-120*		*09/16/2018 15:26*	WG1167092
(S) Dibromofluoromethane	*98.8*		*75.0-120*		*09/16/2018 15:26*	WG1167092
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*09/16/2018 15:26*	WG1167092

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	09/16/2018 15:46	WG1167092
Toluene	ND		1.00	1	09/16/2018 15:46	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 15:46	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 15:46	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 15:46	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 15:46	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 15:46	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 15:46	WG1167092
(S) Toluene-d8	*107*		*80.0-120*		*09/16/2018 15:46*	WG1167092
(S) Dibromofluoromethane	*97.2*		*75.0-120*		*09/16/2018 15:46*	WG1167092
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*09/16/2018 15:46*	WG1167092

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	09/16/2018 16:06	WG1167092
Toluene	ND		1.00	1	09/16/2018 16:06	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 16:06	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 16:06	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 16:06	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 16:06	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 16:06	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 16:06	WG1167092
(S) Toluene-d8	*102*		*80.0-120*		*09/16/2018 16:06*	WG1167092
(S) Dibromofluoromethane	*96.9*		*75.0-120*		*09/16/2018 16:06*	WG1167092
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*09/16/2018 16:06*	WG1167092

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	09/16/2018 16:26	WG1167092
Toluene	ND		1.00	1	09/16/2018 16:26	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 16:26	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 16:26	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 16:26	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 16:26	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 16:26	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 16:26	WG1167092
(S) Toluene-d8	*108*		*80.0-120*		*09/16/2018 16:26*	WG1167092
(S) Dibromofluoromethane	*99.2*		*75.0-120*		*09/16/2018 16:26*	WG1167092
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*09/16/2018 16:26*	WG1167092

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	09/16/2018 16:47	WG1167092
Toluene	ND		1.00	1	09/16/2018 16:47	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 16:47	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 16:47	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 16:47	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 16:47	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 16:47	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 16:47	WG1167092
(S) Toluene-d8	*110*		*80.0-120*		*09/16/2018 16:47*	WG1167092
(S) Dibromofluoromethane	*97.9*		*75.0-120*		*09/16/2018 16:47*	WG1167092
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*09/16/2018 16:47*	WG1167092

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	09/16/2018 17:07	WG1167092
Toluene	ND		1.00	1	09/16/2018 17:07	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 17:07	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 17:07	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 17:07	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 17:07	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 17:07	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 17:07	WG1167092
(S) Toluene-d8	*108*		*80.0-120*		*09/16/2018 17:07*	WG1167092
(S) Dibromofluoromethane	*99.1*		*75.0-120*		*09/16/2018 17:07*	WG1167092
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*09/16/2018 17:07*	WG1167092

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	09/16/2018 17:27	WG1167092
Toluene	ND		1.00	1	09/16/2018 17:27	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 17:27	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 17:27	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 17:27	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 17:27	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 17:27	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 17:27	WG1167092
(S) Toluene-d8	*107*		*80.0-120*		*09/16/2018 17:27*	WG1167092
(S) Dibromofluoromethane	*98.5*		*75.0-120*		*09/16/2018 17:27*	WG1167092
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*09/16/2018 17:27*	WG1167092

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	09/16/2018 17:47	WG1167092
Toluene	ND		1.00	1	09/16/2018 17:47	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 17:47	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 17:47	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 17:47	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 17:47	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 17:47	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 17:47	WG1167092
(S) Toluene-d8	*105*		*80.0-120*		*09/16/2018 17:47*	WG1167092
(S) Dibromofluoromethane	*95.9*		*75.0-120*		*09/16/2018 17:47*	WG1167092
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*09/16/2018 17:47*	WG1167092

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.34		1.00	1	09/16/2018 18:07	WG1167092
Toluene	ND		1.00	1	09/16/2018 18:07	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 18:07	WG1167092
o-Xylene	2.00		1.00	1	09/16/2018 18:07	WG1167092
m&p-Xylene	3.20		2.00	1	09/16/2018 18:07	WG1167092
Total Xylenes	5.20		3.00	1	09/16/2018 18:07	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 18:07	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 18:07	WG1167092
(S) Toluene-d8	*108*		*80.0-120*		*09/16/2018 18:07*	WG1167092
(S) Dibromofluoromethane	*97.4*		*75.0-120*		*09/16/2018 18:07*	WG1167092
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*09/16/2018 18:07*	WG1167092

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	09/16/2018 18:27	WG1167092
Toluene	ND		1.00	1	09/16/2018 18:27	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 18:27	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 18:27	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 18:27	WG1167092
Total Xylenes	ND		3.00	1	09/16/2018 18:27	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 18:27	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 18:27	WG1167092
(S) Toluene-d8	*106*		*80.0-120*		*09/16/2018 18:27*	WG1167092
(S) Dibromofluoromethane	*97.6*		*75.0-120*		*09/16/2018 18:27*	WG1167092
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*09/16/2018 18:27*	WG1167092

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND	J3	50.0	1	09/16/2018 13:25	WG1167092
Benzene	ND		1.00	1	09/16/2018 13:25	WG1167092
Bromodichloromethane	ND		1.00	1	09/16/2018 13:25	WG1167092
Bromoform	ND	J3	1.00	1	09/16/2018 13:25	WG1167092
Bromomethane	ND		5.00	1	09/16/2018 13:25	WG1167092
Carbon disulfide	ND		1.00	1	09/16/2018 13:25	WG1167092
Carbon tetrachloride	ND		1.00	1	09/16/2018 13:25	WG1167092
Chlorobenzene	ND		1.00	1	09/16/2018 13:25	WG1167092
Chlorodibromomethane	ND		1.00	1	09/16/2018 13:25	WG1167092
Chloroethane	ND		5.00	1	09/16/2018 13:25	WG1167092
Chloroform	ND		5.00	1	09/16/2018 13:25	WG1167092
Chloromethane	ND		2.50	1	09/20/2018 21:53	WG1169250
1,2-Dibromo-3-Chloropropane	ND	J3 J4	5.00	1	09/16/2018 13:25	WG1167092
1,2-Dibromoethane	ND		1.00	1	09/16/2018 13:25	WG1167092
1,2-Dichlorobenzene	ND		1.00	1	09/16/2018 13:25	WG1167092
1,3-Dichlorobenzene	ND		1.00	1	09/16/2018 13:25	WG1167092
1,4-Dichlorobenzene	ND		1.00	1	09/16/2018 13:25	WG1167092
1,1-Dichloroethane	ND		1.00	1	09/16/2018 13:25	WG1167092
1,2-Dichloroethane	ND		1.00	1	09/16/2018 13:25	WG1167092
1,1-Dichloroethene	ND		1.00	1	09/20/2018 21:53	WG1169250
cis-1,2-Dichloroethene	ND		1.00	1	09/16/2018 13:25	WG1167092
trans-1,2-Dichloroethene	ND		1.00	1	09/16/2018 13:25	WG1167092
1,2-Dichloropropane	ND		1.00	1	09/16/2018 13:25	WG1167092
cis-1,3-Dichloropropene	ND		1.00	1	09/16/2018 13:25	WG1167092
trans-1,3-Dichloropropene	ND		1.00	1	09/16/2018 13:25	WG1167092
Di-isopropyl ether	ND		1.00	1	09/16/2018 13:25	WG1167092
Ethylbenzene	ND		1.00	1	09/16/2018 13:25	WG1167092
2-Butanone (MEK)	ND	J3	10.0	1	09/16/2018 13:25	WG1167092
2-Hexanone	ND	J3 J4	10.0	1	09/16/2018 13:25	WG1167092
Methylene Chloride	ND		5.00	1	09/16/2018 13:25	WG1167092
4-Methyl-2-pentanone (MIBK)	ND	J3	10.0	1	09/16/2018 13:25	WG1167092
Methyl tert-butyl ether	ND		1.00	1	09/16/2018 13:25	WG1167092
Naphthalene	ND	J3	5.00	1	09/16/2018 13:25	WG1167092
Styrene	ND		1.00	1	09/16/2018 13:25	WG1167092
1,1,2,2-Tetrachloroethane	ND	J3	1.00	1	09/16/2018 13:25	WG1167092
Tetrachloroethene	ND		1.00	1	09/16/2018 13:25	WG1167092
Toluene	1.02		1.00	1	09/16/2018 13:25	WG1167092
1,1,1-Trichloroethane	ND		1.00	1	09/16/2018 13:25	WG1167092
1,1,2-Trichloroethane	ND		1.00	1	09/16/2018 13:25	WG1167092
Trichloroethene	ND		1.00	1	09/16/2018 13:25	WG1167092
Vinyl chloride	ND		1.00	1	09/16/2018 13:25	WG1167092
o-Xylene	ND		1.00	1	09/16/2018 13:25	WG1167092
m&p-Xylene	ND		2.00	1	09/16/2018 13:25	WG1167092
Xylenes, Total	ND		3.00	1	09/16/2018 13:25	WG1167092
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/16/2018 13:25	WG1167092
1,2,3-Trimethylbenzene	ND		1.00	1	09/16/2018 13:25	WG1167092
(S) Toluene-d8	*105*		*80.0-120*		*09/16/2018 13:25*	WG1167092
(S) Toluene-d8	*101*		*80.0-120*		*09/20/2018 21:53*	WG1169250
(S) Dibromofluoromethane	*98.4*		*75.0-120*		*09/16/2018 13:25*	WG1167092
(S) Dibromofluoromethane	*107*		*75.0-120*		*09/20/2018 21:53*	WG1169250
(S) a,a,a-Trifluorotoluene	*98.9*		*80.0-120*		*09/16/2018 13:25*	WG1167092
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*09/20/2018 21:53*	WG1169250
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*09/16/2018 13:25*	WG1167092
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/20/2018 21:53*	WG1169250

Method Blank (MB)

(MB) R3343700-2 09/16/18 11:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
1,2,3-Trimethylbenzene	U		0.321	1.00

Method Blank (MB)

(MB) R3343700-2 09/16/18 11:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Vinyl chloride	U		0.259	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	*96.4*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*104*			*77.0-126*

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

(LCS) R3343700-1 09/16/18 11:01 • (LCSD) R3343700-3 09/16/18 12:09

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 %
Acetone	125	109	77.9	87.2	62.3	19.0-160		J3	33.3	27
Benzene	25.0	21.2	20.0	84.8	79.9	70.0-123			5.94	20
Bromodichloromethane	25.0	23.2	21.8	92.6	87.0	75.0-120			6.25	20
Bromoform	25.0	21.7	17.8	87.0	71.1	68.0-132		J3	20.1	20
Bromomethane	25.0	25.4	29.7	102	119	10.0-160			15.7	25
Carbon disulfide	25.0	18.9	17.8	75.6	71.2	61.0-128			5.95	20
Carbon tetrachloride	25.0	22.3	20.6	89.0	82.3	68.0-126			7.91	20
Chlorobenzene	25.0	25.2	23.8	101	95.2	80.0-121			5.60	20
Chlorodibromomethane	25.0	25.1	23.2	100	92.6	77.0-125			7.90	20
Chloroethane	25.0	35.9	33.5	144	134	47.0-150			6.93	20
Chloroform	25.0	21.2	20.1	84.9	80.4	73.0-120			5.51	20
1,2-Dibromo-3-Chloropropane	25.0	20.0	14.3	79.9	57.2	58.0-134		J3 J4	33.1	20
1,2-Dibromoethane	25.0	24.7	21.7	99.0	87.0	80.0-122			12.9	20
1,2-Dichlorobenzene	25.0	22.5	20.5	90.0	81.8	79.0-121			9.51	20
1,3-Dichlorobenzene	25.0	22.1	20.0	88.3	80.2	79.0-120			9.68	20
1,4-Dichlorobenzene	25.0	21.9	20.2	87.6	80.7	79.0-120			8.14	20
1,1-Dichloroethane	25.0	21.9	21.1	87.5	84.2	70.0-126			3.76	20
1,2-Dichloroethane	25.0	23.0	21.4	91.9	85.7	70.0-128			6.94	20
cis-1,2-Dichloroethene	25.0	22.5	19.5	90.0	78.0	73.0-120			14.2	20
trans-1,2-Dichloroethene	25.0	21.2	19.0	84.8	76.0	73.0-120			11.0	20
1,2-Dichloropropane	25.0	22.7	21.8	90.9	87.2	77.0-125			4.18	20
cis-1,3-Dichloropropene	25.0	23.2	21.6	92.6	86.3	80.0-123			7.00	20
trans-1,3-Dichloropropene	25.0	23.1	21.9	92.3	87.4	78.0-124			5.50	20
Di-isopropyl ether	25.0	22.5	21.1	90.1	84.4	58.0-138			6.43	20
Ethylbenzene	25.0	25.4	24.5	101	97.8	79.0-123			3.64	20

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

(LCS) R3343700-1 09/16/18 11:01 • (LCSD) R3343700-3 09/16/18 12:09

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 %
2-Hexanone	125	119	83.2	94.8	66.5	67.0-149		J3 J4	35.1	20
2-Butanone (MEK)	125	112	77.8	89.4	62.2	44.0-160		J3	35.8	20
Methylene Chloride	25.0	20.5	20.1	81.8	80.2	67.0-120			1.93	20
4-Methyl-2-pentanone (MIBK)	125	125	91.5	99.8	73.2	68.0-142		J3	30.7	20
Methyl tert-butyl ether	25.0	21.6	18.6	86.2	74.4	68.0-125			14.7	20
Naphthalene	25.0	20.7	14.4	83.0	57.5	54.0-135		J3	36.3	20
Styrene	25.0	22.5	20.3	90.0	81.1	73.0-130			10.3	20
1,1,2,2-Tetrachloroethane	25.0	21.9	16.9	87.8	67.8	65.0-130		J3	25.7	20
Tetrachloroethene	25.0	23.9	22.3	95.8	89.0	72.0-132			7.32	20
Toluene	25.0	23.2	22.3	92.6	89.3	79.0-120			3.69	20
1,1,2-Trichlorotrifluoroethane	25.0	21.9	20.3	87.6	81.3	69.0-132			7.54	20
1,1,1-Trichloroethane	25.0	23.6	21.8	94.3	87.3	73.0-124			7.63	20
1,1,2-Trichloroethane	25.0	24.0	21.6	95.9	86.5	80.0-120			10.3	20
Trichloroethene	25.0	23.5	21.9	93.8	87.6	78.0-124			6.94	20
1,2,3-Trimethylbenzene	25.0	21.7	20.1	86.9	80.3	77.0-120			7.92	20
Vinyl chloride	25.0	25.1	24.5	101	98.1	67.0-131			2.53	20
Xylenes, Total	75.0	72.5	68.7	96.7	91.6	79.0-123			5.38	20
o-Xylene	25.0	23.7	22.5	94.7	90.0	80.0-122			5.08	20
m&p-Xylenes	50.0	48.8	46.2	97.6	92.5	80.0-122			5.37	20
(S) Toluene-d8				*106*	*109*	*80.0-120*				
(S) Dibromofluoromethane				*96.3*	*99.4*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*104*	*105*	*80.0-120*				
(S) 4-Bromofluorobenzene				*92.5*	*95.6*	*77.0-126*				

Method Blank (MB)

(MB) R3343861-4 09/20/18 21:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloromethane	U		0.276	2.50
1,1-Dichloroethene	U		0.398	1.00
(S) Toluene-d8	*104*			*80.0-120*
(S) Dibromofluoromethane	*104*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*115*			*77.0-126*

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

(LCS) R3343861-1 09/20/18 20:12 • (LCSD) R3343861-2 09/20/18 20:32

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 %
Chloromethane	25.0	22.6	22.2	90.6	88.9	41.0-142			1.85	20
1,1-Dichloroethene	25.0	27.1	27.4	108	110	71.0-124			1.24	20
(S) Toluene-d8				*96.9*	*96.5*	*80.0-120*				
(S) Dibromofluoromethane				*110*	*109*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*99.2*	*99.7*	*80.0-120*				
(S) 4-Bromofluorobenzene				*107*	*108*	*77.0-126*				

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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
J4	The associated batch QC was outside the established quality control range for accuracy.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

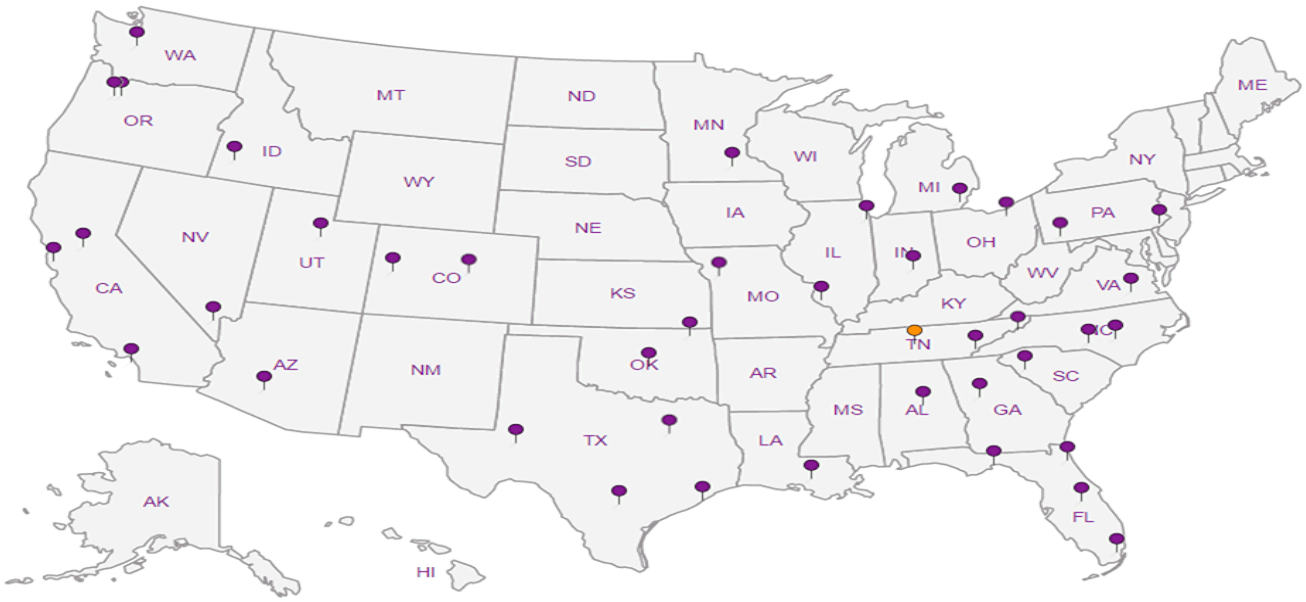
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Chain of Custody Page 1 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# 1026900
B027

Acctnum: KINCH2MGA
Template: T132193
Prelogin: P646447
TSR: 526 - Chris McCord
PB: 4-2-18G
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 # 699858.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 ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ 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	V8260TCLSC-TB 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
SW14-091418	GRAB	GW	NA	09/14/18	0730	3	X			01
FP03-091418		GW			0754	3	X			02
SW04-091418		GW			0813	3	X			03
SW02-091418		GW			0817	3	X			04
SW01-091418		GW			0845	3	X			05
SW11-091418		GW			0735	3	X			06
SW10-091418		GW			~~0730~~ 0731	3	X			07
SW13-091418		GW			0705	3	X			08
SW08-091418		GW			0710	3	X			09
SW09-091418		GW			0715	3	X			10

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

Remarks: V8260BTEXMNSC=BTEX,Naphthalene,MTBE

RAD SCREEN <0.5 mR/hr

pH ___ Temp ___
Flow ___ Other ___

Samples returned via:
__ UPS X FedEx __ Courier __

Tracking # 4492 6226 1952

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

Temp: 0.9+0.2=1.1 °C Bottles Received: 42

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

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	09/14/18	1100	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Date: 9/15/18 Time: 0845

Chain of Custody Page 2 of 2

Pace Analytical® National Center for Testing & Innovation

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

L# 1026400

Table #

Acctnum: KINCH2MGA

Template: T130279

Prelogin: P668774

TSR: 526 - Chris McCord

PB: 8-28-18

Shipped Via: FedEX Ground

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Surface Water

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.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 ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ 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	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
FP02-091418	GRAB	GW	NA	09/14/18	0720	3	X			-11
FP01-091418	GRAB	GW	NA	09/14/18	0725	3	X			-12
SW12-091418	GRAB	GW	NA	09/14/18	0740	3	X			-13
SW03-091418	GRAB	GW	NA	09/14/18	0745	3	X			-14
		GW				3	X			
		GW				3	X			
		GW				3	X			
TB01-091418	GRAB	GW	NA	09/14/18	0915	1		X		-15

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

Remarks:

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4492 6226 1952

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: 09/14/18	Time: 1100	Received by: (Signature)	Trip Blank Received: Yes / No (HCl / MeoH) TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 0.9 to 0.2 = 1.1 Bottles Received: 42
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/15/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Jeremy W. Watkins

Pace Analytical®
National Center for Testing & Innovation

Login #:1026400	Client:KINCH2MGA	Date:9/15/18	Evaluated by:Brock F

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	X	Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received 3 additional containers labeld as FP02-091418 (listed on the COC) in a bag that said "lad to dispose"

Client informed by:		Call		Email		Voice Mail		Date:9/17/18	Time:09:02
TSR Initials:CM	Client Contact:								

Login Instructions:

Dispose of the containers labeled for lab to dispose of.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 18, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1009283
Samples Received:	07/13/2018
Project Number:	699858.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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-22-071218 L1009283-01 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:05 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 08:59	07/14/18 08:59	JHH

MW-29-071218 L1009283-02 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:15 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 09:18	07/14/18 09:18	JHH

MW-26-071218 L1009283-03 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:25 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 09:37	07/14/18 09:37	JHH

MW-23-071218 L1009283-04 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:35 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 09:56	07/14/18 09:56	JHH

MW-20-071218 L1009283-05 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 13:40 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	100	07/14/18 14:57	07/14/18 14:57	JHH

MW-28-071218 L1009283-06 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 14:05 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 10:15	07/14/18 10:15	JHH

MW-35-071218 L1009283-07 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 14:15 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 10:33	07/14/18 10:33	JHH

MW-25-071218 L1009283-08 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 14:20 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 10:52	07/14/18 10:52	JHH

MW-41-071218 L1009283-09 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 14:28 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 11:10	07/14/18 11:10	JHH

FB01-071218 L1009283-10 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 15:05 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 11:29	07/14/18 11:29	JHH

MW-39-071218 L1009283-11 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 15:50 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 11:48	07/14/18 11:48	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138388	10	07/15/18 17:52	07/15/18 17:52	JAH

MW-34-071218 L1009283-12 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 15:55 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 12:07	07/14/18 12:07	JHH

MW-34-D-071218 L1009283-13 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 15:56 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 12:26	07/14/18 12:26	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138388	10	07/15/18 18:10	07/15/18 18:10	JAH

MW-40-071218 L1009283-14 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 16:05 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 12:45	07/14/18 12:45	JHH

MW-38-071218 L1009283-15 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 16:15 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 13:03	07/14/18 13:03	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138388	10	07/15/18 18:29	07/15/18 18:29	JAH

MW-43-071218 L1009283-16 GW

Collected by: Melissa Warren | Collected date/time: 07/12/18 16:25 | Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 13:22	07/14/18 13:22	JHH

MW-02-071218 L1009283-17 GW

Collected by: Melissa Warren
Collected date/time: 07/12/18 17:05
Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 13:41	07/14/18 13:41	JHH

MW-03-071218 L1009283-18 GW

Collected by: Melissa Warren
Collected date/time: 07/12/18 16:55
Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1137880	1	07/14/18 14:00	07/14/18 14:00	JHH

TB01-071218 L1009283-19 GW

Collected by: Melissa Warren
Collected date/time: 07/12/18 17:10
Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138191	1	07/14/18 21:21	07/14/18 21:21	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1139063	1	07/17/18 17:20	07/17/18 17:20	DWR

MW-30-071218 L1009283-20 GW

Collected by: Melissa Warren
Collected date/time: 07/12/18 16:40
Received date/time: 07/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138191	1	07/14/18 21:02	07/14/18 21:02	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. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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	07/14/2018 08:59	WG1137880
Toluene	ND		1.00	1	07/14/2018 08:59	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 08:59	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 08:59	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 08:59	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 08:59	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 08:59	WG1137880
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 08:59*	WG1137880
(S) Dibromofluoromethane	*98.7*		*76.0-123*		*07/14/2018 08:59*	WG1137880
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*07/14/2018 08:59*	WG1137880

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	07/14/2018 09:18	WG1137880
Toluene	ND		1.00	1	07/14/2018 09:18	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 09:18	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 09:18	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 09:18	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 09:18	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 09:18	WG1137880
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 09:18*	WG1137880
(S) Dibromofluoromethane	*96.1*		*76.0-123*		*07/14/2018 09:18*	WG1137880
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*07/14/2018 09:18*	WG1137880

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	07/14/2018 09:37	WG1137880
Toluene	ND		1.00	1	07/14/2018 09:37	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 09:37	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 09:37	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 09:37	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 09:37	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 09:37	WG1137880
(S) Toluene-d8	*103*		*80.0-120*		*07/14/2018 09:37*	WG1137880
(S) Dibromofluoromethane	*93.1*		*76.0-123*		*07/14/2018 09:37*	WG1137880
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*07/14/2018 09:37*	WG1137880

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	07/14/2018 09:56	WG1137880
Toluene	ND		1.00	1	07/14/2018 09:56	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 09:56	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 09:56	WG1137880
Methyl tert-butyl ether	7.05		1.00	1	07/14/2018 09:56	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 09:56	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 09:56	WG1137880
(S) Toluene-d8	*106*		*80.0-120*		*07/14/2018 09:56*	WG1137880
(S) Dibromofluoromethane	*96.7*		*76.0-123*		*07/14/2018 09:56*	WG1137880
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*07/14/2018 09:56*	WG1137880

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	5740		100	100	07/14/2018 14:57	WG1137880
Toluene	18100		100	100	07/14/2018 14:57	WG1137880
Ethylbenzene	1350		100	100	07/14/2018 14:57	WG1137880
Total Xylenes	14500		300	100	07/14/2018 14:57	WG1137880
Methyl tert-butyl ether	351		100	100	07/14/2018 14:57	WG1137880
Naphthalene	ND		500	100	07/14/2018 14:57	WG1137880
1,2-Dichloroethane	ND		100	100	07/14/2018 14:57	WG1137880
(S) Toluene-d8	*103*		*80.0-120*		*07/14/2018 14:57*	WG1137880
(S) Dibromofluoromethane	*91.8*		*76.0-123*		*07/14/2018 14:57*	WG1137880
(S) 4-Bromofluorobenzene	*109*		*80.0-120*		*07/14/2018 14:57*	WG1137880

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	3.91		1.00	1	07/14/2018 10:15	WG1137880
Toluene	1.05		1.00	1	07/14/2018 10:15	WG1137880
Ethylbenzene	5.19		1.00	1	07/14/2018 10:15	WG1137880
Total Xylenes	8.82		3.00	1	07/14/2018 10:15	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 10:15	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 10:15	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 10:15	WG1137880
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 10:15*	WG1137880
(S) Dibromofluoromethane	*94.8*		*76.0-123*		*07/14/2018 10:15*	WG1137880
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*07/14/2018 10:15*	WG1137880

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	07/14/2018 10:33	WG1137880
Toluene	ND		1.00	1	07/14/2018 10:33	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 10:33	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 10:33	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 10:33	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 10:33	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 10:33	WG1137880
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 10:33*	WG1137880
(S) Dibromofluoromethane	*95.4*		*76.0-123*		*07/14/2018 10:33*	WG1137880
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/14/2018 10:33*	WG1137880

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	07/14/2018 10:52	WG1137880
Toluene	ND		1.00	1	07/14/2018 10:52	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 10:52	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 10:52	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 10:52	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 10:52	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 10:52	WG1137880
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 10:52*	WG1137880
(S) Dibromofluoromethane	*96.0*		*76.0-123*		*07/14/2018 10:52*	WG1137880
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*07/14/2018 10:52*	WG1137880

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	07/14/2018 11:10	WG1137880
Toluene	ND		1.00	1	07/14/2018 11:10	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 11:10	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 11:10	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 11:10	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 11:10	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 11:10	WG1137880
(S) Toluene-d8	*103*		*80.0-120*		*07/14/2018 11:10*	WG1137880
(S) Dibromofluoromethane	*97.9*		*76.0-123*		*07/14/2018 11:10*	WG1137880
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*07/14/2018 11:10*	WG1137880

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	07/14/2018 11:29	WG1137880
Toluene	ND		1.00	1	07/14/2018 11:29	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 11:29	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 11:29	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 11:29	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 11:29	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 11:29	WG1137880
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 11:29*	WG1137880
(S) Dibromofluoromethane	*97.5*		*76.0-123*		*07/14/2018 11:29*	WG1137880
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*07/14/2018 11:29*	WG1137880

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.00		1.00	1	07/14/2018 11:48	WG1137880
Toluene	ND		1.00	1	07/14/2018 11:48	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 11:48	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 11:48	WG1137880
Methyl tert-butyl ether	244		10.0	10	07/15/2018 17:52	WG1138388
Naphthalene	ND		5.00	1	07/14/2018 11:48	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 11:48	WG1137880
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 11:48*	WG1137880
(S) Toluene-d8	*103*		*80.0-120*		*07/15/2018 17:52*	WG1138388
(S) Dibromofluoromethane	*94.3*		*76.0-123*		*07/14/2018 11:48*	WG1137880
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/15/2018 17:52*	WG1138388
(S) 4-Bromofluorobenzene	*110*		*80.0-120*		*07/14/2018 11:48*	WG1137880
(S) 4-Bromofluorobenzene	*111*		*80.0-120*		*07/15/2018 17:52*	WG1138388

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	186		1.00	1	07/14/2018 12:07	WG1137880
Toluene	9.34		1.00	1	07/14/2018 12:07	WG1137880
Ethylbenzene	2.41		1.00	1	07/14/2018 12:07	WG1137880
Total Xylenes	33.7		3.00	1	07/14/2018 12:07	WG1137880
Methyl tert-butyl ether	153		1.00	1	07/14/2018 12:07	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 12:07	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 12:07	WG1137880
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 12:07*	WG1137880
(S) Dibromofluoromethane	*92.2*		*76.0-123*		*07/14/2018 12:07*	WG1137880
(S) 4-Bromofluorobenzene	*109*		*80.0-120*		*07/14/2018 12:07*	WG1137880

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	303		10.0	10	07/15/2018 18:10	WG1138388
Toluene	14.9		1.00	1	07/14/2018 12:26	WG1137880
Ethylbenzene	3.82		1.00	1	07/14/2018 12:26	WG1137880
Total Xylenes	51.3		3.00	1	07/14/2018 12:26	WG1137880
Methyl tert-butyl ether	199		1.00	1	07/14/2018 12:26	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 12:26	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 12:26	WG1137880
(S) Toluene-d8	*106*		*80.0-120*		*07/14/2018 12:26*	WG1137880
(S) Toluene-d8	*103*		*80.0-120*		*07/15/2018 18:10*	WG1138388
(S) Dibromofluoromethane	*93.9*		*76.0-123*		*07/14/2018 12:26*	WG1137880
(S) Dibromofluoromethane	*98.7*		*76.0-123*		*07/15/2018 18:10*	WG1138388
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*07/14/2018 12:26*	WG1137880
(S) 4-Bromofluorobenzene	*111*		*80.0-120*		*07/15/2018 18:10*	WG1138388

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	148		1.00	1	07/14/2018 12:45	WG1137880
Toluene	28.7		1.00	1	07/14/2018 12:45	WG1137880
Ethylbenzene	6.85		1.00	1	07/14/2018 12:45	WG1137880
Total Xylenes	197		3.00	1	07/14/2018 12:45	WG1137880
Methyl tert-butyl ether	152		1.00	1	07/14/2018 12:45	WG1137880
Naphthalene	8.62		5.00	1	07/14/2018 12:45	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 12:45	WG1137880
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 12:45*	WG1137880
(S) Dibromofluoromethane	*91.8*		*76.0-123*		*07/14/2018 12:45*	WG1137880
(S) 4-Bromofluorobenzene	*110*		*80.0-120*		*07/14/2018 12:45*	WG1137880

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	268		10.0	10	07/15/2018 18:29	WG1138388
Toluene	1.27		1.00	1	07/14/2018 13:03	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 13:03	WG1137880
Total Xylenes	138		3.00	1	07/14/2018 13:03	WG1137880
Methyl tert-butyl ether	52.5		1.00	1	07/14/2018 13:03	WG1137880
Naphthalene	7.26		5.00	1	07/14/2018 13:03	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 13:03	WG1137880
(S) Toluene-d8	*107*		*80.0-120*		*07/14/2018 13:03*	WG1137880
(S) Toluene-d8	*102*		*80.0-120*		*07/15/2018 18:29*	WG1138388
(S) Dibromofluoromethane	*96.2*		*76.0-123*		*07/14/2018 13:03*	WG1137880
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/15/2018 18:29*	WG1138388
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 13:03*	WG1137880
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/15/2018 18:29*	WG1138388

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	07/14/2018 13:22	WG1137880
Toluene	ND		1.00	1	07/14/2018 13:22	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 13:22	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 13:22	WG1137880
Methyl tert-butyl ether	4.42		1.00	1	07/14/2018 13:22	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 13:22	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 13:22	WG1137880
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 13:22*	WG1137880
(S) Dibromofluoromethane	*98.7*		*76.0-123*		*07/14/2018 13:22*	WG1137880
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 13:22*	WG1137880

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	07/14/2018 13:41	WG1137880
Toluene	ND		1.00	1	07/14/2018 13:41	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 13:41	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 13:41	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 13:41	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 13:41	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 13:41	WG1137880
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 13:41*	WG1137880
(S) Dibromofluoromethane	*97.8*		*76.0-123*		*07/14/2018 13:41*	WG1137880
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 13:41*	WG1137880

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	07/14/2018 14:00	WG1137880
Toluene	ND		1.00	1	07/14/2018 14:00	WG1137880
Ethylbenzene	ND		1.00	1	07/14/2018 14:00	WG1137880
Total Xylenes	ND		3.00	1	07/14/2018 14:00	WG1137880
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 14:00	WG1137880
Naphthalene	ND		5.00	1	07/14/2018 14:00	WG1137880
1,2-Dichloroethane	ND		1.00	1	07/14/2018 14:00	WG1137880
(S) Toluene-d8	*105*		*80.0-120*		*07/14/2018 14:00*	WG1137880
(S) Dibromofluoromethane	*95.7*		*76.0-123*		*07/14/2018 14:00*	WG1137880
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*07/14/2018 14:00*	WG1137880

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	07/17/2018 17:20	WG1139063
Benzene	ND		1.00	1	07/14/2018 21:21	WG1138191
Bromochloromethane	ND		1.00	1	07/14/2018 21:21	WG1138191
Bromodichloromethane	ND		1.00	1	07/14/2018 21:21	WG1138191
Bromoform	ND		1.00	1	07/14/2018 21:21	WG1138191
Bromomethane	ND		5.00	1	07/14/2018 21:21	WG1138191
Carbon disulfide	ND		1.00	1	07/14/2018 21:21	WG1138191
Carbon tetrachloride	ND		1.00	1	07/14/2018 21:21	WG1138191
Chlorobenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
Chlorodibromomethane	ND		1.00	1	07/14/2018 21:21	WG1138191
Chloroethane	ND		5.00	1	07/14/2018 21:21	WG1138191
Chloroform	ND		5.00	1	07/14/2018 21:21	WG1138191
Chloromethane	ND		2.50	1	07/14/2018 21:21	WG1138191
Cyclohexane	ND		1.00	1	07/14/2018 21:21	WG1138191
1,2-Dibromo-3-Chloropropane	ND		5.00	1	07/14/2018 21:21	WG1138191
1,2-Dibromoethane	ND		1.00	1	07/14/2018 21:21	WG1138191
1,2-Dichlorobenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
1,3-Dichlorobenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
1,4-Dichlorobenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
Dichlorodifluoromethane	ND		5.00	1	07/14/2018 21:21	WG1138191
1,1-Dichloroethane	ND		1.00	1	07/14/2018 21:21	WG1138191
1,2-Dichloroethane	ND		1.00	1	07/14/2018 21:21	WG1138191
1,1-Dichloroethene	ND		1.00	1	07/14/2018 21:21	WG1138191
cis-1,2-Dichloroethene	ND		1.00	1	07/14/2018 21:21	WG1138191
trans-1,2-Dichloroethene	ND		1.00	1	07/14/2018 21:21	WG1138191
1,2-Dichloropropane	ND		1.00	1	07/17/2018 17:20	WG1139063
cis-1,3-Dichloropropene	ND		1.00	1	07/14/2018 21:21	WG1138191
trans-1,3-Dichloropropene	ND		1.00	1	07/14/2018 21:21	WG1138191
Ethylbenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
2-Hexanone	ND		10.0	1	07/14/2018 21:21	WG1138191
Isopropylbenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
2-Butanone (MEK)	ND	J4	10.0	1	07/14/2018 21:21	WG1138191
Methyl Acetate	ND		20.0	1	07/17/2018 17:20	WG1139063
Methyl Cyclohexane	ND		1.00	1	07/14/2018 21:21	WG1138191
Methylene Chloride	ND		5.00	1	07/14/2018 21:21	WG1138191
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	07/14/2018 21:21	WG1138191
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 21:21	WG1138191
Styrene	ND		1.00	1	07/14/2018 21:21	WG1138191
1,1,2,2-Tetrachloroethane	ND		1.00	1	07/14/2018 21:21	WG1138191
Tetrachloroethene	ND		1.00	1	07/14/2018 21:21	WG1138191
Toluene	ND		1.00	1	07/14/2018 21:21	WG1138191
1,2,3-Trichlorobenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
1,2,4-Trichlorobenzene	ND		1.00	1	07/14/2018 21:21	WG1138191
1,1,1-Trichloroethane	ND		1.00	1	07/14/2018 21:21	WG1138191
1,1,2-Trichloroethane	ND		1.00	1	07/14/2018 21:21	WG1138191
Trichloroethene	ND		1.00	1	07/14/2018 21:21	WG1138191
Trichlorofluoromethane	ND		5.00	1	07/14/2018 21:21	WG1138191
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	07/14/2018 21:21	WG1138191
Vinyl chloride	ND		1.00	1	07/17/2018 17:20	WG1139063
Xylenes, Total	ND		3.00	1	07/14/2018 21:21	WG1138191
(S) Toluene-d8	*103*		*80.0-120*		*07/14/2018 21:21*	WG1138191
(S) Toluene-d8	*104*		*80.0-120*		*07/17/2018 17:20*	WG1139063
(S) Dibromofluoromethane	*97.7*		*76.0-123*		*07/14/2018 21:21*	WG1138191
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/17/2018 17:20*	WG1139063
(S) a,a,a-Trifluorotoluene	*95.6*		*80.0-120*		*07/14/2018 21:21*	WG1138191
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*07/17/2018 17:20*	WG1139063

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
(S) 4-Bromofluorobenzene	*109*		*80.0-120*		*07/14/2018 21:21*	WG1138191
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*07/17/2018 17:20*	WG1139063

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	07/14/2018 21:02	WG1138191
Toluene	ND		1.00	1	07/14/2018 21:02	WG1138191
Ethylbenzene	ND		1.00	1	07/14/2018 21:02	WG1138191
Total Xylenes	ND		3.00	1	07/14/2018 21:02	WG1138191
Methyl tert-butyl ether	2.79		1.00	1	07/14/2018 21:02	WG1138191
Naphthalene	ND		5.00	1	07/14/2018 21:02	WG1138191
1,2-Dichloroethane	ND		1.00	1	07/14/2018 21:02	WG1138191
(S) Toluene-d8	*104*		*80.0-120*		*07/14/2018 21:02*	WG1138191
(S) Dibromofluoromethane	*97.0*		*76.0-123*		*07/14/2018 21:02*	WG1138191
(S) 4-Bromofluorobenzene	*112*		*80.0-120*		*07/14/2018 21:02*	WG1138191

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

Method Blank (MB)

(MB) R3325645-3 07/14/18 08:15

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	*94.4*			*76.0-123*
(S) 4-Bromofluorobenzene	*101*			*80.0-120*

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

(LCS) R3325645-1 07/14/18 07:00 • (LCSD) R3325645-2 07/14/18 07:19

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	20.5	20.3	82.1	81.4	70.0-130			0.833	20
1,2-Dichloroethane	25.0	20.5	20.8	82.0	83.3	70.0-130			1.58	20
Ethylbenzene	25.0	23.4	23.1	93.6	92.5	70.0-130			1.16	20
Methyl tert-butyl ether	25.0	20.5	21.3	82.0	85.1	70.0-130			3.64	20
Naphthalene	25.0	23.6	23.8	94.5	95.4	70.0-130			0.959	20
Toluene	25.0	23.0	22.8	92.0	91.2	70.0-130			0.833	20
Xylenes, Total	75.0	70.5	70.1	94.0	93.5	70.0-130			0.569	20
(S) Toluene-d8				*104*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*95.2*	*96.5*	*76.0-123*				
(S) 4-Bromofluorobenzene				*102*	*102*	*80.0-120*				

Method Blank (MB)

(MB) R3326180-2 07/14/18 19:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	0.608	J	0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00

Method Blank (MB)

(MB) R3326180-2 07/14/18 19:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*102*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*95.0*			*80.0-120*
(S) 4-Bromofluorobenzene	*110*			*80.0-120*

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

(LCS) R3326180-1 07/14/18 15:53 • (LCSD) R3326180-3 07/14/18 19:55

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	20.6	20.8	82.5	83.1	70.0-130			0.666	20
Bromodichloromethane	25.0	21.4	22.2	85.6	88.9	70.0-130			3.77	20
Bromochloromethane	25.0	22.7	23.4	90.7	93.5	70.0-130			2.98	20
Bromoform	25.0	22.7	23.2	90.7	92.9	70.0-130			2.44	20
Bromomethane	25.0	23.9	22.7	95.5	90.9	70.0-130			4.95	20
Carbon disulfide	25.0	22.8	21.6	91.3	86.2	70.0-130			5.74	20
Carbon tetrachloride	25.0	20.3	21.3	81.2	85.3	70.0-130			4.91	20
Chlorobenzene	25.0	23.3	23.5	93.1	94.0	70.0-130			0.946	20
Chlorodibromomethane	25.0	23.5	24.5	94.1	98.1	70.0-130			4.11	20
Chloroethane	25.0	20.2	20.2	80.6	80.9	70.0-130			0.391	20
Chloroform	25.0	20.9	21.7	83.6	87.0	70.0-130			3.93	20
Chloromethane	25.0	19.3	19.3	77.3	77.3	70.0-130			0.00482	20
1,2-Dibromo-3-Chloropropane	25.0	18.7	20.9	75.0	83.6	70.0-130			11.0	20
1,2-Dibromoethane	25.0	23.3	24.9	93.3	99.6	70.0-130			6.56	20
1,2-Dichlorobenzene	25.0	21.9	22.0	87.7	87.9	70.0-130			0.183	20
1,3-Dichlorobenzene	25.0	22.4	22.2	89.4	88.9	70.0-130			0.626	20
1,4-Dichlorobenzene	25.0	21.6	21.8	86.6	87.2	70.0-130			0.733	20
Dichlorodifluoromethane	25.0	25.1	24.6	100	98.6	70.0-130			1.80	20
1,1-Dichloroethane	25.0	17.8	19.8	71.2	79.2	70.0-130			10.6	20
1,2-Dichloroethane	25.0	20.9	21.7	83.6	86.7	70.0-130			3.63	20
1,1-Dichloroethene	25.0	20.6	23.6	82.3	94.5	70.0-130			13.7	20
cis-1,2-Dichloroethene	25.0	20.5	22.3	82.2	89.4	70.0-130			8.41	20

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

(LCS) R3326180-1 07/14/18 15:53 • (LCSD) R3326180-3 07/14/18 19:55

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 %
trans-1,2-Dichloroethene	25.0	18.6	21.3	74.2	85.2	70.0-130			13.7	20
cis-1,3-Dichloropropene	25.0	23.0	23.2	91.9	92.9	70.0-130			0.989	20
trans-1,3-Dichloropropene	25.0	22.6	23.2	90.3	92.8	70.0-130			2.71	20
Ethylbenzene	25.0	22.7	23.1	90.8	92.3	70.0-130			1.61	20
2-Hexanone	125	96.9	112	77.5	89.5	70.0-130			14.3	20
Isopropylbenzene	25.0	24.5	24.0	98.1	96.1	70.0-130			2.15	20
2-Butanone (MEK)	125	83.3	97.4	66.6	77.9	70.0-130	J4		15.6	20
Methylene Chloride	25.0	21.2	21.2	84.9	84.8	70.0-130			0.130	20
4-Methyl-2-pentanone (MIBK)	125	103	117	82.6	93.7	70.0-130			12.7	20
Methyl tert-butyl ether	25.0	20.4	21.3	81.6	85.2	70.0-130			4.32	20
Naphthalene	25.0	23.8	23.5	95.1	93.9	70.0-130			1.33	20
Styrene	25.0	25.0	24.6	100	98.6	70.0-130			1.54	20
1,1,2,2-Tetrachloroethane	25.0	23.9	22.9	95.5	91.5	70.0-130			4.22	20
Tetrachloroethene	25.0	21.8	21.2	87.2	84.7	70.0-130			2.95	20
Toluene	25.0	22.6	22.4	90.5	89.7	70.0-130			0.899	20
1,1,2-Trichlorotrifluoroethane	25.0	27.2	31.5	109	126	70.0-130			14.7	20
1,2,3-Trichlorobenzene	25.0	25.3	24.8	101	99.1	70.0-130			2.06	20
1,2,4-Trichlorobenzene	25.0	24.3	24.0	97.3	96.0	70.0-130			1.32	20
1,1,1-Trichloroethane	25.0	22.3	23.7	89.1	95.0	70.0-130			6.38	20
1,1,2-Trichloroethane	25.0	22.7	23.4	90.7	93.6	70.0-130			3.09	20
Trichloroethene	25.0	22.7	23.6	90.9	94.5	70.0-130			3.90	20
Trichlorofluoromethane	25.0	24.9	22.9	99.5	91.5	70.0-130			8.44	20
Xylenes, Total	75.0	68.6	70.5	91.5	94.0	70.0-130			2.73	20
(S) Toluene-d8				*102*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*95.3*	*98.3*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*95.1*	*94.8*	*80.0-120*				
(S) 4-Bromofluorobenzene				*108*	*106*	*80.0-120*				

Method Blank (MB)

(MB) R3325788-3 07/15/18 12:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
(S) Toluene-d8	*105*			*80.0-120*
(S) Dibromofluoromethane	*98.5*			*76.0-123*
(S) 4-Bromofluorobenzene	*108*			*80.0-120*

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

(LCS) R3325788-1 07/15/18 11:22 • (LCSD) R3325788-2 07/15/18 11:41

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	%	%	%			%	%
Benzene	25.0	22.7	21.6	90.9	86.4	70.0-130			4.98	20
Methyl tert-butyl ether	25.0	21.5	20.7	86.1	83.0	70.0-130			3.74	20
(S) Toluene-d8				*103*	*107*	*80.0-120*				
(S) Dibromofluoromethane				*95.3*	*90.5*	*76.0-123*				
(S) 4-Bromofluorobenzene				*108*	*109*	*80.0-120*				

Method Blank (MB)

(MB) R3326476-3 07/17/18 16:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
1,2-Dichloropropane	U		0.306	1.00
Methyl Acetate	U		4.30	20.0
Vinyl chloride	U		0.259	1.00
(S) Toluene-d8	*104*			*80.0-120*
(S) Dibromofluoromethane	*102*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*80.0-120*

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

(LCS) R3326476-1 07/17/18 15:02 • (LCSD) R3326476-2 07/17/18 15:22

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 %
Acetone	125	120	121	96.1	96.5	70.0-130			0.443	23.9
1,2-Dichloropropane	25.0	25.9	25.1	104	100	70.0-130			3.27	20
Vinyl chloride	25.0	24.8	23.4	99.2	93.6	70.0-130			5.81	20
(S) Toluene-d8				*105*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*99.2*	*99.2*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*105*	*104*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*104*	*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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
J4	The associated batch QC was outside the established quality control range for accuracy.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

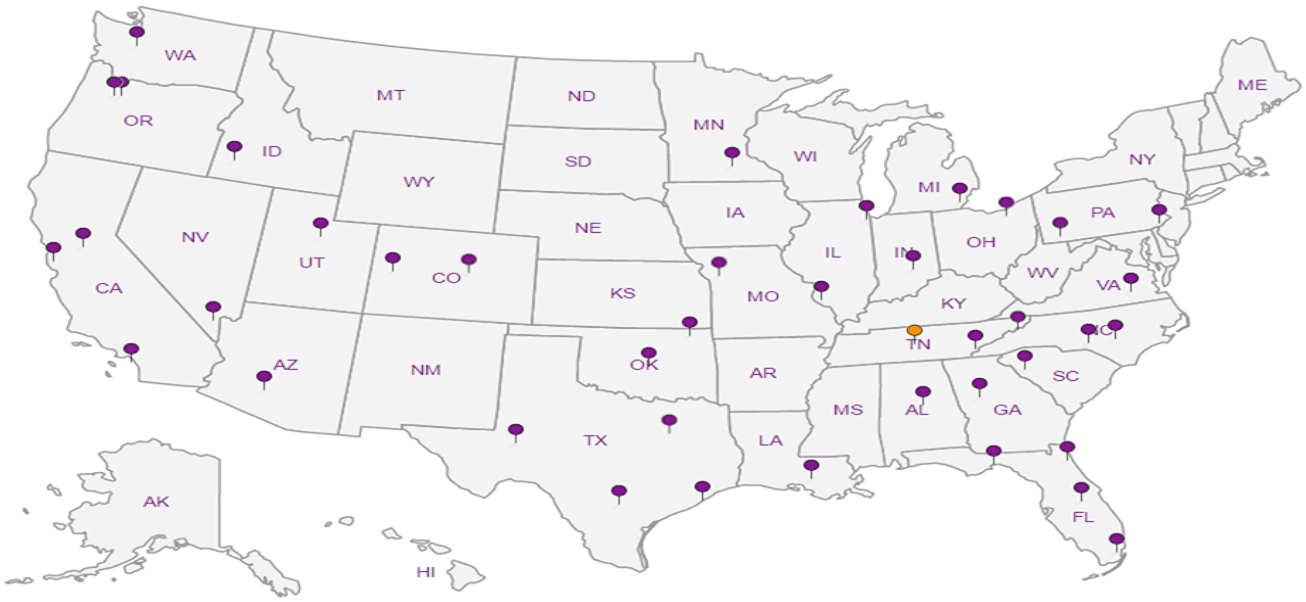
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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; kyle.sexton@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.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 ___ 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	V8260TCLSC-TB 40mlAmb-NoPres-Blk	BTEX	MTBE	NAPTHALENE	1,2-DCA					Remarks	Sample # (lab only)
MW-22-071218	GRAB	GW	N/A	07/12/18	1305	3	X		X	X	X	X						-01
MW-29-071218		GW			1315	3	X											-02
MW-26-071218		GW			1325	3	X											-03
MW-23-071218		GW			1335	3	X											-04
MW-20-071218		GW			1340	3	X											-05
MW-28-071218		GW			1405	3	X											-06
MW-35-071218		GW			1415	3	X											-07
MW-25-071218		GW			1420	3	X											-08
MW-41-071218		GW			1428	3	X											-09
FB01-071218		GW			1505	3	X	X									FIELD BLANK	-10

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# 1609283

T: H038

Acctnum: KINCH2MGA
Template: T131319
Prelogin: P662161
TSR: 526 - Chris McCord
PB: 7-6186

Shipped Via: FedEX Ground

Remarks: Sample # (lab only)

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

Remarks: V8260BTEXMNSC = BTEX, MTBE, Naphthalene, 1,2-DCA.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4380 6874 2419

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
	07/12/18	1730		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.5 °C Bottles Received: 5 7
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/13/18 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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; kyle.sexton@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WANER

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ 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	V8260TCLSC-TB 40mlAmb-NoPres-Blk	BTEX	MTBE	NAPTHALENE	1,2-DCA	Remarks	Sample # (lab only)
MW39-071218	GRAB	GW	NA	07/12/18	1550	3	X		X	X	X	X		-11
MW34-071218		GW			1555	3	X		X	X	X	X		-12
MW34-071218-DUP		GW			1556	3	X		X	X	X	X		-13
MW40-071218		GW			1605	3	X		X	X	X	X		-14
MW38-071218		GW			1615	3	X		X	X	X	X		-15
MW43-071218		GW			1625	3	X		X	X	X	X		-16
MW-02-071218		GW			1705	3	X		X	X	X	X		-17
MW-03-071218		GW			1655	3	X		X	X	X	X		-18
TB01-071218		GW			1710	1		X					TRIP BLANK	-19
MW-30-071218					1640	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: V8260BTEXMNSC = BTEX, MTBE, Naphthalene, 1,2-DCA.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4380 6874 2419

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

Temp: 0.5 °C Bottles Received: 5

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	07/12/18	1750	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			7/13/18 8:45

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 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# 1009283

Table #

Acctnum: KINCH2MGA

Template: T131319

Prelogin: P662161

TSR: 526 - Chris McCord

PB: 7.6.18

Shipped Via: FedEX Ground

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 18, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1009427
Samples Received:	07/14/2018
Project Number:	699858.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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-05-071318 L1009427-01 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 07:10 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138186	1	07/14/18 20:23	07/14/18 20:23	JAH

MW-10-071318 L1009427-02 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 07:15 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138186	1	07/14/18 20:43	07/14/18 20:43	JAH

MW-10-D-071318 L1009427-03 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 07:20 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138186	1	07/14/18 21:03	07/14/18 21:03	JAH

MW-31-071318 L1009427-04 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 07:30 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138186	1	07/14/18 21:23	07/14/18 21:23	JAH

MW-45-071318 L1009427-05 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 07:35 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138186	1	07/14/18 21:43	07/14/18 21:43	JAH

FB01-071318 L1009427-06 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 07:40 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138186	1	07/14/18 18:43	07/14/18 18:43	JAH

TB01-071318 L1009427-07 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 07:45 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138181	1	07/14/18 18:28	07/14/18 18:28	BMB

MW-19-071318 L1009427-08 GW

Collected by: Melissa Warren | Collected date/time: 07/13/18 09:00 | Received date/time: 07/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1138186	1	07/14/18 22:03	07/14/18 22:03	JAH

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

Chris McCord
Project Manager

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	07/14/2018 20:23	WG1138186
Toluene	ND		1.00	1	07/14/2018 20:23	WG1138186
Ethylbenzene	ND		1.00	1	07/14/2018 20:23	WG1138186
Total Xylenes	ND		3.00	1	07/14/2018 20:23	WG1138186
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 20:23	WG1138186
Naphthalene	ND		5.00	1	07/14/2018 20:23	WG1138186
1,2-Dichloroethane	ND		1.00	1	07/14/2018 20:23	WG1138186
(S) Toluene-d8	*97.0*		*80.0-120*		*07/14/2018 20:23*	WG1138186
(S) Dibromofluoromethane	*106*		*76.0-123*		*07/14/2018 20:23*	WG1138186
(S) 4-Bromofluorobenzene	*84.3*		*80.0-120*		*07/14/2018 20:23*	WG1138186

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	07/14/2018 20:43	WG1138186
Toluene	ND		1.00	1	07/14/2018 20:43	WG1138186
Ethylbenzene	ND		1.00	1	07/14/2018 20:43	WG1138186
Total Xylenes	ND		3.00	1	07/14/2018 20:43	WG1138186
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 20:43	WG1138186
Naphthalene	ND		5.00	1	07/14/2018 20:43	WG1138186
1,2-Dichloroethane	ND		1.00	1	07/14/2018 20:43	WG1138186
(S) Toluene-d8	*98.1*		*80.0-120*		*07/14/2018 20:43*	WG1138186
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/14/2018 20:43*	WG1138186
(S) 4-Bromofluorobenzene	*81.9*		*80.0-120*		*07/14/2018 20:43*	WG1138186

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	07/14/2018 21:03	WG1138186
Toluene	ND		1.00	1	07/14/2018 21:03	WG1138186
Ethylbenzene	ND		1.00	1	07/14/2018 21:03	WG1138186
Total Xylenes	ND		3.00	1	07/14/2018 21:03	WG1138186
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 21:03	WG1138186
Naphthalene	ND		5.00	1	07/14/2018 21:03	WG1138186
1,2-Dichloroethane	ND		1.00	1	07/14/2018 21:03	WG1138186
(S) Toluene-d8	*100*		*80.0-120*		*07/14/2018 21:03*	WG1138186
(S) Dibromofluoromethane	*105*		*76.0-123*		*07/14/2018 21:03*	WG1138186
(S) 4-Bromofluorobenzene	*81.9*		*80.0-120*		*07/14/2018 21:03*	WG1138186

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	07/14/2018 21:23	WG1138186
Toluene	ND		1.00	1	07/14/2018 21:23	WG1138186
Ethylbenzene	ND		1.00	1	07/14/2018 21:23	WG1138186
Total Xylenes	ND		3.00	1	07/14/2018 21:23	WG1138186
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 21:23	WG1138186
Naphthalene	ND		5.00	1	07/14/2018 21:23	WG1138186
1,2-Dichloroethane	ND		1.00	1	07/14/2018 21:23	WG1138186
(S) Toluene-d8	*96.8*		*80.0-120*		*07/14/2018 21:23*	WG1138186
(S) Dibromofluoromethane	*105*		*76.0-123*		*07/14/2018 21:23*	WG1138186
(S) 4-Bromofluorobenzene	*79.6*	J2	*80.0-120*		*07/14/2018 21:23*	WG1138186

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	07/14/2018 21:43	WG1138186
Toluene	ND		1.00	1	07/14/2018 21:43	WG1138186
Ethylbenzene	ND		1.00	1	07/14/2018 21:43	WG1138186
Total Xylenes	ND		3.00	1	07/14/2018 21:43	WG1138186
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 21:43	WG1138186
Naphthalene	ND		5.00	1	07/14/2018 21:43	WG1138186
1,2-Dichloroethane	ND		1.00	1	07/14/2018 21:43	WG1138186
(S) Toluene-d8	*97.1*		*80.0-120*		*07/14/2018 21:43*	WG1138186
(S) Dibromofluoromethane	*105*		*76.0-123*		*07/14/2018 21:43*	WG1138186
(S) 4-Bromofluorobenzene	*82.0*		*80.0-120*		*07/14/2018 21:43*	WG1138186

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	07/14/2018 18:43	WG1138186
Toluene	ND		1.00	1	07/14/2018 18:43	WG1138186
Ethylbenzene	ND		1.00	1	07/14/2018 18:43	WG1138186
Total Xylenes	ND		3.00	1	07/14/2018 18:43	WG1138186
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 18:43	WG1138186
Naphthalene	ND		5.00	1	07/14/2018 18:43	WG1138186
1,2-Dichloroethane	ND		1.00	1	07/14/2018 18:43	WG1138186
(S) Toluene-d8	*98.2*		*80.0-120*		*07/14/2018 18:43*	WG1138186
(S) Dibromofluoromethane	*105*		*76.0-123*		*07/14/2018 18:43*	WG1138186
(S) 4-Bromofluorobenzene	*80.2*		*80.0-120*		*07/14/2018 18:43*	WG1138186

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	07/14/2018 18:28	WG1138181
Benzene	ND		1.00	1	07/14/2018 18:28	WG1138181
Bromochloromethane	ND		1.00	1	07/14/2018 18:28	WG1138181
Bromodichloromethane	ND		1.00	1	07/14/2018 18:28	WG1138181
Bromoform	ND		1.00	1	07/14/2018 18:28	WG1138181
Bromomethane	ND		5.00	1	07/14/2018 18:28	WG1138181
Carbon disulfide	ND		1.00	1	07/14/2018 18:28	WG1138181
Carbon tetrachloride	ND		1.00	1	07/14/2018 18:28	WG1138181
Chlorobenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
Chlorodibromomethane	ND		1.00	1	07/14/2018 18:28	WG1138181
Chloroethane	ND		5.00	1	07/14/2018 18:28	WG1138181
Chloroform	ND		5.00	1	07/14/2018 18:28	WG1138181
Chloromethane	ND		2.50	1	07/14/2018 18:28	WG1138181
Cyclohexane	ND		1.00	1	07/14/2018 18:28	WG1138181
1,2-Dibromo-3-Chloropropane	ND		5.00	1	07/14/2018 18:28	WG1138181
1,2-Dibromoethane	ND		1.00	1	07/14/2018 18:28	WG1138181
1,2-Dichlorobenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
1,3-Dichlorobenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
1,4-Dichlorobenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
Dichlorodifluoromethane	ND		5.00	1	07/14/2018 18:28	WG1138181
1,1-Dichloroethane	ND		1.00	1	07/14/2018 18:28	WG1138181
1,2-Dichloroethane	ND		1.00	1	07/14/2018 18:28	WG1138181
1,1-Dichloroethene	ND		1.00	1	07/14/2018 18:28	WG1138181
cis-1,2-Dichloroethene	ND		1.00	1	07/14/2018 18:28	WG1138181
trans-1,2-Dichloroethene	ND		1.00	1	07/14/2018 18:28	WG1138181
1,2-Dichloropropane	ND		1.00	1	07/14/2018 18:28	WG1138181
cis-1,3-Dichloropropene	ND		1.00	1	07/14/2018 18:28	WG1138181
trans-1,3-Dichloropropene	ND		1.00	1	07/14/2018 18:28	WG1138181
Ethylbenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
2-Hexanone	ND		10.0	1	07/14/2018 18:28	WG1138181
Isopropylbenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
2-Butanone (MEK)	ND		10.0	1	07/14/2018 18:28	WG1138181
Methyl Acetate	ND		20.0	1	07/14/2018 18:28	WG1138181
Methyl Cyclohexane	ND		1.00	1	07/14/2018 18:28	WG1138181
Methylene Chloride	ND		5.00	1	07/14/2018 18:28	WG1138181
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	07/14/2018 18:28	WG1138181
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 18:28	WG1138181
Styrene	ND		1.00	1	07/14/2018 18:28	WG1138181
1,1,2,2-Tetrachloroethane	ND		1.00	1	07/14/2018 18:28	WG1138181
Tetrachloroethene	ND		1.00	1	07/14/2018 18:28	WG1138181
Toluene	ND		1.00	1	07/14/2018 18:28	WG1138181
1,2,3-Trichlorobenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
1,2,4-Trichlorobenzene	ND		1.00	1	07/14/2018 18:28	WG1138181
1,1,1-Trichloroethane	ND		1.00	1	07/14/2018 18:28	WG1138181
1,1,2-Trichloroethane	ND		1.00	1	07/14/2018 18:28	WG1138181
Trichloroethene	ND		1.00	1	07/14/2018 18:28	WG1138181
Trichlorofluoromethane	ND		5.00	1	07/14/2018 18:28	WG1138181
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	07/14/2018 18:28	WG1138181
Vinyl chloride	ND		1.00	1	07/14/2018 18:28	WG1138181
Xylenes, Total	ND		3.00	1	07/14/2018 18:28	WG1138181
(S) Toluene-d8	*103*		*80.0-120*		*07/14/2018 18:28*	WG1138181
(S) Dibromofluoromethane	*96.5*		*76.0-123*		*07/14/2018 18:28*	WG1138181
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*07/14/2018 18:28*	WG1138181
(S) 4-Bromofluorobenzene	*94.9*		*80.0-120*		*07/14/2018 18:28*	WG1138181

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	07/14/2018 22:03	WG1138186
Toluene	ND		1.00	1	07/14/2018 22:03	WG1138186
Ethylbenzene	ND		1.00	1	07/14/2018 22:03	WG1138186
Total Xylenes	ND		3.00	1	07/14/2018 22:03	WG1138186
Methyl tert-butyl ether	ND		1.00	1	07/14/2018 22:03	WG1138186
Naphthalene	ND		5.00	1	07/14/2018 22:03	WG1138186
1,2-Dichloroethane	ND		1.00	1	07/14/2018 22:03	WG1138186
(S) Toluene-d8	*96.2*		*80.0-120*		*07/14/2018 22:03*	WG1138186
(S) Dibromofluoromethane	*105*		*76.0-123*		*07/14/2018 22:03*	WG1138186
(S) 4-Bromofluorobenzene	*80.0*		*80.0-120*		*07/14/2018 22:03*	WG1138186

Method Blank (MB)

(MB) R3325949-3 07/14/18 17:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3325949-3 07/14/18 17:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*92.0*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*80.0-120*

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

(LCS) R3325949-1 07/14/18 16:06 • (LCSD) R3325949-2 07/14/18 16:26

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 %
Acetone	125	163	154	130	123	70.0-130			5.36	23.9
Benzene	25.0	21.3	19.7	85.3	78.9	70.0-130			7.85	20
Bromodichloromethane	25.0	20.6	19.8	82.4	79.2	70.0-130			3.94	20
Bromochloromethane	25.0	23.5	22.0	94.1	88.0	70.0-130			6.69	20
Bromoform	25.0	25.4	25.9	102	103	70.0-130			1.68	20
Bromomethane	25.0	24.3	21.2	97.3	84.8	70.0-130			13.8	20
Carbon disulfide	25.0	22.5	19.7	90.0	78.7	70.0-130			13.4	20
Carbon tetrachloride	25.0	21.1	18.2	84.2	72.7	70.0-130			14.7	20
Chlorobenzene	25.0	24.8	22.9	99.2	91.5	70.0-130			8.00	20
Chlorodibromomethane	25.0	24.7	23.6	98.9	94.5	70.0-130			4.62	20
Chloroethane	25.0	20.6	19.7	82.5	78.9	70.0-130			4.45	20
Chloroform	25.0	22.0	19.7	87.9	78.7	70.0-130			11.1	20
Chloromethane	25.0	21.1	18.2	84.4	72.7	70.0-130			14.9	20
1,2-Dibromo-3-Chloropropane	25.0	24.1	26.1	96.6	105	70.0-130			7.95	20
1,2-Dibromoethane	25.0	25.0	24.5	100	98.0	70.0-130			2.12	20
1,2-Dichlorobenzene	25.0	22.9	23.4	91.5	93.5	70.0-130			2.15	20
1,3-Dichlorobenzene	25.0	23.2	24.0	92.8	96.0	70.0-130			3.31	20
1,4-Dichlorobenzene	25.0	23.7	23.1	95.0	92.4	70.0-130			2.71	20
Dichlorodifluoromethane	25.0	26.6	23.1	107	92.4	70.0-130			14.3	20

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

(LCS) R3325949-1 07/14/18 16:06 • (LCSD) R3325949-2 07/14/18 16:26

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 %
1,1-Dichloroethane	25.0	21.0	19.0	84.1	75.9	70.0-130			10.2	20
1,2-Dichloroethane	25.0	20.0	19.7	80.0	78.6	70.0-130			1.70	20
1,1-Dichloroethene	25.0	21.4	18.6	85.5	74.4	70.0-130			13.8	20
cis-1,2-Dichloroethene	25.0	21.0	19.4	84.0	77.8	70.0-130			7.67	20
trans-1,2-Dichloroethene	25.0	20.4	18.9	81.8	75.7	70.0-130			7.78	20
1,2-Dichloropropane	25.0	21.3	20.9	85.2	83.7	70.0-130			1.81	20
cis-1,3-Dichloropropene	25.0	24.1	23.1	96.2	92.4	70.0-130			4.11	20
trans-1,3-Dichloropropene	25.0	24.3	24.4	97.1	97.8	70.0-130			0.716	20
Ethylbenzene	25.0	23.9	21.6	95.5	86.6	70.0-130			9.74	20
2-Hexanone	125	131	133	105	106	70.0-130			0.814	20
Isopropylbenzene	25.0	23.3	23.6	93.1	94.5	70.0-130			1.48	20
2-Butanone (MEK)	125	137	131	110	105	70.0-130			4.43	20
Methylene Chloride	25.0	22.1	20.0	88.4	80.0	70.0-130			9.91	20
4-Methyl-2-pentanone (MIBK)	125	129	132	103	106	70.0-130			2.21	20
Methyl tert-butyl ether	25.0	21.4	19.6	85.4	78.5	70.0-130			8.42	20
Styrene	25.0	24.2	23.7	97.0	94.8	70.0-130			2.24	20
1,1,2,2-Tetrachloroethane	25.0	22.1	22.4	88.3	89.7	70.0-130			1.58	20
Tetrachloroethene	25.0	25.4	24.2	101	96.9	70.0-130			4.58	20
Toluene	25.0	23.1	21.2	92.2	84.8	70.0-130			8.44	20
1,1,2-Trichlorotrifluoroethane	25.0	24.7	20.9	98.8	83.6	70.0-130			16.7	20
1,2,3-Trichlorobenzene	25.0	20.2	20.3	80.7	81.0	70.0-130			0.377	20
1,2,4-Trichlorobenzene	25.0	20.0	21.2	80.2	84.9	70.0-130			5.69	20
1,1,1-Trichloroethane	25.0	20.4	17.6	81.7	70.5	70.0-130			14.6	20
1,1,2-Trichloroethane	25.0	23.6	22.9	94.5	91.8	70.0-130			2.95	20
Trichloroethene	25.0	23.7	22.5	94.9	89.9	70.0-130			5.38	20
Trichlorofluoromethane	25.0	22.6	19.5	90.3	78.1	70.0-130			14.4	20
Vinyl chloride	25.0	21.5	18.8	86.1	75.0	70.0-130			13.7	20
Xylenes, Total	75.0	74.1	68.5	98.8	91.3	70.0-130			7.85	20
(S) Toluene-d8				*105*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*96.3*	*90.5*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*94.3*	*101*	*80.0-120*				
(S) 4-Bromofluorobenzene				*92.3*	*104*	*80.0-120*				

Method Blank (MB)

(MB) R3325616-2 07/14/18 15:46

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	*99.8*			*80.0-120*
(S) Dibromofluoromethane	*104*			*76.0-123*
(S) 4-Bromofluorobenzene	*82.1*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3325616-1 07/14/18 15:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	23.5	94.1	70.0-130	
1,2-Dichloroethane	25.0	26.8	107	70.0-130	
Ethylbenzene	25.0	21.3	85.4	70.0-130	
Methyl tert-butyl ether	25.0	24.6	98.3	70.0-130	
Naphthalene	25.0	19.5	77.8	70.0-130	
Toluene	25.0	21.5	85.9	70.0-130	
Xylenes, Total	75.0	63.0	84.0	70.0-130	
(S) Toluene-d8			*97.2*	*80.0-120*	
(S) Dibromofluoromethane			*104*	*76.0-123*	
(S) 4-Bromofluorobenzene			*86.3*	*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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

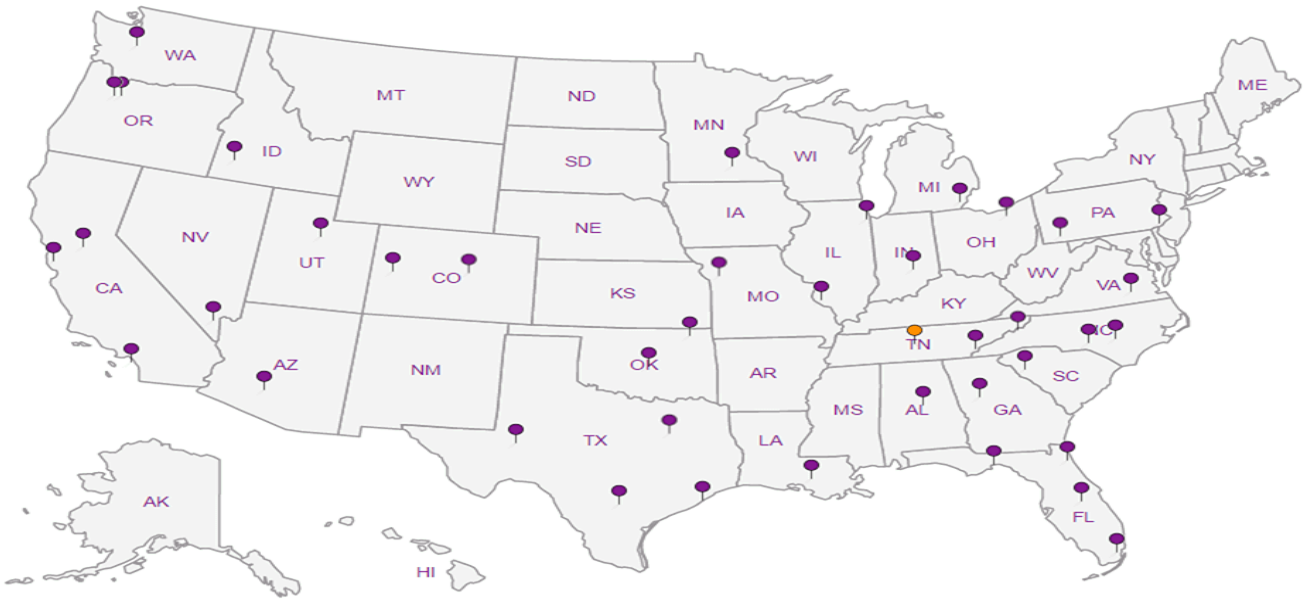
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Chain of Custody Page ___ of ___

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# 1009427
B181

Acctnum: KINCH2MGA
Template: T131319
Prelogin: P646448
TSR: 526 - Chris McCord
PB: 4-2786
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

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

Report to: Bethany Garvey

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project #: 699858.LD.MR.GW

Lab Project #: KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID #: LEWIS DRIVE

P.O. #:

Quote #:

Collected by (signature):

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

Date Results Needed

Immediately Packed on Ice N ___ Y X

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-HCl-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA	Remarks	Sample # (lab only)
Pres Chk							X	X	X	X	X	X		
MW-05-071318	GRAB	GW	N/A	07/13/18	0710	3	X		X	X	X	X		-01
MW-10-071318	↓	GW	↓	↓	0715	3	X		X	X	X	X		-02
MW-10-D-071318	↓	GW	↓	↓	0720	3	X		X	X	X	X		-03
MW-31-071318	↓	GW	↓	↓	0730	3	X		X	X	X	X		-04
MW-45-071318	↓	GW	↓	↓	0735	3	X		X	X	X	X		-05
FB01-071318	↓	GW	↓	↓	0740	3	X		X	X	X	X		-06
TB01-071318	↓	GW	↓	↓	0745	~~3~~ 1	~~X~~	X						-07
MW-19-071318	↓	GW	↓	↓	0900	3	X		X	X	X	X		-08
		GW				3	X							-
		GW				3	X							

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

Remarks: V8260BTEXMNSC = BTEX,MTBE,Naphthalene,1,2-DCA.

pH ___ Temp ___
Flow ___ Other ___

Samples returned via: ___ UPS X FedEx ___ Courier ___

Tracking # 7380 6874 2420

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

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No HCL / MeoH TBR
[signature]	07/13/18			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.9 °C Bottles Received: 21
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 7/17/18 Time: 845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 13, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1014519
Samples Received:	08/03/2018
Project Number:	699858.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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-17B-080218 L1014519-01 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 09:45 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	200	08/03/18 21:49	08/03/18 21:49	LRL

MW-17B-D-080218 L1014519-02 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 09:45 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	200	08/03/18 22:09	08/03/18 22:09	LRL

MW-46-080218 L1014519-03 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 11:05 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	1	08/03/18 22:29	08/03/18 22:29	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147794	20	08/05/18 00:12	08/05/18 00:12	BMB

MW-23-080218 L1014519-04 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 11:55 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	1	08/03/18 22:49	08/03/18 22:49	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147794	1	08/05/18 00:31	08/05/18 00:31	BMB

FB01-080218 L1014519-05 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 12:55 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	1	08/03/18 17:50	08/03/18 17:50	LRL

TB01-080218 L1014519-06 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 13:00 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	1	08/03/18 18:10	08/03/18 18:10	BMB

MW-40-080218 L1014519-07 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 13:29 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	1	08/03/18 23:08	08/03/18 23:08	LRL

MW-34-080218 L1014519-08 GW

Collected by: Melissa Warren | Collected date/time: 08/02/18 13:50 | Received date/time: 08/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147411	1	08/03/18 23:28	08/03/18 23:28	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1147794	10	08/05/18 00:51	08/05/18 00:51	BMB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	9470		200	200	08/03/2018 21:49	WG1147411
Toluene	23200		200	200	08/03/2018 21:49	WG1147411
Ethylbenzene	1190		200	200	08/03/2018 21:49	WG1147411
Total Xylenes	8530		600	200	08/03/2018 21:49	WG1147411
Methyl tert-butyl ether	863		200	200	08/03/2018 21:49	WG1147411
Naphthalene	ND		1000	200	08/03/2018 21:49	WG1147411
1,2-Dichloroethane	ND		200	200	08/03/2018 21:49	WG1147411
(S) Toluene-d8	*103*		*80.0-120*		*08/03/2018 21:49*	WG1147411
(S) Dibromofluoromethane	*96.2*		*76.0-123*		*08/03/2018 21:49*	WG1147411
(S) 4-Bromofluorobenzene	*88.1*		*80.0-120*		*08/03/2018 21:49*	WG1147411

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	9530		200	200	08/03/2018 22:09	WG1147411
Toluene	23900		200	200	08/03/2018 22:09	WG1147411
Ethylbenzene	1230		200	200	08/03/2018 22:09	WG1147411
Total Xylenes	8630		600	200	08/03/2018 22:09	WG1147411
Methyl tert-butyl ether	864		200	200	08/03/2018 22:09	WG1147411
Naphthalene	ND		1000	200	08/03/2018 22:09	WG1147411
1,2-Dichloroethane	ND		200	200	08/03/2018 22:09	WG1147411
(S) Toluene-d8	*105*		*80.0-120*		*08/03/2018 22:09*	WG1147411
(S) Dibromofluoromethane	*96.0*		*76.0-123*		*08/03/2018 22:09*	WG1147411
(S) 4-Bromofluorobenzene	*89.0*		*80.0-120*		*08/03/2018 22:09*	WG1147411

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1520		20.0	20	08/05/2018 00:12	WG1147794
Toluene	92.1		1.00	1	08/03/2018 22:29	WG1147411
Ethylbenzene	4.24		1.00	1	08/03/2018 22:29	WG1147411
Total Xylenes	763		60.0	20	08/05/2018 00:12	WG1147794
Methyl tert-butyl ether	200		1.00	1	08/03/2018 22:29	WG1147411
Naphthalene	20.7		5.00	1	08/03/2018 22:29	WG1147411
1,2-Dichloroethane	ND		1.00	1	08/03/2018 22:29	WG1147411
(S) Toluene-d8	*107*		*80.0-120*		*08/03/2018 22:29*	WG1147411
(S) Toluene-d8	*107*		*80.0-120*		*08/05/2018 00:12*	WG1147794
(S) Dibromofluoromethane	*77.6*		*76.0-123*		*08/03/2018 22:29*	WG1147411
(S) Dibromofluoromethane	*105*		*76.0-123*		*08/05/2018 00:12*	WG1147794
(S) 4-Bromofluorobenzene	*86.7*		*80.0-120*		*08/03/2018 22:29*	WG1147411
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*08/05/2018 00:12*	WG1147794

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	17.9	V3	1.00	1	08/05/2018 00:31	WG1147794
Toluene	ND		1.00	1	08/03/2018 22:49	WG1147411
Ethylbenzene	ND		1.00	1	08/03/2018 22:49	WG1147411
Total Xylenes	10.4		3.00	1	08/05/2018 00:31	WG1147794
Methyl tert-butyl ether	5.01		1.00	1	08/03/2018 22:49	WG1147411
Naphthalene	ND		5.00	1	08/03/2018 22:49	WG1147411
1,2-Dichloroethane	ND		1.00	1	08/03/2018 22:49	WG1147411
(S) Toluene-d8	*104*		*80.0-120*		*08/03/2018 22:49*	WG1147411
(S) Toluene-d8	*106*		*80.0-120*		*08/05/2018 00:31*	WG1147794
(S) Dibromofluoromethane	*98.7*		*76.0-123*		*08/03/2018 22:49*	WG1147411
(S) Dibromofluoromethane	*111*		*76.0-123*		*08/05/2018 00:31*	WG1147794
(S) 4-Bromofluorobenzene	*85.6*		*80.0-120*		*08/03/2018 22:49*	WG1147411
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*08/05/2018 00:31*	WG1147794

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	08/03/2018 17:50	WG1147411
Toluene	ND		1.00	1	08/03/2018 17:50	WG1147411
Ethylbenzene	ND		1.00	1	08/03/2018 17:50	WG1147411
Total Xylenes	ND		3.00	1	08/03/2018 17:50	WG1147411
Methyl tert-butyl ether	ND		1.00	1	08/03/2018 17:50	WG1147411
Naphthalene	ND		5.00	1	08/03/2018 17:50	WG1147411
1,2-Dichloroethane	ND		1.00	1	08/03/2018 17:50	WG1147411
(S) Toluene-d8	*108*		*80.0-120*		*08/03/2018 17:50*	WG1147411
(S) Dibromofluoromethane	*99.2*		*76.0-123*		*08/03/2018 17:50*	WG1147411
(S) 4-Bromofluorobenzene	*87.7*		*80.0-120*		*08/03/2018 17:50*	WG1147411

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	08/03/2018 18:10	WG1147411
Benzene	ND		1.00	1	08/03/2018 18:10	WG1147411
Bromochloromethane	ND		1.00	1	08/03/2018 18:10	WG1147411
Bromodichloromethane	ND		1.00	1	08/03/2018 18:10	WG1147411
Bromoform	ND		1.00	1	08/03/2018 18:10	WG1147411
Bromomethane	ND		5.00	1	08/03/2018 18:10	WG1147411
Carbon disulfide	ND		1.00	1	08/03/2018 18:10	WG1147411
Carbon tetrachloride	ND		1.00	1	08/03/2018 18:10	WG1147411
Chlorobenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
Chlorodibromomethane	ND		1.00	1	08/03/2018 18:10	WG1147411
Chloroethane	ND	J4	5.00	1	08/03/2018 18:10	WG1147411
Chloroform	ND		5.00	1	08/03/2018 18:10	WG1147411
Chloromethane	ND	J4	2.50	1	08/03/2018 18:10	WG1147411
Cyclohexane	ND		1.00	1	08/03/2018 18:10	WG1147411
1,2-Dibromo-3-Chloropropane	ND		5.00	1	08/03/2018 18:10	WG1147411
1,2-Dibromoethane	ND		1.00	1	08/03/2018 18:10	WG1147411
1,2-Dichlorobenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
1,3-Dichlorobenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
1,4-Dichlorobenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
Dichlorodifluoromethane	ND		5.00	1	08/03/2018 18:10	WG1147411
1,1-Dichloroethane	ND		1.00	1	08/03/2018 18:10	WG1147411
1,2-Dichloroethane	ND		1.00	1	08/03/2018 18:10	WG1147411
1,1-Dichloroethene	ND		1.00	1	08/03/2018 18:10	WG1147411
cis-1,2-Dichloroethene	ND		1.00	1	08/03/2018 18:10	WG1147411
trans-1,2-Dichloroethene	ND		1.00	1	08/03/2018 18:10	WG1147411
1,2-Dichloropropane	ND		1.00	1	08/03/2018 18:10	WG1147411
cis-1,3-Dichloropropene	ND		1.00	1	08/03/2018 18:10	WG1147411
trans-1,3-Dichloropropene	ND		1.00	1	08/03/2018 18:10	WG1147411
Ethylbenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
2-Hexanone	ND		10.0	1	08/03/2018 18:10	WG1147411
Isopropylbenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
2-Butanone (MEK)	ND		10.0	1	08/03/2018 18:10	WG1147411
Methyl Acetate	ND		20.0	1	08/03/2018 18:10	WG1147411
Methyl Cyclohexane	ND		1.00	1	08/03/2018 18:10	WG1147411
Methylene Chloride	ND		5.00	1	08/03/2018 18:10	WG1147411
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	08/03/2018 18:10	WG1147411
Methyl tert-butyl ether	ND		1.00	1	08/03/2018 18:10	WG1147411
Styrene	ND		1.00	1	08/03/2018 18:10	WG1147411
1,1,2,2-Tetrachloroethane	ND		1.00	1	08/03/2018 18:10	WG1147411
Tetrachloroethene	ND		1.00	1	08/03/2018 18:10	WG1147411
Toluene	ND		1.00	1	08/03/2018 18:10	WG1147411
1,2,3-Trichlorobenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
1,2,4-Trichlorobenzene	ND		1.00	1	08/03/2018 18:10	WG1147411
1,1,1-Trichloroethane	ND		1.00	1	08/03/2018 18:10	WG1147411
1,1,2-Trichloroethane	ND		1.00	1	08/03/2018 18:10	WG1147411
Trichloroethene	ND		1.00	1	08/03/2018 18:10	WG1147411
Trichlorofluoromethane	ND	J4	5.00	1	08/03/2018 18:10	WG1147411
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	08/03/2018 18:10	WG1147411
Vinyl chloride	ND	J4	1.00	1	08/03/2018 18:10	WG1147411
Xylenes, Total	ND		3.00	1	08/03/2018 18:10	WG1147411
(S) Toluene-d8	*106*		*80.0-120*		*08/03/2018 18:10*	WG1147411
(S) Dibromofluoromethane	*101*		*76.0-123*		*08/03/2018 18:10*	WG1147411
(S) a,a,a-Trifluorotoluene	*94.1*		*80.0-120*		*08/03/2018 18:10*	WG1147411
(S) 4-Bromofluorobenzene	*86.1*		*80.0-120*		*08/03/2018 18:10*	WG1147411

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	123		1.00	1	08/03/2018 23:08	WG1147411
Toluene	9.67		1.00	1	08/03/2018 23:08	WG1147411
Ethylbenzene	4.46		1.00	1	08/03/2018 23:08	WG1147411
Total Xylenes	93.2		3.00	1	08/03/2018 23:08	WG1147411
Methyl tert-butyl ether	183		1.00	1	08/03/2018 23:08	WG1147411
Naphthalene	ND		5.00	1	08/03/2018 23:08	WG1147411
1,2-Dichloroethane	ND		1.00	1	08/03/2018 23:08	WG1147411
(S) Toluene-d8	*103*		*80.0-120*		*08/03/2018 23:08*	WG1147411
(S) Dibromofluoromethane	*94.7*		*76.0-123*		*08/03/2018 23:08*	WG1147411
(S) 4-Bromofluorobenzene	*87.4*		*80.0-120*		*08/03/2018 23:08*	WG1147411

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	414		10.0	10	08/05/2018 00:51	WG1147794
Toluene	32.6		1.00	1	08/03/2018 23:28	WG1147411
Ethylbenzene	5.27		1.00	1	08/03/2018 23:28	WG1147411
Total Xylenes	53.6		3.00	1	08/03/2018 23:28	WG1147411
Methyl tert-butyl ether	147		10.0	10	08/05/2018 00:51	WG1147794
Naphthalene	ND		5.00	1	08/03/2018 23:28	WG1147411
1,2-Dichloroethane	ND		1.00	1	08/03/2018 23:28	WG1147411
(S) Toluene-d8	*103*		*80.0-120*		*08/03/2018 23:28*	WG1147411
(S) Toluene-d8	*104*		*80.0-120*		*08/05/2018 00:51*	WG1147794
(S) Dibromofluoromethane	*92.4*		*76.0-123*		*08/03/2018 23:28*	WG1147411
(S) Dibromofluoromethane	*67.7*	J2	*76.0-123*		*08/05/2018 00:51*	WG1147794
(S) 4-Bromofluorobenzene	*89.0*		*80.0-120*		*08/03/2018 23:28*	WG1147411
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*08/05/2018 00:51*	WG1147794

Method Blank (MB)

(MB) R3330964-5 08/03/18 14:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00

Method Blank (MB)

(MB) R3330964-5 08/03/18 14:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*101*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*95.0*			*80.0-120*
(S) 4-Bromofluorobenzene	*86.4*			*80.0-120*

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

(LCS) R3330964-1 08/03/18 12:50 • (LCSD) R3330964-2 08/03/18 13:10

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 %
Acetone	125	131	136	105	109	70.0-130			3.94	23.9
Benzene	25.0	25.1	24.2	100	96.6	70.0-130			3.69	20
Bromodichloromethane	25.0	25.6	25.1	103	100	70.0-130			2.11	20
Bromochloromethane	25.0	23.8	23.7	95.3	95.0	70.0-130			0.384	20
Bromoform	25.0	20.1	20.6	80.6	82.6	70.0-130			2.46	20
Bromomethane	25.0	19.0	20.3	76.2	81.3	70.0-130			6.55	20
Carbon disulfide	25.0	20.9	19.9	83.5	79.7	70.0-130			4.72	20
Carbon tetrachloride	25.0	24.9	23.2	99.7	92.7	70.0-130			7.34	20
Chlorobenzene	25.0	23.8	23.0	95.1	92.2	70.0-130			3.13	20
Chlorodibromomethane	25.0	21.8	22.3	87.0	89.2	70.0-130			2.53	20
Chloroethane	25.0	38.9	35.9	155	144	70.0-130	J4	J4	7.99	20
Chloroform	25.0	27.2	25.5	109	102	70.0-130			6.43	20
Chloromethane	25.0	34.6	29.2	138	117	70.0-130	J4		16.9	20
1,2-Dibromo-3-Chloropropane	25.0	25.5	26.0	102	104	70.0-130			1.99	20
1,2-Dibromoethane	25.0	23.4	23.0	93.6	92.1	70.0-130			1.58	20
1,2-Dichlorobenzene	25.0	26.7	26.4	107	106	70.0-130			1.11	20
1,3-Dichlorobenzene	25.0	24.5	23.9	98.1	95.5	70.0-130			2.70	20
1,4-Dichlorobenzene	25.0	24.6	24.4	98.4	97.4	70.0-130			0.970	20

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

(LCS) R3330964-1 08/03/18 12:50 • (LCSD) R3330964-2 08/03/18 13:10

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 %
Dichlorodifluoromethane	25.0	27.3	26.2	109	105	70.0-130			4.23	20
1,1-Dichloroethane	25.0	27.1	25.6	109	102	70.0-130			5.78	20
1,2-Dichloroethane	25.0	28.1	26.9	112	108	70.0-130			4.39	20
1,1-Dichloroethene	25.0	24.1	23.3	96.4	93.2	70.0-130			3.32	20
cis-1,2-Dichloroethene	25.0	24.5	23.2	98.1	92.9	70.0-130			5.44	20
trans-1,2-Dichloroethene	25.0	25.1	24.3	100	97.2	70.0-130			3.27	20
1,2-Dichloropropane	25.0	26.6	25.8	106	103	70.0-130			3.16	20
cis-1,3-Dichloropropene	25.0	24.7	24.7	98.8	98.9	70.0-130			0.186	20
trans-1,3-Dichloropropene	25.0	24.3	24.2	97.2	96.9	70.0-130			0.345	20
Ethylbenzene	25.0	23.0	22.4	91.9	89.6	70.0-130			2.53	20
2-Hexanone	125	134	133	107	107	70.0-130			0.650	20
Isopropylbenzene	25.0	19.8	20.8	79.3	83.0	70.0-130			4.62	20
2-Butanone (MEK)	125	132	128	105	102	70.0-130			3.05	20
Methylene Chloride	25.0	23.7	22.6	94.7	90.3	70.0-130			4.83	20
4-Methyl-2-pentanone (MIBK)	125	129	128	103	102	70.0-130			1.36	20
Methyl tert-butyl ether	25.0	26.5	25.1	106	101	70.0-130			5.19	20
Naphthalene	25.0	23.6	24.1	94.5	96.5	70.0-130			2.05	20
Styrene	25.0	20.1	20.8	80.4	83.2	70.0-130			3.50	20
1,1,2,2-Tetrachloroethane	25.0	25.5	25.1	102	100	70.0-130			1.47	20
Tetrachloroethene	25.0	22.2	22.1	88.8	88.4	70.0-130			0.494	20
Toluene	25.0	23.1	22.6	92.3	90.4	70.0-130			2.10	20
1,1,2-Trichlorotrifluoroethane	25.0	24.2	23.4	96.9	93.6	70.0-130			3.44	20
1,2,3-Trichlorobenzene	25.0	24.2	24.4	96.8	97.5	70.0-130			0.621	20
1,2,4-Trichlorobenzene	25.0	24.1	24.6	96.5	98.4	70.0-130			1.92	20
1,1,1-Trichloroethane	25.0	25.3	24.1	101	96.3	70.0-130			5.09	20
1,1,2-Trichloroethane	25.0	23.8	23.7	95.3	94.7	70.0-130			0.596	20
Trichloroethene	25.0	23.3	22.4	93.4	89.8	70.0-130			3.92	20
Trichlorofluoromethane	25.0	34.5	29.7	138	119	70.0-130	J4		15.1	20
Vinyl chloride	25.0	38.2	35.6	153	142	70.0-130	J4	J4	6.98	20
Xylenes, Total	75.0	66.7	67.2	88.9	89.6	70.0-130			0.747	20
(S) Toluene-d8				*97.3*	*98.8*	*80.0-120*				
(S) Dibromofluoromethane				*101*	*99.3*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*91.1*	*93.5*	*80.0-120*				
(S) 4-Bromofluorobenzene				*83.0*	*84.5*	*80.0-120*				

Method Blank (MB)

(MB) R3330971-3 08/04/18 21:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*108*			*76.0-123*
(S) 4-Bromofluorobenzene	*109*			*80.0-120*

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

(LCS) R3330971-1 08/04/18 20:38 • (LCSD) R3330971-2 08/04/18 20:57

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	%	%	%			%	%
Benzene	25.0	26.5	26.8	106	107	70.0-130			0.788	20
Methyl tert-butyl ether	25.0	25.9	25.5	104	102	70.0-130			1.56	20
Xylenes, Total	75.0	73.1	75.4	97.5	101	70.0-130			3.10	20
(S) Toluene-d8				*102*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*104*	*104*	*76.0-123*				
(S) 4-Bromofluorobenzene				*107*	*106*	*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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J4	The associated batch QC was outside the established quality control range for accuracy.
V3	The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

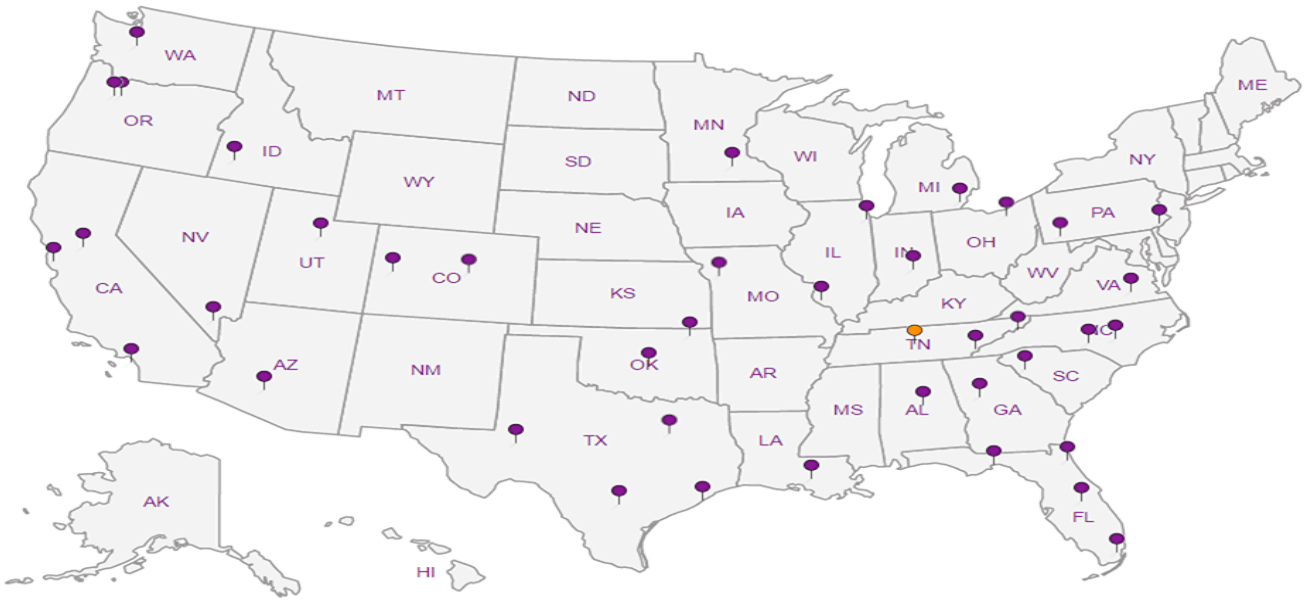
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Report to: Bethany Garvey

Email To: bgarvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.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 ___ 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	V8260TCLSC-Trip Blan 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-17B-080218	GRAB	GW	NA	08/02/18	0945	3	X			-01
MW-17B-D-080218		GW			0945	3	X			-02
MW-46-080218		GW			1105	3	X			-03
MW-23-080218		GW			1155	3	X			-04
FB01-080218		GW			1255	3	X		FIELD BLANK	-05
TB01-080218		GW			1300	1		X	TRIP BLANK	-06
MW-40-080218		GW			1329	3	X			-07
MW-34-080218		GW			1350	3	X			-08
		GW								
		GW								

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

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

L# 104519
A107

Acctnum: KINCH2MGA
Template: T122208
Prelogin: P664759
TSR: 526 - Chris McCord
PB: TB 7-30-18
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 # 4492 6220 1431

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
2 of 5 MR/HR

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	08/02/18	1600		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.4 °C Bottles Received: 21	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/3/18 Time: 0845	Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 20, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1024877
Samples Received:	09/12/2018
Project Number:	699858.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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-29-091118 L1024877-01 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 13:10 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/12/18 23:16	09/12/18 23:16	TJJ

MW-26B-091118 L1024877-02 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 13:20 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/12/18 23:36	09/12/18 23:36	TJJ

MW-26B-D-091118 L1024877-03 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 13:21 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/12/18 23:55	09/12/18 23:55	TJJ

MW-26-091118 L1024877-04 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 13:28 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 00:15	09/13/18 00:15	TJJ

MW-23-091118 L1024877-05 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 13:40 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 00:34	09/13/18 00:34	TJJ

MW-23B-091118 L1024877-06 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 13:45 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 00:53	09/13/18 00:53	TJJ

MW-46-091118 L1024877-07 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 13:55 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 01:13	09/13/18 01:13	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166498	10	09/14/18 20:53	09/14/18 20:53	ACG

MW-45B-091118 L1024877-08 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 14:00 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 01:32	09/13/18 01:32	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166498	1	09/14/18 21:13	09/14/18 21:13	ACG

MW-21-091118 L1024877-09 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 14:10 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 01:52	09/13/18 01:52	TJJ

MW-17B-091118 L1024877-10 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 14:15 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	50	09/13/18 02:11	09/13/18 02:11	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166498	200	09/14/18 21:33	09/14/18 21:33	ACG

MW-44B-091118 L1024877-11 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 14:45 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 02:30	09/13/18 02:30	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166498	1	09/14/18 21:53	09/14/18 21:53	ACG

MW-01B-091118 L1024877-12 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 14:55 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 02:50	09/13/18 02:50	TJJ

MW-01-091118 L1024877-13 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 15:00 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167316	1	09/17/18 17:22	09/17/18 17:22	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167316	1	09/17/18 17:22	09/17/18 17:22	GB
Wet Chemistry by Method 9056A	WG1165009	1	09/12/18 19:36	09/12/18 19:36	MAJ
Volatile Organic Compounds (GC) by Method RSK175	WG1165117	1	09/13/18 14:19	09/13/18 14:19	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 03:09	09/13/18 03:09	TJJ

MW-27B-091118 L1024877-14 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 15:05 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 03:28	09/13/18 03:28	TJJ

MW-27-091118 L1024877-15 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 15:10 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167662	1	09/18/18 16:50	09/18/18 16:50	BMB

MW-12B-091118 L1024877-16 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 15:30 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 04:07	09/13/18 04:07	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166498	5	09/14/18 22:13	09/14/18 22:13	ACG

MW-12-091118 L1024877-17 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 15:35 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167316	1	09/17/18 17:28	09/17/18 17:28	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167316	1	09/17/18 17:28	09/17/18 17:28	GB
Wet Chemistry by Method 9056A	WG1165009	1	09/12/18 19:50	09/12/18 19:50	MAJ
Volatile Organic Compounds (GC) by Method RSK175	WG1165117	1	09/13/18 14:21	09/13/18 14:21	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 04:27	09/13/18 04:27	TJJ

MW-28-091118 L1024877-18 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 15:55 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167316	1	09/17/18 17:35	09/17/18 17:35	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167316	1	09/17/18 17:35	09/17/18 17:35	GB
Wet Chemistry by Method 9056A	WG1165009	1	09/12/18 20:33	09/12/18 20:33	MAJ
Volatile Organic Compounds (GC) by Method RSK175	WG1165117	1	09/13/18 14:24	09/13/18 14:24	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 04:46	09/13/18 04:46	TJJ

MW-35-091118 L1024877-19 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 16:30 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167316	1	09/17/18 17:41	09/17/18 17:41	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167316	1	09/17/18 17:41	09/17/18 17:41	GB
Wet Chemistry by Method 9056A	WG1165009	1	09/12/18 20:48	09/12/18 20:48	MAJ
Volatile Organic Compounds (GC) by Method RSK175	WG1165117	1	09/13/18 14:28	09/13/18 14:28	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 05:05	09/13/18 05:05	TJJ

MW-49-091118 L1024877-20 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 16:10 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165288	1	09/13/18 05:25	09/13/18 05:25	TJJ

FB01-091118 L1024877-21 GW

Collected by: Melissa Warren | Collected date/time: 09/11/18 16:02 | Received date/time: 09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165489	1	09/14/18 03:14	09/14/18 03:14	PP

TB01-091118 L1024877-22 GW

Collected by	Collected date/time	Received date/time
Melissa Warren	09/11/18 16:03	09/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1164993	1	09/12/18 14:17	09/12/18 14:17	PP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Sample Handling and Receiving

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1024877-21	FB01-091118	8260B
L1024877-22	TB01-091118	8260B

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	09/12/2018 23:16	WG1165288
Toluene	ND		1.00	1	09/12/2018 23:16	WG1165288
Ethylbenzene	ND		1.00	1	09/12/2018 23:16	WG1165288
Total Xylenes	ND		3.00	1	09/12/2018 23:16	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/12/2018 23:16	WG1165288
Naphthalene	ND		5.00	1	09/12/2018 23:16	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/12/2018 23:16	WG1165288
(S) Toluene-d8	*100*		*80.0-120*		*09/12/2018 23:16*	WG1165288
(S) Dibromofluoromethane	*92.9*		*75.0-120*		*09/12/2018 23:16*	WG1165288
(S) 4-Bromofluorobenzene	*96.8*		*77.0-126*		*09/12/2018 23:16*	WG1165288

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	09/12/2018 23:36	WG1165288
Toluene	ND		1.00	1	09/12/2018 23:36	WG1165288
Ethylbenzene	ND		1.00	1	09/12/2018 23:36	WG1165288
Total Xylenes	ND		3.00	1	09/12/2018 23:36	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/12/2018 23:36	WG1165288
Naphthalene	ND		5.00	1	09/12/2018 23:36	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/12/2018 23:36	WG1165288
(S) Toluene-d8	*104*		*80.0-120*		*09/12/2018 23:36*	WG1165288
(S) Dibromofluoromethane	*94.7*		*75.0-120*		*09/12/2018 23:36*	WG1165288
(S) 4-Bromofluorobenzene	*92.6*		*77.0-126*		*09/12/2018 23:36*	WG1165288

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	09/12/2018 23:55	WG1165288
Toluene	ND		1.00	1	09/12/2018 23:55	WG1165288
Ethylbenzene	ND		1.00	1	09/12/2018 23:55	WG1165288
Total Xylenes	ND		3.00	1	09/12/2018 23:55	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/12/2018 23:55	WG1165288
Naphthalene	ND		5.00	1	09/12/2018 23:55	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/12/2018 23:55	WG1165288
(S) Toluene-d8	*99.7*		*80.0-120*		*09/12/2018 23:55*	WG1165288
(S) Dibromofluoromethane	*95.0*		*75.0-120*		*09/12/2018 23:55*	WG1165288
(S) 4-Bromofluorobenzene	*93.0*		*77.0-126*		*09/12/2018 23:55*	WG1165288

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	09/13/2018 00:15	WG1165288
Toluene	ND		1.00	1	09/13/2018 00:15	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 00:15	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 00:15	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 00:15	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 00:15	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 00:15	WG1165288
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 00:15*	WG1165288
(S) Dibromofluoromethane	*92.7*		*75.0-120*		*09/13/2018 00:15*	WG1165288
(S) 4-Bromofluorobenzene	*94.5*		*77.0-126*		*09/13/2018 00:15*	WG1165288

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.30		1.00	1	09/13/2018 00:34	WG1165288
Toluene	ND		1.00	1	09/13/2018 00:34	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 00:34	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 00:34	WG1165288
Methyl tert-butyl ether	11.0		1.00	1	09/13/2018 00:34	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 00:34	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 00:34	WG1165288
(S) Toluene-d8	*98.2*		*80.0-120*		*09/13/2018 00:34*	WG1165288
(S) Dibromofluoromethane	*96.3*		*75.0-120*		*09/13/2018 00:34*	WG1165288
(S) 4-Bromofluorobenzene	*96.9*		*77.0-126*		*09/13/2018 00:34*	WG1165288

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	09/13/2018 00:53	WG1165288
Toluene	1.24		1.00	1	09/13/2018 00:53	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 00:53	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 00:53	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 00:53	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 00:53	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 00:53	WG1165288
(S) Toluene-d8	*100*		*80.0-120*		*09/13/2018 00:53*	WG1165288
(S) Dibromofluoromethane	*90.7*		*75.0-120*		*09/13/2018 00:53*	WG1165288
(S) 4-Bromofluorobenzene	*93.9*		*77.0-126*		*09/13/2018 00:53*	WG1165288

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1510		10.0	10	09/14/2018 20:53	WG1166498
Toluene	64.0		1.00	1	09/13/2018 01:13	WG1165288
Ethylbenzene	6.81		1.00	1	09/13/2018 01:13	WG1165288
Total Xylenes	597		30.0	10	09/14/2018 20:53	WG1166498
Methyl tert-butyl ether	311		10.0	10	09/14/2018 20:53	WG1166498
Naphthalene	23.4		5.00	1	09/13/2018 01:13	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 01:13	WG1165288
(S) Toluene-d8	*101*		*80.0-120*		*09/13/2018 01:13*	WG1165288
(S) Toluene-d8	*100*		*80.0-120*		*09/14/2018 20:53*	WG1166498
(S) Dibromofluoromethane	*112*		*75.0-120*		*09/13/2018 01:13*	WG1165288
(S) Dibromofluoromethane	*103*		*75.0-120*		*09/14/2018 20:53*	WG1166498
(S) 4-Bromofluorobenzene	*95.9*		*77.0-126*		*09/13/2018 01:13*	WG1165288
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*09/14/2018 20:53*	WG1166498

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	09/13/2018 01:32	WG1165288
Toluene	1.16		1.00	1	09/13/2018 01:32	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 01:32	WG1165288
Total Xylenes	ND		3.00	1	09/14/2018 21:13	WG1166498
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 01:32	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 01:32	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 01:32	WG1165288
(S) Toluene-d8	*99.4*		*80.0-120*		*09/13/2018 01:32*	WG1165288
(S) Toluene-d8	*97.4*		*80.0-120*		*09/14/2018 21:13*	WG1166498
(S) Dibromofluoromethane	*95.1*		*75.0-120*		*09/13/2018 01:32*	WG1165288
(S) Dibromofluoromethane	*106*		*75.0-120*		*09/14/2018 21:13*	WG1166498
(S) 4-Bromofluorobenzene	*95.3*		*77.0-126*		*09/13/2018 01:32*	WG1165288
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*09/14/2018 21:13*	WG1166498

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	09/13/2018 01:52	WG1165288
Toluene	ND		1.00	1	09/13/2018 01:52	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 01:52	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 01:52	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 01:52	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 01:52	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 01:52	WG1165288
(S) Toluene-d8	*103*		*80.0-120*		*09/13/2018 01:52*	WG1165288
(S) Dibromofluoromethane	*93.5*		*75.0-120*		*09/13/2018 01:52*	WG1165288
(S) 4-Bromofluorobenzene	*96.9*		*77.0-126*		*09/13/2018 01:52*	WG1165288

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	8180		50.0	50	09/13/2018 02:11	WG1165288
Toluene	20200		200	200	09/14/2018 21:33	WG1166498
Ethylbenzene	1370		50.0	50	09/13/2018 02:11	WG1165288
Total Xylenes	9660		150	50	09/13/2018 02:11	WG1165288
Methyl tert-butyl ether	832		50.0	50	09/13/2018 02:11	WG1165288
Naphthalene	ND		250	50	09/13/2018 02:11	WG1165288
1,2-Dichloroethane	ND		50.0	50	09/13/2018 02:11	WG1165288
(S) Toluene-d8	*103*		*80.0-120*		*09/13/2018 02:11*	WG1165288
(S) Toluene-d8	*101*		*80.0-120*		*09/14/2018 21:33*	WG1166498
(S) Dibromofluoromethane	*97.8*		*75.0-120*		*09/13/2018 02:11*	WG1165288
(S) Dibromofluoromethane	*101*		*75.0-120*		*09/14/2018 21:33*	WG1166498
(S) 4-Bromofluorobenzene	*93.5*		*77.0-126*		*09/13/2018 02:11*	WG1165288
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*09/14/2018 21:33*	WG1166498

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	09/13/2018 02:30	WG1165288
Toluene	ND		1.00	1	09/14/2018 21:53	WG1166498
Ethylbenzene	ND		1.00	1	09/13/2018 02:30	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 02:30	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 02:30	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 02:30	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 02:30	WG1165288
(S) Toluene-d8	*103*		*80.0-120*		*09/13/2018 02:30*	WG1165288
(S) Toluene-d8	*103*		*80.0-120*		*09/14/2018 21:53*	WG1166498
(S) Dibromofluoromethane	*93.7*		*75.0-120*		*09/13/2018 02:30*	WG1165288
(S) Dibromofluoromethane	*103*		*75.0-120*		*09/14/2018 21:53*	WG1166498
(S) 4-Bromofluorobenzene	*92.8*		*77.0-126*		*09/13/2018 02:30*	WG1165288
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*09/14/2018 21:53*	WG1166498

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	11.1		1.00	1	09/13/2018 02:50	WG1165288
Toluene	ND		1.00	1	09/13/2018 02:50	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 02:50	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 02:50	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 02:50	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 02:50	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 02:50	WG1165288
(S) Toluene-d8	*104*		*80.0-120*		*09/13/2018 02:50*	WG1165288
(S) Dibromofluoromethane	*88.8*		*75.0-120*		*09/13/2018 02:50*	WG1165288
(S) 4-Bromofluorobenzene	*95.4*		*77.0-126*		*09/13/2018 02:50*	WG1165288

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/17/2018 17:22	WG1167316

Sample Narrative:
L1024877-13 WG1167316: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	75900	T8	20000	1	09/17/2018 17:22	WG1167316

Sample Narrative:
L1024877-13 WG1167316: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	09/12/2018 19:36	WG1165009
Sulfate	ND		5000	1	09/12/2018 19:36	WG1165009

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	09/13/2018 14:19	WG1165117

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.02		1.00	1	09/13/2018 03:09	WG1165288
Toluene	ND		1.00	1	09/13/2018 03:09	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 03:09	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 03:09	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 03:09	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 03:09	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 03:09	WG1165288
(S) Toluene-d8	*100*		*80.0-120*		*09/13/2018 03:09*	WG1165288
(S) Dibromofluoromethane	*93.2*		*75.0-120*		*09/13/2018 03:09*	WG1165288
(S) 4-Bromofluorobenzene	*93.2*		*77.0-126*		*09/13/2018 03:09*	WG1165288

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	09/13/2018 03:28	WG1165288
Toluene	5.65		1.00	1	09/13/2018 03:28	WG1165288
Ethylbenzene	2.98		1.00	1	09/13/2018 03:28	WG1165288
Total Xylenes	25.0		3.00	1	09/13/2018 03:28	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 03:28	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 03:28	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 03:28	WG1165288
(S) Toluene-d8	*98.6*		*80.0-120*		*09/13/2018 03:28*	WG1165288
(S) Dibromofluoromethane	*94.6*		*75.0-120*		*09/13/2018 03:28*	WG1165288
(S) 4-Bromofluorobenzene	*94.0*		*77.0-126*		*09/13/2018 03:28*	WG1165288

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.06		1.00	1	09/18/2018 16:50	WG1167662
Toluene	7.44		1.00	1	09/18/2018 16:50	WG1167662
Ethylbenzene	2.94		1.00	1	09/18/2018 16:50	WG1167662
Total Xylenes	25.6		3.00	1	09/18/2018 16:50	WG1167662
Methyl tert-butyl ether	ND		1.00	1	09/18/2018 16:50	WG1167662
Naphthalene	ND		5.00	1	09/18/2018 16:50	WG1167662
1,2-Dichloroethane	ND		1.00	1	09/18/2018 16:50	WG1167662
(S) Toluene-d8	*100*		*80.0-120*		*09/18/2018 16:50*	WG1167662
(S) Dibromofluoromethane	*117*		*75.0-120*		*09/18/2018 16:50*	WG1167662
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*09/18/2018 16:50*	WG1167662

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	246		5.00	5	09/14/2018 22:13	WG1166498
Toluene	2.87		1.00	1	09/13/2018 04:07	WG1165288
Ethylbenzene	39.8		1.00	1	09/13/2018 04:07	WG1165288
Total Xylenes	68.0		3.00	1	09/13/2018 04:07	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 04:07	WG1165288
Naphthalene	18.7		5.00	1	09/13/2018 04:07	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 04:07	WG1165288
(S) Toluene-d8	*96.8*		*80.0-120*		*09/13/2018 04:07*	WG1165288
(S) Toluene-d8	*101*		*80.0-120*		*09/14/2018 22:13*	WG1166498
(S) Dibromofluoromethane	*97.0*		*75.0-120*		*09/13/2018 04:07*	WG1165288
(S) Dibromofluoromethane	*104*		*75.0-120*		*09/14/2018 22:13*	WG1166498
(S) 4-Bromofluorobenzene	*94.3*		*77.0-126*		*09/13/2018 04:07*	WG1165288
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*09/14/2018 22:13*	WG1166498

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	09/17/2018 17:28	WG1167316

Sample Narrative:
L1024877-17 WG1167316: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Free Carbon Dioxide	ND	T8	20000	1	09/17/2018 17:28	WG1167316

Sample Narrative:
L1024877-17 WG1167316: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	154		100	1	09/12/2018 19:50	WG1165009
Sulfate	ND		5000	1	09/12/2018 19:50	WG1165009

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/13/2018 14:21	WG1165117

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	09/13/2018 04:27	WG1165288
Toluene	ND		1.00	1	09/13/2018 04:27	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 04:27	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 04:27	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 04:27	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 04:27	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 04:27	WG1165288
(S) Toluene-d8	*100*		*80.0-120*		*09/13/2018 04:27*	WG1165288
(S) Dibromofluoromethane	*94.1*		*75.0-120*		*09/13/2018 04:27*	WG1165288
(S) 4-Bromofluorobenzene	*94.6*		*77.0-126*		*09/13/2018 04:27*	WG1165288

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	83900		20000	1	09/17/2018 17:35	WG1167316

Sample Narrative:
L1024877-18 WG1167316: Endpoint pH 4.5 headspace

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	09/17/2018 17:35	WG1167316

Sample Narrative:
L1024877-18 WG1167316: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	09/12/2018 20:33	WG1165009
Sulfate	74200		5000	1	09/12/2018 20:33	WG1165009

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	49.7		10.0	1	09/13/2018 14:24	WG1165117

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	28.0		1.00	1	09/13/2018 04:46	WG1165288
Toluene	3.66		1.00	1	09/13/2018 04:46	WG1165288
Ethylbenzene	25.2		1.00	1	09/13/2018 04:46	WG1165288
Total Xylenes	4.89		3.00	1	09/13/2018 04:46	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 04:46	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 04:46	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 04:46	WG1165288
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 04:46*	WG1165288
(S) Dibromofluoromethane	*95.6*		*75.0-120*		*09/13/2018 04:46*	WG1165288
(S) 4-Bromofluorobenzene	*98.2*		*77.0-126*		*09/13/2018 04:46*	WG1165288

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/17/2018 17:41	WG1167316

Sample Narrative:
L1024877-19 WG1167316: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	23100	T8	20000	1	09/17/2018 17:41	WG1167316

Sample Narrative:
L1024877-19 WG1167316: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	1450		100	1	09/12/2018 20:48	WG1165009
Sulfate	ND		5000	1	09/12/2018 20:48	WG1165009

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	09/13/2018 14:28	WG1165117

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	09/13/2018 05:05	WG1165288
Toluene	ND		1.00	1	09/13/2018 05:05	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 05:05	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 05:05	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 05:05	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 05:05	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 05:05	WG1165288
(S) Toluene-d8	*99.0*		*80.0-120*		*09/13/2018 05:05*	WG1165288
(S) Dibromofluoromethane	*93.4*		*75.0-120*		*09/13/2018 05:05*	WG1165288
(S) 4-Bromofluorobenzene	*92.9*		*77.0-126*		*09/13/2018 05:05*	WG1165288

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	09/13/2018 05:25	WG1165288
Toluene	ND		1.00	1	09/13/2018 05:25	WG1165288
Ethylbenzene	ND		1.00	1	09/13/2018 05:25	WG1165288
Total Xylenes	ND		3.00	1	09/13/2018 05:25	WG1165288
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 05:25	WG1165288
Naphthalene	ND		5.00	1	09/13/2018 05:25	WG1165288
1,2-Dichloroethane	ND		1.00	1	09/13/2018 05:25	WG1165288
(S) Toluene-d8	*101*		*80.0-120*		*09/13/2018 05:25*	WG1165288
(S) Dibromofluoromethane	*95.4*		*75.0-120*		*09/13/2018 05:25*	WG1165288
(S) 4-Bromofluorobenzene	*98.2*		*77.0-126*		*09/13/2018 05:25*	WG1165288

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	09/14/2018 03:14	WG1165489
Toluene	ND		1.00	1	09/14/2018 03:14	WG1165489
Ethylbenzene	ND		1.00	1	09/14/2018 03:14	WG1165489
Total Xylenes	ND		3.00	1	09/14/2018 03:14	WG1165489
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 03:14	WG1165489
Naphthalene	ND		5.00	1	09/14/2018 03:14	WG1165489
1,2-Dichloroethane	ND		1.00	1	09/14/2018 03:14	WG1165489
(S) Toluene-d8	*99.5*		*80.0-120*		*09/14/2018 03:14*	WG1165489
(S) Dibromofluoromethane	*94.6*		*75.0-120*		*09/14/2018 03:14*	WG1165489
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/14/2018 03:14*	WG1165489

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	09/12/2018 14:17	WG1164993
Benzene	ND		1.00	1	09/12/2018 14:17	WG1164993
Bromochloromethane	ND		1.00	1	09/12/2018 14:17	WG1164993
Bromodichloromethane	ND		1.00	1	09/12/2018 14:17	WG1164993
Bromoform	ND		1.00	1	09/12/2018 14:17	WG1164993
Bromomethane	ND		5.00	1	09/12/2018 14:17	WG1164993
Carbon disulfide	ND		1.00	1	09/12/2018 14:17	WG1164993
Carbon tetrachloride	ND		1.00	1	09/12/2018 14:17	WG1164993
Chlorobenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
Chlorodibromomethane	ND		1.00	1	09/12/2018 14:17	WG1164993
Chloroethane	ND		5.00	1	09/12/2018 14:17	WG1164993
Chloroform	ND		5.00	1	09/12/2018 14:17	WG1164993
Chloromethane	ND		2.50	1	09/12/2018 14:17	WG1164993
Cyclohexane	ND		1.00	1	09/12/2018 14:17	WG1164993
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/12/2018 14:17	WG1164993
1,2-Dibromoethane	ND		1.00	1	09/12/2018 14:17	WG1164993
1,2-Dichlorobenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
1,3-Dichlorobenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
1,4-Dichlorobenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
Dichlorodifluoromethane	ND		5.00	1	09/12/2018 14:17	WG1164993
1,1-Dichloroethane	ND		1.00	1	09/12/2018 14:17	WG1164993
1,2-Dichloroethane	ND		1.00	1	09/12/2018 14:17	WG1164993
1,1-Dichloroethene	ND		1.00	1	09/12/2018 14:17	WG1164993
cis-1,2-Dichloroethene	ND		1.00	1	09/12/2018 14:17	WG1164993
trans-1,2-Dichloroethene	ND		1.00	1	09/12/2018 14:17	WG1164993
1,2-Dichloropropane	ND		1.00	1	09/12/2018 14:17	WG1164993
cis-1,3-Dichloropropene	ND		1.00	1	09/12/2018 14:17	WG1164993
trans-1,3-Dichloropropene	ND		1.00	1	09/12/2018 14:17	WG1164993
Ethylbenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
2-Hexanone	ND		10.0	1	09/12/2018 14:17	WG1164993
Isopropylbenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
2-Butanone (MEK)	ND		10.0	1	09/12/2018 14:17	WG1164993
Methyl Acetate	ND		20.0	1	09/12/2018 14:17	WG1164993
Methyl Cyclohexane	ND		1.00	1	09/12/2018 14:17	WG1164993
Methylene Chloride	ND		5.00	1	09/12/2018 14:17	WG1164993
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/12/2018 14:17	WG1164993
Methyl tert-butyl ether	ND		1.00	1	09/12/2018 14:17	WG1164993
Styrene	ND		1.00	1	09/12/2018 14:17	WG1164993
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/12/2018 14:17	WG1164993
Tetrachloroethene	ND		1.00	1	09/12/2018 14:17	WG1164993
Toluene	ND		1.00	1	09/12/2018 14:17	WG1164993
1,2,3-Trichlorobenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
1,2,4-Trichlorobenzene	ND		1.00	1	09/12/2018 14:17	WG1164993
1,1,1-Trichloroethane	ND		1.00	1	09/12/2018 14:17	WG1164993
1,1,2-Trichloroethane	ND		1.00	1	09/12/2018 14:17	WG1164993
Trichloroethene	ND		1.00	1	09/12/2018 14:17	WG1164993
Trichlorofluoromethane	ND		5.00	1	09/12/2018 14:17	WG1164993
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/12/2018 14:17	WG1164993
Vinyl chloride	ND		1.00	1	09/12/2018 14:17	WG1164993
Xylenes, Total	ND		3.00	1	09/12/2018 14:17	WG1164993
(S) Toluene-d8	*99.9*		*80.0-120*		*09/12/2018 14:17*	WG1164993
(S) Dibromofluoromethane	*104*		*75.0-120*		*09/12/2018 14:17*	WG1164993
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*09/12/2018 14:17*	WG1164993
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*09/12/2018 14:17*	WG1164993

Method Blank (MB)

(MB) R3342580-1 09/17/18 14:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		2710	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1024455-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1024455-01 09/17/18 14:28 • (DUP) R3342580-5 09/17/18 14:36

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	209000	209000	1	0.0267		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1026210-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1026210-01 09/17/18 18:18 • (DUP) R3342580-11 09/17/18 18:24

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	34100	34100	1	0.133		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

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

(LCS) R3342580-9 09/17/18 15:38 • (LCSD) R3342580-10 09/17/18 18:02

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	104000	100000	104	100	85.0-115			3.29	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

Method Blank (MB)

(MB) R3342580-2 09/17/18 14:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Free Carbon Dioxide	U		6670	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1024455-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1024455-01 09/17/18 14:28 • (DUP) R3342580-6 09/17/18 14:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1026210-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1026210-01 09/17/18 18:18 • (DUP) R3342580-12 09/17/18 18:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	ND	ND	1	9.98	J	20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3341447-1 09/12/18 14:09

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

L1024860-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1024860-04 09/12/18 16:14 • (DUP) R3341447-4 09/12/18 16:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	ND	69.0	1	0.000		15
Sulfate	ND	1650	1	0.000		15

L1024869-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1024869-08 09/12/18 18:38 • (DUP) R3341447-7 09/12/18 18:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	ND	0.000	1	0.000		15

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

(LCS) R3341447-2 09/12/18 14:24 • (LCSD) R3341447-3 09/12/18 14:38

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	8230	8250	103	103	80.0-120			0.167	15
Sulfate	40000	40700	40700	102	102	80.0-120			0.151	15

L1024860-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1024860-04 09/12/18 16:14 • (MS) R3341447-5 09/12/18 16:43 • (MSD) R3341447-6 09/12/18 16:57

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	5070	5060	100	99.7	1	80.0-120			0.286	15
Sulfate	50000	ND	52400	52300	102	101	1	80.0-120			0.224	15

L1024869-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1024869-08 09/12/18 18:38 • (MS) R3341447-8 09/12/18 19:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	ND	4870	97.5	1	80.0-120	

Method Blank (MB)

(MB) R3341714-1 09/13/18 13:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0

L1024101-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1024101-01 09/13/18 13:20 • (DUP) R3341714-2 09/13/18 14:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	1830	1830	1	0.0135		20

L1024902-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1024902-01 09/13/18 14:30 • (DUP) R3341714-3 09/13/18 14:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	474	475	1	0.0632		20

L1024904-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1024904-01 09/13/18 14:41 • (DUP) R3341714-4 09/13/18 15:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	24.4	24.6	1	0.695		20

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

(LCS) R3341714-5 09/13/18 15:04 • (LCSD) R3341714-6 09/13/18 15:08

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	%	%	%			%	%
Methane	67.8	72.7	71.2	107	105	85.0-115			2.10	20

Method Blank (MB)

(MB) R3342092-3 09/12/18 09:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3342092-3 09/12/18 09:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*97.2*			*80.0-120*
(S) Dibromofluoromethane	*107*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*

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

(LCS) R3342092-1 09/12/18 08:55 • (LCSD) R3342092-2 09/12/18 09:15

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 %
Acetone	125	146	170	117	136	19.0-160			15.0	27
Benzene	25.0	26.7	26.4	107	106	70.0-123			1.13	20
Bromodichloromethane	25.0	24.4	25.5	97.8	102	75.0-120			4.24	20
Bromochloromethane	25.0	26.1	27.2	104	109	76.0-122			4.28	20
Bromoform	25.0	24.6	24.2	98.4	96.8	68.0-132			1.68	20
Bromomethane	25.0	24.3	24.8	97.1	99.0	10.0-160			2.01	25
Carbon disulfide	25.0	24.3	25.9	97.0	104	61.0-128			6.73	20
Carbon tetrachloride	25.0	26.2	27.1	105	108	68.0-126			3.43	20
Chlorobenzene	25.0	26.1	25.2	105	101	80.0-121			3.49	20
Chlorodibromomethane	25.0	25.9	25.2	104	101	77.0-125			3.01	20
Chloroethane	25.0	26.3	27.1	105	108	47.0-150			2.96	20
Chloroform	25.0	26.8	27.0	107	108	73.0-120			0.955	20
Chloromethane	25.0	23.6	25.2	94.4	101	41.0-142			6.48	20
1,2-Dibromo-3-Chloropropane	25.0	23.1	23.9	92.2	95.6	58.0-134			3.63	20
1,2-Dibromoethane	25.0	24.8	24.2	99.3	96.9	80.0-122			2.45	20
1,2-Dichlorobenzene	25.0	25.3	24.1	101	96.4	79.0-121			4.74	20
1,3-Dichlorobenzene	25.0	26.6	25.6	107	102	79.0-120			4.16	20
1,4-Dichlorobenzene	25.0	25.3	24.8	101	99.1	79.0-120			2.15	20
Dichlorodifluoromethane	25.0	26.5	27.4	106	110	51.0-149			3.24	20

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

(LCS) R3342092-1 09/12/18 08:55 • (LCSD) R3342092-2 09/12/18 09:15

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 %
1,1-Dichloroethane	25.0	25.5	26.1	102	104	70.0-126			2.39	20
1,2-Dichloroethane	25.0	25.8	27.6	103	110	70.0-128			6.79	20
1,1-Dichloroethene	25.0	26.4	28.1	106	112	71.0-124			6.34	20
cis-1,2-Dichloroethene	25.0	24.9	26.4	99.6	106	73.0-120			5.82	20
trans-1,2-Dichloroethene	25.0	26.2	26.7	105	107	73.0-120			1.84	20
1,2-Dichloropropane	25.0	25.7	25.7	103	103	77.0-125			0.0444	20
cis-1,3-Dichloropropene	25.0	25.7	24.7	103	98.7	80.0-123			4.18	20
trans-1,3-Dichloropropene	25.0	26.0	25.4	104	102	78.0-124			2.28	20
Ethylbenzene	25.0	27.6	25.9	110	104	79.0-123			6.40	20
2-Hexanone	125	135	129	108	103	67.0-149			4.05	20
Isopropylbenzene	25.0	27.5	25.4	110	102	76.0-127			8.00	20
2-Butanone (MEK)	125	140	153	112	122	44.0-160			8.27	20
Methylene Chloride	25.0	25.3	25.5	101	102	67.0-120			0.653	20
4-Methyl-2-pentanone (MIBK)	125	130	121	104	97.2	68.0-142			6.65	20
Methyl tert-butyl ether	25.0	25.9	26.8	104	107	68.0-125			3.09	20
Styrene	25.0	25.8	25.6	103	103	73.0-130			0.575	20
1,1,2,2-Tetrachloroethane	25.0	25.0	24.6	100	98.3	65.0-130			1.89	20
Tetrachloroethene	25.0	26.0	25.7	104	103	72.0-132			1.16	20
Toluene	25.0	25.2	25.7	101	103	79.0-120			1.94	20
1,1,2-Trichlorotrifluoroethane	25.0	27.4	29.1	110	116	69.0-132			5.77	20
1,2,3-Trichlorobenzene	25.0	21.8	21.7	87.3	86.9	50.0-138			0.501	20
1,2,4-Trichlorobenzene	25.0	22.5	22.3	89.8	89.2	57.0-137			0.712	20
1,1,1-Trichloroethane	25.0	26.6	28.3	107	113	73.0-124			5.84	20
1,1,2-Trichloroethane	25.0	26.3	24.4	105	97.8	80.0-120			7.18	20
Trichloroethene	25.0	25.5	25.0	102	100	78.0-124			1.94	20
Trichlorofluoromethane	25.0	27.1	28.7	108	115	59.0-147			5.58	20
Vinyl chloride	25.0	26.1	26.2	104	105	67.0-131			0.410	20
Xylenes, Total	75.0	81.3	76.0	108	101	79.0-123			6.74	20
(S) Toluene-d8				*95.4*	*101*	*80.0-120*				
(S) Dibromofluoromethane				*101*	*108*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*99.1*	*106*	*80.0-120*				
(S) 4-Bromofluorobenzene				*106*	*102*	*77.0-126*				

Method Blank (MB)

(MB) R3342050-4 09/12/18 20:12

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	*98.3*			*80.0-120*
(S) Dibromofluoromethane	*93.9*			*75.0-120*
(S) 4-Bromofluorobenzene	*94.1*			*77.0-126*

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

(LCS) R3342050-1 09/12/18 18:54 • (LCSD) R3342050-2 09/12/18 19:14

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	21.6	22.3	86.5	89.2	70.0-123			3.11	20
1,2-Dichloroethane	25.0	24.3	25.1	97.2	101	70.0-128			3.43	20
Ethylbenzene	25.0	25.3	25.8	101	103	79.0-123			2.00	20
Methyl tert-butyl ether	25.0	22.4	23.6	89.8	94.3	68.0-125			4.87	20
Naphthalene	25.0	20.1	21.1	80.4	84.3	54.0-135			4.73	20
Toluene	25.0	23.8	24.4	95.2	97.8	79.0-120			2.69	20
Xylenes, Total	75.0	76.0	77.8	101	104	79.0-123			2.34	20
(S) Toluene-d8				*103*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*94.5*	*93.0*	*75.0-120*				
(S) 4-Bromofluorobenzene				*92.0*	*93.9*	*77.0-126*				

Method Blank (MB)

(MB) R3342179-3 09/14/18 02:34

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	*100*			*80.0-120*
(S) Dibromofluoromethane	*93.9*			*75.0-120*
(S) 4-Bromofluorobenzene	*113*			*77.0-126*

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

(LCS) R3342179-1 09/14/18 01:33 • (LCSD) R3342179-2 09/14/18 01:53

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	26.0	26.6	104	106	70.0-123			2.37	20
1,2-Dichloroethane	25.0	22.7	22.9	90.6	91.7	70.0-128			1.18	20
Ethylbenzene	25.0	26.8	28.4	107	114	79.0-123			5.57	20
Methyl tert-butyl ether	25.0	22.4	23.6	89.4	94.2	68.0-125			5.23	20
Naphthalene	25.0	19.7	21.5	78.7	86.0	54.0-135			8.82	20
Toluene	25.0	26.2	27.2	105	109	79.0-120			3.69	20
Xylenes, Total	75.0	81.5	84.6	109	113	79.0-123			3.73	20
(S) Toluene-d8				*102*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*91.1*	*91.2*	*75.0-120*				
(S) 4-Bromofluorobenzene				*113*	*113*	*77.0-126*				

Method Blank (MB)

(MB) R3342861-2 09/14/18 20:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*99.7*			*80.0-120*
(S) Dibromofluoromethane	*104*			*75.0-120*
(S) 4-Bromofluorobenzene	*105*			*77.0-126*

Laboratory Control Sample (LCS)

(LCS) R3342861-1 09/14/18 19:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	26.9	108	70.0-123	
Methyl tert-butyl ether	25.0	26.3	105	68.0-125	
Toluene	25.0	23.8	95.2	79.0-120	
Xylenes, Total	75.0	71.5	95.3	79.0-123	
(S) Toluene-d8			*96.2*	*80.0-120*	
(S) Dibromofluoromethane			*103*	*75.0-120*	
(S) 4-Bromofluorobenzene			*107*	*77.0-126*	

Method Blank (MB)

(MB) R3342979-3 09/18/18 13:57

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	*108*			*75.0-120*
(S) 4-Bromofluorobenzene	*92.0*			*77.0-126*

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

(LCS) R3342979-1 09/18/18 12:50 • (LCSD) R3342979-2 09/18/18 13:10

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	24.5	25.0	98.2	100	70.0-123			1.86	20
1,2-Dichloroethane	25.0	26.8	26.6	107	106	70.0-128			0.681	20
Ethylbenzene	25.0	27.8	27.8	111	111	79.0-123			0.123	20
Methyl tert-butyl ether	25.0	23.5	24.3	94.1	97.2	68.0-125			3.24	20
Naphthalene	25.0	24.5	26.4	98.1	106	54.0-135			7.34	20
Toluene	25.0	24.7	25.5	98.9	102	79.0-120			3.04	20
Xylenes, Total	75.0	76.5	76.6	102	102	79.0-123			0.131	20
(S) Toluene-d8				*106*	*107*	*80.0-120*				
(S) Dibromofluoromethane				*108*	*108*	*75.0-120*				
(S) 4-Bromofluorobenzene				*98.9*	*106*	*77.0-126*				

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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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.
T8	Sample(s) received past/too close to holding time expiration.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

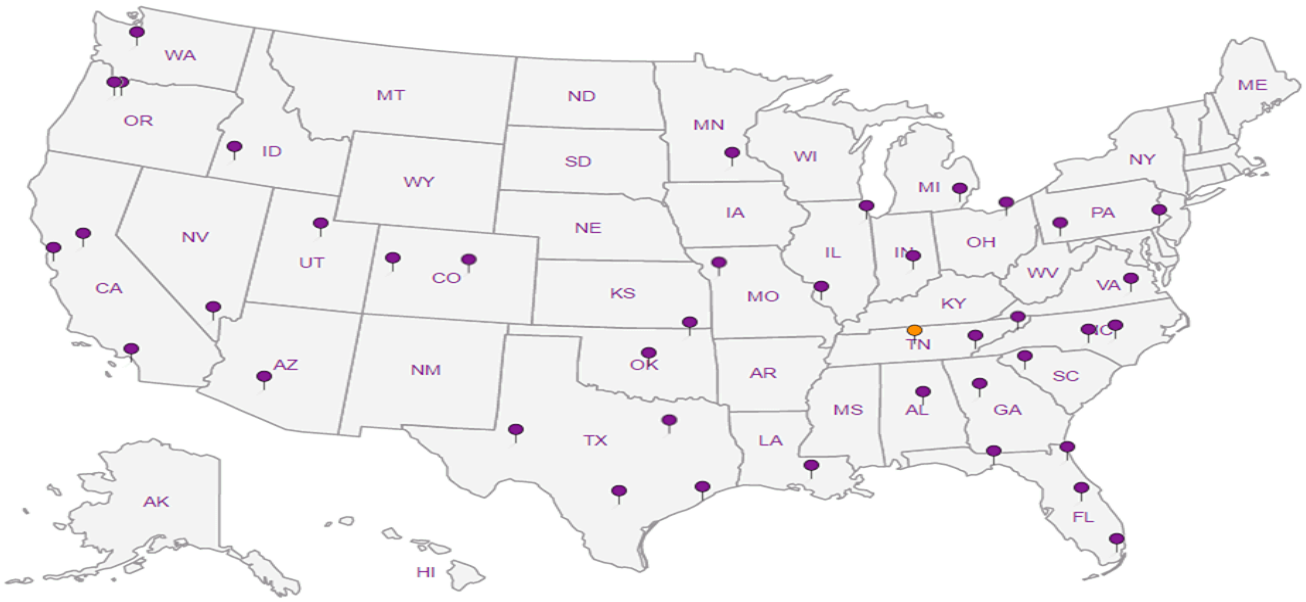
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National 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 # 699858.LD.MRGW

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 ___ 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	V8260TCLSC-TB 40mlAmb-NoPres-Blk	BTEX	MTBE	NAPHTHALENE	1,2-DCA					Remarks	Sample # (lab only)
							X		X	X	X	X						
MW-29-091118	GRAB	GW	N/A	09/11/18	1310	3	X		X	X	X	X						-01
MW-26B-091118		GW			1320	3	X											02
MW-26B-D-091118		GW			1321	3	X											03
MW-26-091118		GW			1328	3	X											04
MW-23-091118		GW			1340	3	X											05
MW-23B-091118		GW			1345	3	X											06
MW-46-091118		GW			1355	3	X											07
MW-45B-091118		GW			1400	3	X											08
MW-21-091118		GW			1410	3	X											09
MW-17B-091118		GW			1415	3	X											10

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

Remarks:

PAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4492 6226 1908

Trip Blank Received: (Yes) / No
HCL / MeoH
TBR
1

Temp: 4.9 °C Bottles Received: 79

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	09/11/18	1800	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 9/12/18 Time: 8:45

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 3

ESC LABS
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# L1024877
H168

Acctnum: KINCH2MGA
Template: T135401
Prelogin: P649732
TSR: 526 - Chris McCord
PB: 4-25-18
Shipped Via: FedEX Ground

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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; kyle.sexton@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BECTON, SC

Phone: 770-604-9182
Fax:

Client Project # LQ9858, LD.MR.CA

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 ___ 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 3

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# L1024877

Table #

Acctnum: KINCH2MGA
Template: T131319
Prelogin: P662161
TSR: 526 - Chris McCord
PB: 7-6-18

Shipped Via: FedEX Ground

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl BTEX, MTBE, 1,2-DCA, Naphthalene	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Nitrate	Alkalinity	Sulfate	CO2	Methane	Remarks	Sample # (lab only)
MW-44B-091118	GRAB	GW	N/A	09/11/18	1445	3	X								-11
MW-01B-091118		GW			1455	3	X								12
MW-01-091118		GW			1500	7 3	X		X	X	X	X	X	MNA	13
MW-27B-091118		GW			1505	3	X								14
MW-27-091118		GW			1510	3	X								15
MW-12B-091118		GW			1530	3	X								16
MW-12-091118		GW			1535	7 3	X		X	X	X	X	X	MNA	17
MW-28-091118		GW			1555	7 3	X		X	X	X	X	X	MNA	18
MW-35-091118		GW			1630	7 3	X		X	X	X	X	X	MNA	19
MW-49-091118		GW			1610	3	X								20

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

Remarks: V8260BTEXMNSC = BTEX, MTBE, Naphthalene, 1,2-DCA.

CL 9/12/18

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

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	If preservation required by Login: Date/Time
	09/11/18	1800		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.9 °C Bottles Received: 79	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/12/18 Time: 8:45	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 ~~LEWIS DRIVE~~

Phone: 770-604-9182
Fax:

Client Project # 699858.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 ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	BTEX	MTBE	1,2 - DCA	NAPHALENE	Remarks	Sample # (lab only)
FB01-091118	GRAB	GW	NA	09/11/18	1602	3	X		X	X	X	X	FIELD BLANK	-21
TB01-091118	GRAB	GW	NA	09/11/18	1603	~~1~~ 2		1					TRIP BLANK	22
		GW				3	X							
		GW				3	X							
		GW				3	X							
		GW				3	X							
		GW				3	X							
		GW				3	X							
		GW				3	X							
		GW				1		X						

Chain of Custody Page 3 of 3

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# L1024877

Table #

Acctnum: KINCH2MGA
Template: T135401
Prelogin: P649732
TSR: 526 - Chris McCord
PB: 4-25-18

Shipped Via: FedEX Ground

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

Remarks:

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No HCl / MeoH TBR
	09/11/18	1800		1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.0 °C Bottles Received: 7
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/12/18 Time: 8:45
				Hold: Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 24, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1025359
Samples Received:	09/13/2018
Project Number:	699858.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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-25B-091218 L1025359-01 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 07:15 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 18:31	09/13/18 18:31	PP

MW-25-091218 L1025359-02 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 07:20 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167701	1	09/19/18 19:49	09/19/18 19:49	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167701	1	09/19/18 19:49	09/19/18 19:49	GB
Wet Chemistry by Method 9056A	WG1165641	1	09/13/18 15:53	09/13/18 15:53	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1165818	1	09/14/18 15:06	09/14/18 15:06	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 18:51	09/13/18 18:51	PP

MW-42-091218 L1025359-03 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 07:30 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167701	1	09/19/18 20:01	09/19/18 20:01	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167701	1	09/19/18 20:01	09/19/18 20:01	GB
Wet Chemistry by Method 9056A	WG1165641	1	09/13/18 16:12	09/13/18 16:12	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1165818	1	09/14/18 15:14	09/14/18 15:14	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 19:11	09/13/18 19:11	PP

MW-41-091218 L1025359-04 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 07:35 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 19:32	09/13/18 19:32	PP

MW-40-091218 L1025359-05 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 07:45 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167701	1	09/19/18 20:07	09/19/18 20:07	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167701	1	09/19/18 20:07	09/19/18 20:07	GB
Wet Chemistry by Method 9056A	WG1165641	1	09/13/18 16:30	09/13/18 16:30	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1165818	1	09/14/18 15:17	09/14/18 15:17	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 19:52	09/13/18 19:52	PP

MW-39-091218 L1025359-06 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 07:55 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 20:12	09/13/18 20:12	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	5	09/15/18 22:51	09/15/18 22:51	JHH

MW-39-D-091218 L1025359-07 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 07:56 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 20:32	09/13/18 20:32	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	5	09/15/18 23:11	09/15/18 23:11	JHH

MW-34-091218 L1025359-08 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 08:00 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 20:52	09/13/18 20:52	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	5	09/15/18 23:31	09/15/18 23:31	JHH

MW-15B-091218 L1025359-09 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 08:10 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 21:12	09/13/18 21:12	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	50	09/15/18 23:51	09/15/18 23:51	GLN

MW-15-091218 L1025359-10 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 08:15 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167701	1	09/19/18 20:14	09/19/18 20:14	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167701	1	09/19/18 20:14	09/19/18 20:14	GB
Wet Chemistry by Method 9056A	WG1165641	1	09/13/18 17:24	09/13/18 17:24	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1165818	1	09/14/18 15:19	09/14/18 15:19	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 21:32	09/13/18 21:32	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	1	09/16/18 00:11	09/16/18 00:11	JHH

MW-38-091218 L1025359-11 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 08:40 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 21:52	09/13/18 21:52	PP

MW-37-091218 L1025359-12 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 08:50 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 22:12	09/13/18 22:12	PP

MW-24-091218 L1025359-13 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 09:00 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 22:33	09/13/18 22:33	PP

MW-24B-091218 L1025359-14 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 09:05 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 22:53	09/13/18 22:53	PP

MW-43-091218 L1025359-15 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 09:10 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 23:13	09/13/18 23:13	PP

MW-43B-091218 L1025359-16 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 09:15 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 23:33	09/13/18 23:33	PP

MW-13B-091218 L1025359-17 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 09:30 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/13/18 23:53	09/13/18 23:53	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	10	09/16/18 00:31	09/16/18 00:31	JHH

MW-14-091218 L1025359-18 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 09:35 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/14/18 00:13	09/14/18 00:13	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	1	09/16/18 00:51	09/16/18 00:51	JHH

MW-14B-091218 L1025359-19 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 09:45 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/14/18 00:33	09/14/18 00:33	PP

MW-50B-091218 L1025359-20 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 10:00 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1165925	1	09/14/18 00:53	09/14/18 00:53	PP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166730	5	09/16/18 01:12	09/16/18 01:12	JAH

MW-48B-091218 L1025359-21 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 10:10 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 04:36	09/14/18 04:36	JHH

MW-33T-091218 L1025359-22 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 10:20 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 04:56	09/14/18 04:56	JHH

MW-31-091218 L1025359-23 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 10:30 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 05:16	09/14/18 05:16	JHH

MW-31-D-091218 L1025359-24 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 10:31 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 05:36	09/14/18 05:36	JHH

MW-47-091218 L1025359-25 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 10:35 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 05:56	09/14/18 05:56	JHH

MW-10-091218 L1025359-26 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 10:55 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167701	1	09/19/18 20:20	09/19/18 20:20	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167701	1	09/19/18 20:20	09/19/18 20:20	GB
Wet Chemistry by Method 9056A	WG1165641	1	09/13/18 17:42	09/13/18 17:42	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1165818	1	09/14/18 15:23	09/14/18 15:23	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 06:15	09/14/18 06:15	JHH

MW-32-091218 L1025359-27 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 11:05 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167701	1	09/19/18 20:26	09/19/18 20:26	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167701	1	09/19/18 20:26	09/19/18 20:26	GB
Wet Chemistry by Method 9056A	WG1165641	1	09/13/18 18:01	09/13/18 18:01	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1165818	1	09/14/18 15:26	09/14/18 15:26	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 06:35	09/14/18 06:35	JHH

MW-02B-091218 L1025359-28 GW

Collected by: Melissa Warren | Collected date/time: 09/12/18 11:20 | Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 06:55	09/14/18 06:55	JHH

MW-02-091218 L1025359-29 GW

Collected by: Melissa Warren
Collected date/time: 09/12/18 11:25
Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167701	1	09/19/18 20:32	09/19/18 20:32	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167701	1	09/19/18 20:32	09/19/18 20:32	GB
Wet Chemistry by Method 9056A	WG1165641	1	09/13/18 18:19	09/13/18 18:19	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1165818	1	09/14/18 15:29	09/14/18 15:29	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 07:15	09/14/18 07:15	JHH

FB01-091218 L1025359-30 GW

Collected by: Melissa Warren
Collected date/time: 09/12/18 12:45
Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166024	1	09/14/18 07:35	09/14/18 07:35	JHH

TB01-091218 L1025359-31 GW

Collected by: Melissa Warren
Collected date/time: 09/12/18 12:50
Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166026	1	09/13/18 23:56	09/13/18 23:56	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167656	1	09/18/18 14:49	09/18/18 14:49	BMB

MW-07-091218 L1025359-32 GW

Collected by: Melissa Warren
Collected date/time: 09/12/18 15:11
Received date/time: 09/13/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166026	1	09/14/18 01:03	09/14/18 01:03	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167656	100	09/18/18 16:30	09/18/18 16:30	BMB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Sample Handling and Receiving

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1025359-01	MW-25B-091218	8260B
L1025359-02	MW-25-091218	8260B
L1025359-03	MW-42-091218	8260B
L1025359-04	MW-41-091218	8260B
L1025359-05	MW-40-091218	8260B
L1025359-06	MW-39-091218	8260B
L1025359-07	MW-39-D-091218	8260B
L1025359-08	MW-34-091218	8260B
L1025359-09	MW-15B-091218	8260B
L1025359-10	MW-15-091218	8260B
L1025359-11	MW-38-091218	8260B
L1025359-12	MW-37-091218	8260B
L1025359-13	MW-24-091218	8260B
L1025359-14	MW-24B-091218	8260B
L1025359-15	MW-43-091218	8260B
L1025359-16	MW-43B-091218	8260B
L1025359-17	MW-13B-091218	8260B
L1025359-18	MW-14-091218	8260B
L1025359-19	MW-14B-091218	8260B
L1025359-20	MW-50B-091218	8260B
L1025359-21	MW-48B-091218	8260B
L1025359-22	MW-33T-091218	8260B
L1025359-23	MW-31-091218	8260B
L1025359-24	MW-31-D-091218	8260B
L1025359-25	MW-47-091218	8260B
L1025359-26	MW-10-091218	8260B
L1025359-27	MW-32-091218	8260B
L1025359-28	MW-02B-091218	8260B
L1025359-29	MW-02-091218	8260B
L1025359-30	FB01-091218	8260B

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	09/13/2018 18:31	WG1165925
Toluene	ND		1.00	1	09/13/2018 18:31	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 18:31	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 18:31	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 18:31	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 18:31	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 18:31	WG1165925
(S) Toluene-d8	*100*		*80.0-120*		*09/13/2018 18:31*	WG1165925
(S) Dibromofluoromethane	*92.3*		*75.0-120*		*09/13/2018 18:31*	WG1165925
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/13/2018 18:31*	WG1165925

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	09/19/2018 19:49	WG1167701

Sample Narrative:
L1025359-02 WG1167701: 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	ND	T8	20000	1	09/19/2018 19:49	WG1167701

Sample Narrative:
L1025359-02 WG1167701: 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)	455		100	1	09/13/2018 15:53	WG1165641
Sulfate	ND		5000	1	09/13/2018 15:53	WG1165641

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/14/2018 15:06	WG1165818

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	09/13/2018 18:51	WG1165925
Toluene	ND		1.00	1	09/13/2018 18:51	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 18:51	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 18:51	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 18:51	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 18:51	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 18:51	WG1165925
(S) Toluene-d8	*98.3*		*80.0-120*		*09/13/2018 18:51*	WG1165925
(S) Dibromofluoromethane	*96.8*		*75.0-120*		*09/13/2018 18:51*	WG1165925
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/13/2018 18:51*	WG1165925

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	09/19/2018 20:01	WG1167701

Sample Narrative:
L1025359-03 WG1167701: 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	21700	T8	20000	1	09/19/2018 20:01	WG1167701

Sample Narrative:
L1025359-03 WG1167701: 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	09/13/2018 16:12	WG1165641
Sulfate	ND		5000	1	09/13/2018 16:12	WG1165641

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	30.8		10.0	1	09/14/2018 15:14	WG1165818

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	09/13/2018 19:11	WG1165925
Toluene	ND		1.00	1	09/13/2018 19:11	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 19:11	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 19:11	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 19:11	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 19:11	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 19:11	WG1165925
(S) Toluene-d8	*103*		*80.0-120*		*09/13/2018 19:11*	WG1165925
(S) Dibromofluoromethane	*97.5*		*75.0-120*		*09/13/2018 19:11*	WG1165925
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*09/13/2018 19:11*	WG1165925

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	09/13/2018 19:32	WG1165925
Toluene	ND		1.00	1	09/13/2018 19:32	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 19:32	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 19:32	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 19:32	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 19:32	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 19:32	WG1165925
(S) Toluene-d8	*99.7*		*80.0-120*		*09/13/2018 19:32*	WG1165925
(S) Dibromofluoromethane	*95.3*		*75.0-120*		*09/13/2018 19:32*	WG1165925
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/13/2018 19:32*	WG1165925

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 20:07	WG1167701

Sample Narrative:
L1025359-05 WG1167701: 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	21500	T8	20000	1	09/19/2018 20:07	WG1167701

Sample Narrative:
L1025359-05 WG1167701: 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	09/13/2018 16:30	WG1165641
Sulfate	ND		5000	1	09/13/2018 16:30	WG1165641

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	11.7		10.0	1	09/14/2018 15:17	WG1165818

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	28.2		1.00	1	09/13/2018 19:52	WG1165925
Toluene	15.3		1.00	1	09/13/2018 19:52	WG1165925
Ethylbenzene	1.67		1.00	1	09/13/2018 19:52	WG1165925
Total Xylenes	14.0		3.00	1	09/13/2018 19:52	WG1165925
Methyl tert-butyl ether	112		1.00	1	09/13/2018 19:52	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 19:52	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 19:52	WG1165925
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 19:52*	WG1165925
(S) Dibromofluoromethane	*92.8*		*75.0-120*		*09/13/2018 19:52*	WG1165925
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/13/2018 19:52*	WG1165925

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	09/13/2018 20:12	WG1165925
Toluene	ND		1.00	1	09/13/2018 20:12	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 20:12	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 20:12	WG1165925
Methyl tert-butyl ether	176		5.00	5	09/15/2018 22:51	WG1166730
Naphthalene	ND		5.00	1	09/13/2018 20:12	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 20:12	WG1165925
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 20:12*	WG1165925
(S) Toluene-d8	*110*		*80.0-120*		*09/15/2018 22:51*	WG1166730
(S) Dibromofluoromethane	*93.2*		*75.0-120*		*09/13/2018 20:12*	WG1165925
(S) Dibromofluoromethane	*95.9*		*75.0-120*		*09/15/2018 22:51*	WG1166730
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*09/13/2018 20:12*	WG1165925
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*09/15/2018 22:51*	WG1166730

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.84		1.00	1	09/13/2018 20:32	WG1165925
Toluene	1.06		1.00	1	09/13/2018 20:32	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 20:32	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 20:32	WG1165925
Methyl tert-butyl ether	187		5.00	5	09/15/2018 23:11	WG1166730
Naphthalene	ND		5.00	1	09/13/2018 20:32	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 20:32	WG1165925
(S) Toluene-d8	*105*		*80.0-120*		*09/13/2018 20:32*	WG1165925
(S) Toluene-d8	*109*		*80.0-120*		*09/15/2018 23:11*	WG1166730
(S) Dibromofluoromethane	*91.4*		*75.0-120*		*09/13/2018 20:32*	WG1165925
(S) Dibromofluoromethane	*97.3*		*75.0-120*		*09/15/2018 23:11*	WG1166730
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*09/13/2018 20:32*	WG1165925
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*09/15/2018 23:11*	WG1166730

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	09/13/2018 20:52	WG1165925
Toluene	ND		1.00	1	09/13/2018 20:52	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 20:52	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 20:52	WG1165925
Methyl tert-butyl ether	209		5.00	5	09/15/2018 23:31	WG1166730
Naphthalene	ND		5.00	1	09/13/2018 20:52	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 20:52	WG1165925
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 20:52*	WG1165925
(S) Toluene-d8	*111*		*80.0-120*		*09/15/2018 23:31*	WG1166730
(S) Dibromofluoromethane	*95.1*		*75.0-120*		*09/13/2018 20:52*	WG1165925
(S) Dibromofluoromethane	*97.9*		*75.0-120*		*09/15/2018 23:31*	WG1166730
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*09/13/2018 20:52*	WG1165925
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*09/15/2018 23:31*	WG1166730

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	947		50.0	50	09/15/2018 23:51	WG1166730
Toluene	2270		50.0	50	09/15/2018 23:51	WG1166730
Ethylbenzene	122		1.00	1	09/13/2018 21:12	WG1165925
Total Xylenes	820		150	50	09/15/2018 23:51	WG1166730
Methyl tert-butyl ether	111		1.00	1	09/13/2018 21:12	WG1165925
Naphthalene	15.9		5.00	1	09/13/2018 21:12	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 21:12	WG1165925
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 21:12*	WG1165925
(S) Toluene-d8	*109*		*80.0-120*		*09/15/2018 23:51*	WG1166730
(S) Dibromofluoromethane	*100*		*75.0-120*		*09/13/2018 21:12*	WG1165925
(S) Dibromofluoromethane	*94.9*		*75.0-120*		*09/15/2018 23:51*	WG1166730
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/13/2018 21:12*	WG1165925
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*09/15/2018 23:51*	WG1166730

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 20:14	WG1167701

Sample Narrative:
L1025359-10 WG1167701: 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	09/19/2018 20:14	WG1167701

Sample Narrative:
L1025359-10 WG1167701: 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)	654		100	1	09/13/2018 17:24	WG1165641
Sulfate	ND		5000	1	09/13/2018 17:24	WG1165641

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	09/14/2018 15:19	WG1165818

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	14.6		1.00	1	09/16/2018 00:11	WG1166730
Toluene	27.9		1.00	1	09/13/2018 21:32	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 21:32	WG1165925
Total Xylenes	16.0		3.00	1	09/16/2018 00:11	WG1166730
Methyl tert-butyl ether	72.2		1.00	1	09/13/2018 21:32	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 21:32	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 21:32	WG1165925
(S) Toluene-d8	*103*		*80.0-120*		*09/13/2018 21:32*	WG1165925
(S) Toluene-d8	*111*		*80.0-120*		*09/16/2018 00:11*	WG1166730
(S) Dibromofluoromethane	*91.8*		*75.0-120*		*09/13/2018 21:32*	WG1165925
(S) Dibromofluoromethane	*94.3*		*75.0-120*		*09/16/2018 00:11*	WG1166730
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*09/13/2018 21:32*	WG1165925
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*09/16/2018 00:11*	WG1166730

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	157		1.00	1	09/13/2018 21:52	WG1165925
Toluene	1.19		1.00	1	09/13/2018 21:52	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 21:52	WG1165925
Total Xylenes	66.5		3.00	1	09/13/2018 21:52	WG1165925
Methyl tert-butyl ether	38.8		1.00	1	09/13/2018 21:52	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 21:52	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 21:52	WG1165925
(S) Toluene-d8	*101*		*80.0-120*		*09/13/2018 21:52*	WG1165925
(S) Dibromofluoromethane	*94.9*		*75.0-120*		*09/13/2018 21:52*	WG1165925
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/13/2018 21:52*	WG1165925

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	09/13/2018 22:12	WG1165925
Toluene	ND		1.00	1	09/13/2018 22:12	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 22:12	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 22:12	WG1165925
Methyl tert-butyl ether	4.30		1.00	1	09/13/2018 22:12	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 22:12	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 22:12	WG1165925
(S) Toluene-d8	*103*		*80.0-120*		*09/13/2018 22:12*	WG1165925
(S) Dibromofluoromethane	*95.4*		*75.0-120*		*09/13/2018 22:12*	WG1165925
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/13/2018 22:12*	WG1165925

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	09/13/2018 22:33	WG1165925
Toluene	ND		1.00	1	09/13/2018 22:33	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 22:33	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 22:33	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 22:33	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 22:33	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 22:33	WG1165925
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 22:33*	WG1165925
(S) Dibromofluoromethane	*96.2*		*75.0-120*		*09/13/2018 22:33*	WG1165925
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/13/2018 22:33*	WG1165925

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	09/13/2018 22:53	WG1165925
Toluene	ND		1.00	1	09/13/2018 22:53	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 22:53	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 22:53	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 22:53	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 22:53	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 22:53	WG1165925
(S) Toluene-d8	*100*		*80.0-120*		*09/13/2018 22:53*	WG1165925
(S) Dibromofluoromethane	*95.5*		*75.0-120*		*09/13/2018 22:53*	WG1165925
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*09/13/2018 22:53*	WG1165925

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	09/13/2018 23:13	WG1165925
Toluene	ND		1.00	1	09/13/2018 23:13	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 23:13	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 23:13	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 23:13	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 23:13	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 23:13	WG1165925
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 23:13*	WG1165925
(S) Dibromofluoromethane	*94.3*		*75.0-120*		*09/13/2018 23:13*	WG1165925
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/13/2018 23:13*	WG1165925

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	09/13/2018 23:33	WG1165925
Toluene	ND		1.00	1	09/13/2018 23:33	WG1165925
Ethylbenzene	ND		1.00	1	09/13/2018 23:33	WG1165925
Total Xylenes	ND		3.00	1	09/13/2018 23:33	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 23:33	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 23:33	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 23:33	WG1165925
(S) Toluene-d8	*100*		*80.0-120*		*09/13/2018 23:33*	WG1165925
(S) Dibromofluoromethane	*93.9*		*75.0-120*		*09/13/2018 23:33*	WG1165925
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/13/2018 23:33*	WG1165925

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	402		10.0	10	09/16/2018 00:31	WG1166730
Toluene	503		10.0	10	09/16/2018 00:31	WG1166730
Ethylbenzene	42.5		1.00	1	09/13/2018 23:53	WG1165925
Total Xylenes	271		3.00	1	09/13/2018 23:53	WG1165925
Methyl tert-butyl ether	141		1.00	1	09/13/2018 23:53	WG1165925
Naphthalene	ND		5.00	1	09/13/2018 23:53	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/13/2018 23:53	WG1165925
(S) Toluene-d8	*102*		*80.0-120*		*09/13/2018 23:53*	WG1165925
(S) Toluene-d8	*109*		*80.0-120*		*09/16/2018 00:31*	WG1166730
(S) Dibromofluoromethane	*94.7*		*75.0-120*		*09/13/2018 23:53*	WG1165925
(S) Dibromofluoromethane	*94.7*		*75.0-120*		*09/16/2018 00:31*	WG1166730
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*09/13/2018 23:53*	WG1165925
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*09/16/2018 00:31*	WG1166730

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	09/14/2018 00:13	WG1165925
Toluene	ND		1.00	1	09/16/2018 00:51	WG1166730
Ethylbenzene	ND		1.00	1	09/14/2018 00:13	WG1165925
Total Xylenes	ND		3.00	1	09/14/2018 00:13	WG1165925
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 00:13	WG1165925
Naphthalene	ND		5.00	1	09/14/2018 00:13	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/14/2018 00:13	WG1165925
(S) Toluene-d8	*101*		*80.0-120*		*09/14/2018 00:13*	WG1165925
(S) Toluene-d8	*108*		*80.0-120*		*09/16/2018 00:51*	WG1166730
(S) Dibromofluoromethane	*93.6*		*75.0-120*		*09/14/2018 00:13*	WG1165925
(S) Dibromofluoromethane	*96.4*		*75.0-120*		*09/16/2018 00:51*	WG1166730
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*09/14/2018 00:13*	WG1165925
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*09/16/2018 00:51*	WG1166730

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	3.32		1.00	1	09/14/2018 00:33	WG1165925
Toluene	ND		1.00	1	09/14/2018 00:33	WG1165925
Ethylbenzene	ND		1.00	1	09/14/2018 00:33	WG1165925
Total Xylenes	3.61		3.00	1	09/14/2018 00:33	WG1165925
Methyl tert-butyl ether	7.86		1.00	1	09/14/2018 00:33	WG1165925
Naphthalene	ND		5.00	1	09/14/2018 00:33	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/14/2018 00:33	WG1165925
(S) Toluene-d8	*97.2*		*80.0-120*		*09/14/2018 00:33*	WG1165925
(S) Dibromofluoromethane	*96.3*		*75.0-120*		*09/14/2018 00:33*	WG1165925
(S) 4-Bromofluorobenzene	*115*		*77.0-126*		*09/14/2018 00:33*	WG1165925

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	150		5.00	5	09/16/2018 01:12	WG1166730
Toluene	57.9		1.00	1	09/14/2018 00:53	WG1165925
Ethylbenzene	1.20		1.00	1	09/14/2018 00:53	WG1165925
Total Xylenes	47.8		3.00	1	09/14/2018 00:53	WG1165925
Methyl tert-butyl ether	87.9		1.00	1	09/14/2018 00:53	WG1165925
Naphthalene	ND		5.00	1	09/14/2018 00:53	WG1165925
1,2-Dichloroethane	ND		1.00	1	09/14/2018 00:53	WG1165925
(S) Toluene-d8	*100*		*80.0-120*		*09/14/2018 00:53*	WG1165925
(S) Toluene-d8	*110*		*80.0-120*		*09/16/2018 01:12*	WG1166730
(S) Dibromofluoromethane	*93.6*		*75.0-120*		*09/14/2018 00:53*	WG1165925
(S) Dibromofluoromethane	*95.3*		*75.0-120*		*09/16/2018 01:12*	WG1166730
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*09/14/2018 00:53*	WG1165925
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*09/16/2018 01:12*	WG1166730

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	09/14/2018 04:36	WG1166024
Toluene	ND		1.00	1	09/14/2018 04:36	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 04:36	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 04:36	WG1166024
Methyl tert-butyl ether	1.80		1.00	1	09/14/2018 04:36	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 04:36	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 04:36	WG1166024
(S) Toluene-d8	*108*		*80.0-120*		*09/14/2018 04:36*	WG1166024
(S) Dibromofluoromethane	*91.0*		*75.0-120*		*09/14/2018 04:36*	WG1166024
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*09/14/2018 04:36*	WG1166024

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	09/14/2018 04:56	WG1166024
Toluene	ND		1.00	1	09/14/2018 04:56	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 04:56	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 04:56	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 04:56	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 04:56	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 04:56	WG1166024
(S) Toluene-d8	*106*		*80.0-120*		*09/14/2018 04:56*	WG1166024
(S) Dibromofluoromethane	*90.9*		*75.0-120*		*09/14/2018 04:56*	WG1166024
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/14/2018 04:56*	WG1166024

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	09/14/2018 05:16	WG1166024
Toluene	ND		1.00	1	09/14/2018 05:16	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 05:16	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 05:16	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 05:16	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 05:16	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 05:16	WG1166024
(S) Toluene-d8	*109*		*80.0-120*		*09/14/2018 05:16*	WG1166024
(S) Dibromofluoromethane	*91.3*		*75.0-120*		*09/14/2018 05:16*	WG1166024
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/14/2018 05:16*	WG1166024

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	09/14/2018 05:36	WG1166024
Toluene	ND		1.00	1	09/14/2018 05:36	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 05:36	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 05:36	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 05:36	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 05:36	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 05:36	WG1166024
(S) Toluene-d8	*108*		*80.0-120*		*09/14/2018 05:36*	WG1166024
(S) Dibromofluoromethane	*91.8*		*75.0-120*		*09/14/2018 05:36*	WG1166024
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*09/14/2018 05:36*	WG1166024

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	09/14/2018 05:56	WG1166024
Toluene	ND		1.00	1	09/14/2018 05:56	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 05:56	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 05:56	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 05:56	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 05:56	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 05:56	WG1166024
(S) Toluene-d8	*107*		*80.0-120*		*09/14/2018 05:56*	WG1166024
(S) Dibromofluoromethane	*91.7*		*75.0-120*		*09/14/2018 05:56*	WG1166024
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*09/14/2018 05:56*	WG1166024

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 20:20	WG1167701

Sample Narrative:
L1025359-26 WG1167701: 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	48200	T8	20000	1	09/19/2018 20:20	WG1167701

Sample Narrative:
L1025359-26 WG1167701: 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)	275		100	1	09/13/2018 17:42	WG1165641
Sulfate	ND		5000	1	09/13/2018 17:42	WG1165641

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	09/14/2018 15:23	WG1165818

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	09/14/2018 06:15	WG1166024
Toluene	ND		1.00	1	09/14/2018 06:15	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 06:15	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 06:15	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 06:15	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 06:15	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 06:15	WG1166024
(S) Toluene-d8	*105*		*80.0-120*		*09/14/2018 06:15*	WG1166024
(S) Dibromofluoromethane	*91.8*		*75.0-120*		*09/14/2018 06:15*	WG1166024
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*09/14/2018 06:15*	WG1166024

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 20:26	WG1167701

Sample Narrative:
L1025359-27 WG1167701: 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	09/19/2018 20:26	WG1167701

Sample Narrative:
L1025359-27 WG1167701: 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)	3210		100	1	09/13/2018 18:01	WG1165641
Sulfate	ND		5000	1	09/13/2018 18:01	WG1165641

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	09/14/2018 15:26	WG1165818

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	09/14/2018 06:35	WG1166024
Toluene	ND		1.00	1	09/14/2018 06:35	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 06:35	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 06:35	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 06:35	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 06:35	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 06:35	WG1166024
(S) Toluene-d8	*105*		*80.0-120*		*09/14/2018 06:35*	WG1166024
(S) Dibromofluoromethane	*93.4*		*75.0-120*		*09/14/2018 06:35*	WG1166024
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*09/14/2018 06:35*	WG1166024

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	09/14/2018 06:55	WG1166024
Toluene	ND		1.00	1	09/14/2018 06:55	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 06:55	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 06:55	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 06:55	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 06:55	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 06:55	WG1166024
(S) Toluene-d8	*105*		*80.0-120*		*09/14/2018 06:55*	WG1166024
(S) Dibromofluoromethane	*91.7*		*75.0-120*		*09/14/2018 06:55*	WG1166024
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/14/2018 06:55*	WG1166024

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	09/19/2018 20:32	WG1167701

Sample Narrative:
L1025359-29 WG1167701: 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	ND	T8	20000	1	09/19/2018 20:32	WG1167701

Sample Narrative:
L1025359-29 WG1167701: 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	09/13/2018 18:19	WG1165641
Sulfate	ND		5000	1	09/13/2018 18:19	WG1165641

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/14/2018 15:29	WG1165818

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	09/14/2018 07:15	WG1166024
Toluene	ND		1.00	1	09/14/2018 07:15	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 07:15	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 07:15	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 07:15	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 07:15	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 07:15	WG1166024
(S) Toluene-d8	*106*		*80.0-120*		*09/14/2018 07:15*	WG1166024
(S) Dibromofluoromethane	*89.6*		*75.0-120*		*09/14/2018 07:15*	WG1166024
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*09/14/2018 07:15*	WG1166024

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	09/14/2018 07:35	WG1166024
Toluene	ND		1.00	1	09/14/2018 07:35	WG1166024
Ethylbenzene	ND		1.00	1	09/14/2018 07:35	WG1166024
Total Xylenes	ND		3.00	1	09/14/2018 07:35	WG1166024
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 07:35	WG1166024
Naphthalene	ND		5.00	1	09/14/2018 07:35	WG1166024
1,2-Dichloroethane	ND		1.00	1	09/14/2018 07:35	WG1166024
(S) Toluene-d8	*106*		*80.0-120*		*09/14/2018 07:35*	WG1166024
(S) Dibromofluoromethane	*92.9*		*75.0-120*		*09/14/2018 07:35*	WG1166024
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*09/14/2018 07:35*	WG1166024

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	09/13/2018 23:56	WG1166026
Benzene	ND		1.00	1	09/13/2018 23:56	WG1166026
Bromochloromethane	ND		1.00	1	09/13/2018 23:56	WG1166026
Bromodichloromethane	ND		1.00	1	09/13/2018 23:56	WG1166026
Bromoform	ND		1.00	1	09/13/2018 23:56	WG1166026
Bromomethane	ND		5.00	1	09/18/2018 14:49	WG1167656
Carbon disulfide	ND		1.00	1	09/13/2018 23:56	WG1166026
Carbon tetrachloride	ND		1.00	1	09/13/2018 23:56	WG1166026
Chlorobenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
Chlorodibromomethane	ND		1.00	1	09/13/2018 23:56	WG1166026
Chloroethane	ND		5.00	1	09/13/2018 23:56	WG1166026
Chloroform	ND		5.00	1	09/13/2018 23:56	WG1166026
Chloromethane	ND		2.50	1	09/13/2018 23:56	WG1166026
Cyclohexane	ND		1.00	1	09/13/2018 23:56	WG1166026
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/13/2018 23:56	WG1166026
1,2-Dibromoethane	ND		1.00	1	09/13/2018 23:56	WG1166026
1,2-Dichlorobenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
1,3-Dichlorobenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
1,4-Dichlorobenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
Dichlorodifluoromethane	ND		5.00	1	09/13/2018 23:56	WG1166026
1,1-Dichloroethane	ND		1.00	1	09/13/2018 23:56	WG1166026
1,2-Dichloroethane	ND		1.00	1	09/13/2018 23:56	WG1166026
1,1-Dichloroethene	ND		1.00	1	09/13/2018 23:56	WG1166026
cis-1,2-Dichloroethene	ND		1.00	1	09/13/2018 23:56	WG1166026
trans-1,2-Dichloroethene	ND		1.00	1	09/13/2018 23:56	WG1166026
1,2-Dichloropropane	ND		1.00	1	09/13/2018 23:56	WG1166026
cis-1,3-Dichloropropene	ND		1.00	1	09/13/2018 23:56	WG1166026
trans-1,3-Dichloropropene	ND		1.00	1	09/13/2018 23:56	WG1166026
Ethylbenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
2-Hexanone	ND		10.0	1	09/13/2018 23:56	WG1166026
Isopropylbenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
2-Butanone (MEK)	ND		10.0	1	09/13/2018 23:56	WG1166026
Methyl Acetate	ND		20.0	1	09/13/2018 23:56	WG1166026
Methyl Cyclohexane	ND		1.00	1	09/13/2018 23:56	WG1166026
Methylene Chloride	ND		5.00	1	09/13/2018 23:56	WG1166026
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/13/2018 23:56	WG1166026
Methyl tert-butyl ether	ND		1.00	1	09/13/2018 23:56	WG1166026
Styrene	ND		1.00	1	09/13/2018 23:56	WG1166026
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/13/2018 23:56	WG1166026
Tetrachloroethene	ND		1.00	1	09/13/2018 23:56	WG1166026
Toluene	ND		1.00	1	09/13/2018 23:56	WG1166026
1,2,3-Trichlorobenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
1,2,4-Trichlorobenzene	ND		1.00	1	09/13/2018 23:56	WG1166026
1,1,1-Trichloroethane	ND		1.00	1	09/13/2018 23:56	WG1166026
1,1,2-Trichloroethane	ND		1.00	1	09/13/2018 23:56	WG1166026
Trichloroethene	ND		1.00	1	09/13/2018 23:56	WG1166026
Trichlorofluoromethane	ND		5.00	1	09/13/2018 23:56	WG1166026
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/13/2018 23:56	WG1166026
Vinyl chloride	ND		1.00	1	09/13/2018 23:56	WG1166026
Xylenes, Total	ND		3.00	1	09/13/2018 23:56	WG1166026
(S) Toluene-d8	*105*		*80.0-120*		*09/13/2018 23:56*	WG1166026
(S) Toluene-d8	*104*		*80.0-120*		*09/18/2018 14:49*	WG1167656
(S) Dibromofluoromethane	*103*		*75.0-120*		*09/13/2018 23:56*	WG1166026
(S) Dibromofluoromethane	*121*	J1	*75.0-120*		*09/18/2018 14:49*	WG1167656
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*		*09/13/2018 23:56*	WG1166026
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*09/18/2018 14:49*	WG1167656

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*09/13/2018 23:56*	WG1166026
(S) 4-Bromofluorobenzene	*98.0*		*77.0-126*		*09/18/2018 14:49*	WG1167656

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	4620		100	100	09/18/2018 16:30	WG1167656
Toluene	13600		100	100	09/18/2018 16:30	WG1167656
Ethylbenzene	639		100	100	09/18/2018 16:30	WG1167656
Total Xylenes	6180		300	100	09/18/2018 16:30	WG1167656
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 01:03	WG1166026
Naphthalene	82.5		5.00	1	09/14/2018 01:03	WG1166026
1,2-Dichloroethane	ND		1.00	1	09/14/2018 01:03	WG1166026
(S) Toluene-d8	*93.5*		*80.0-120*		*09/14/2018 01:03*	WG1166026
(S) Toluene-d8	*98.9*		*80.0-120*		*09/18/2018 16:30*	WG1167656
(S) Dibromofluoromethane	*108*		*75.0-120*		*09/14/2018 01:03*	WG1166026
(S) Dibromofluoromethane	*114*		*75.0-120*		*09/18/2018 16:30*	WG1167656
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/14/2018 01:03*	WG1166026
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*09/18/2018 16:30*	WG1167656

Method Blank (MB)

(MB) R3343501-1 09/19/18 19:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		2710	20000

Sample Narrative:
BLANK: Endpoint pH 4.5

L1025359-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1025359-02 09/19/18 19:49 • (DUP) R3343501-3 09/19/18 19:55

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	ND	5910	1	0.000		20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

L1025780-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1025780-06 09/19/18 22:16 • (DUP) R3343501-7 09/19/18 22:22

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	2760	0.000	1	200	P1	20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

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

(LCS) R3343501-5 09/19/18 20:46 • (LCSD) R3343501-6 09/19/18 21:59

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	97500	99500	97.5	99.5	85.0-115			2.06	20

Sample Narrative:
LCS: Endpoint pH 4.5
LCSD: Endpoint pH 4.5

Method Blank (MB)

(MB) R3343501-2 09/19/18 19:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Free Carbon Dioxide	U		6670	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1025359-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1025359-02 09/19/18 19:49 • (DUP) R3343501-4 09/19/18 19:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	ND	ND	1	13.8		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

L1025780-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1025780-06 09/19/18 22:16 • (DUP) R3343501-8 09/19/18 22:22

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) R3342072-1 09/13/18 12:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Nitrate	U		22.7	100
Sulfate	115	J	77.4	5000

L1025351-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1025351-07 09/13/18 14:41 • (DUP) R3342072-4 09/13/18 14:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	897	895	1	0.268		15

L1025431-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025431-01 09/13/18 18:37 • (DUP) R3342072-7 09/13/18 19:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	ND	0.000	1	0.000		15
Sulfate	47900	48200	1	0.456		15

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

(LCS) R3342072-2 09/13/18 12:42 • (LCSD) R3342072-3 09/13/18 13:00

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 %
Nitrate	8000	8070	8080	101	101	80.0-120			0.116	15
Sulfate	40000	40200	40200	100	100	80.0-120			0.0237	15

L1025351-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1025351-07 09/13/18 14:41 • (MS) R3342072-5 09/13/18 15:17 • (MSD) R3342072-6 09/13/18 15:35

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	897	6140	6180	105	106	1	80.0-120			0.760	15
Sulfate	50000	131000	178000	178000	93.8	94.6	1	80.0-120	E	E	0.224	15

L1025431-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1025431-01 09/13/18 18:37 • (MS) R3342072-8 09/13/18 19:24

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	ND	5010	100	1	80.0-120	
Sulfate	50000	47900	97000	98.2	1	80.0-120	

Method Blank (MB)

(MB) R3342043-1 09/14/18 13:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0

L1025271-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025271-01 09/14/18 14:02 • (DUP) R3342043-2 09/14/18 14:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	52.4	51.1	1	2.44		20

L1025272-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025272-01 09/14/18 14:05 • (DUP) R3342043-3 09/14/18 14:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	20.5	21.0	1	1.99		20

L1025273-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025273-01 09/14/18 14:09 • (DUP) R3342043-4 09/14/18 14:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	31.7	32.3	1	1.95		20

L1025286-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025286-01 09/14/18 14:12 • (DUP) R3342043-5 09/14/18 14:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	66.8	65.5	1	1.90		20

L1025288-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025288-01 09/14/18 14:15 • (DUP) R3342043-6 09/14/18 14:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Methane	121	123	1	1.59		20

L1025290-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025290-01 09/14/18 14:26 • (DUP) R3342043-7 09/14/18 14:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Methane	113	113	1	0.385		20

L1025359-27 Original Sample (OS) • Duplicate (DUP)

(OS) L1025359-27 09/14/18 15:26 • (DUP) R3342043-8 09/14/18 15:32

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

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

(LCS) R3342043-9 09/14/18 15:35 • (LCSD) R3342043-10 09/14/18 15:38

	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	%	%	%			%	%
Methane	67.8	69.5	71.7	103	106	85.0-115			3.02	20

Method Blank (MB)

(MB) R3342099-3 09/13/18 14:41

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	*92.3*			*75.0-120*
(S) 4-Bromofluorobenzene	*111*			*77.0-126*

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

(LCS) R3342099-1 09/13/18 13:20 • (LCSD) R3342099-2 09/13/18 13:40

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	24.5	23.7	97.9	94.7	70.0-123			3.26	20
1,2-Dichloroethane	25.0	22.2	21.6	88.8	86.3	70.0-128			2.84	20
Ethylbenzene	25.0	25.6	24.0	102	96.1	79.0-123			6.17	20
Methyl tert-butyl ether	25.0	22.8	22.3	91.1	89.1	68.0-125			2.23	20
Naphthalene	25.0	20.4	19.6	81.6	78.2	54.0-135			4.23	20
Toluene	25.0	24.8	23.2	99.4	92.8	79.0-120			6.81	20
Xylenes, Total	75.0	78.2	72.9	104	97.2	79.0-123			7.02	20
(S) Toluene-d8				*100*	*99.0*	*80.0-120*				
(S) Dibromofluoromethane				*89.5*	*91.5*	*75.0-120*				
(S) 4-Bromofluorobenzene				*111*	*109*	*77.0-126*				

Method Blank (MB)

(MB) R3342863-5 09/14/18 00:12

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	*90.6*			*75.0-120*
(S) 4-Bromofluorobenzene	*107*			*77.0-126*

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

(LCS) R3342863-1 09/13/18 21:53 • (LCSD) R3342863-2 09/13/18 22:13

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	23.1	22.7	92.6	90.8	70.0-123			1.93	20
1,2-Dichloroethane	25.0	22.5	22.2	89.9	88.9	70.0-128			1.19	20
Ethylbenzene	25.0	27.6	27.0	110	108	79.0-123			2.10	20
Methyl tert-butyl ether	25.0	23.2	23.4	92.9	93.8	68.0-125			0.923	20
Naphthalene	25.0	24.7	25.3	99.0	101	54.0-135			2.22	20
Toluene	25.0	25.9	25.9	103	104	79.0-120			0.109	20
Xylenes, Total	75.0	81.8	81.8	109	109	79.0-123			0.000	20
(S) Toluene-d8				*107*	*106*	*80.0-120*				
(S) Dibromofluoromethane				*91.3*	*91.1*	*75.0-120*				
(S) 4-Bromofluorobenzene				*110*	*111*	*77.0-126*				

Method Blank (MB)

(MB) R3342715-4 09/13/18 23:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3342715-4 09/13/18 23:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*102*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*105*			*77.0-126*

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

(LCS) R3342715-1 09/13/18 22:14 • (LCSD) R3342715-2 09/13/18 22:35

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 %
Acetone	125	135	136	108	109	19.0-160			1.22	27
Benzene	25.0	26.7	26.0	107	104	70.0-123			2.32	20
Bromodichloromethane	25.0	26.8	26.2	107	105	75.0-120			2.13	20
Bromochloromethane	25.0	29.1	28.1	116	112	76.0-122			3.52	20
Bromoform	25.0	25.2	25.3	101	101	68.0-132			0.504	20
Carbon disulfide	25.0	25.0	24.7	100	98.9	61.0-128			1.29	20
Carbon tetrachloride	25.0	27.9	28.3	111	113	68.0-126			1.76	20
Chlorobenzene	25.0	26.0	25.6	104	102	80.0-121			1.78	20
Chlorodibromomethane	25.0	26.1	26.0	104	104	77.0-125			0.199	20
Chloroethane	25.0	30.1	29.1	121	116	47.0-150			3.62	20
Chloroform	25.0	27.2	26.5	109	106	73.0-120			2.36	20
Chloromethane	25.0	21.2	21.9	84.9	87.6	41.0-142			3.19	20
1,2-Dibromo-3-Chloropropane	25.0	22.6	23.4	90.5	93.6	58.0-134			3.36	20
1,2-Dibromoethane	25.0	26.3	25.3	105	101	80.0-122			3.67	20
1,2-Dichlorobenzene	25.0	24.7	24.4	99.0	97.5	79.0-121			1.53	20
1,3-Dichlorobenzene	25.0	25.4	24.2	101	96.8	79.0-120			4.67	20
1,4-Dichlorobenzene	25.0	25.0	23.9	100	95.4	79.0-120			4.67	20
Dichlorodifluoromethane	25.0	28.7	26.9	115	108	51.0-149			6.31	20
1,1-Dichloroethane	25.0	26.9	27.2	108	109	70.0-126			0.946	20

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

(LCS) R3342715-1 09/13/18 22:14 • (LCSD) R3342715-2 09/13/18 22:35

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 %
1,2-Dichloroethane	25.0	27.5	27.2	110	109	70.0-128			1.19	20
1,1-Dichloroethene	25.0	27.9	26.5	112	106	71.0-124			5.21	20
cis-1,2-Dichloroethene	25.0	26.9	26.5	107	106	73.0-120			1.42	20
trans-1,2-Dichloroethene	25.0	27.7	26.7	111	107	73.0-120			3.55	20
1,2-Dichloropropane	25.0	26.7	26.4	107	106	77.0-125			1.19	20
cis-1,3-Dichloropropene	25.0	26.0	26.0	104	104	80.0-123			0.0695	20
trans-1,3-Dichloropropene	25.0	27.2	26.2	109	105	78.0-124			3.49	20
Ethylbenzene	25.0	26.5	24.6	106	98.2	79.0-123			7.53	20
2-Hexanone	125	130	126	104	101	67.0-149			3.07	20
Isopropylbenzene	25.0	25.7	25.8	103	103	76.0-127			0.504	20
2-Butanone (MEK)	125	125	126	100	101	44.0-160			0.769	20
Methylene Chloride	25.0	25.3	24.9	101	99.6	67.0-120			1.58	20
4-Methyl-2-pentanone (MIBK)	125	126	121	101	97.0	68.0-142			3.73	20
Methyl tert-butyl ether	25.0	25.9	25.7	103	103	68.0-125			0.674	20
Naphthalene	25.0	23.1	23.2	92.6	92.8	54.0-135			0.244	20
Styrene	25.0	25.2	25.1	101	101	73.0-130			0.230	20
1,1,2,2-Tetrachloroethane	25.0	25.7	24.9	103	99.6	65.0-130			3.19	20
Tetrachloroethene	25.0	27.0	25.7	108	103	72.0-132			5.24	20
Toluene	25.0	25.9	24.9	104	99.7	79.0-120			3.78	20
1,1,2-Trichlorotrifluoroethane	25.0	29.3	28.0	117	112	69.0-132			4.40	20
1,2,3-Trichlorobenzene	25.0	24.4	24.0	97.8	96.0	50.0-138			1.79	20
1,2,4-Trichlorobenzene	25.0	24.5	24.2	98.0	96.6	57.0-137			1.40	20
1,1,1-Trichloroethane	25.0	29.2	29.1	117	116	73.0-124			0.660	20
1,1,2-Trichloroethane	25.0	26.2	24.8	105	99.4	80.0-120			5.14	20
Trichloroethene	25.0	27.0	25.9	108	104	78.0-124			4.28	20
Trichlorofluoromethane	25.0	31.3	33.0	125	132	59.0-147			5.39	20
Vinyl chloride	25.0	28.0	27.6	112	111	67.0-131			1.49	20
Xylenes, Total	75.0	77.2	75.1	103	100	79.0-123			2.76	20
(S) Toluene-d8				*99.2*	*99.9*	*80.0-120*				
(S) Dibromofluoromethane				*104*	*107*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*103*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*106*	*77.0-126*				

L1025403-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1025403-03 09/14/18 02:04 • (MS) R3342715-5 09/14/18 07:30 • (MSD) R3342715-6 09/14/18 07:51

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 %
Acetone	125	ND	129	131	103	105	1	10.0-160			1.62	35
Benzene	25.0	ND	27.0	27.2	106	107	1	17.0-158			0.747	27
Bromodichloromethane	25.0	ND	27.1	27.2	109	109	1	31.0-150			0.418	27
Bromochloromethane	25.0	ND	28.1	28.2	112	113	1	38.0-142			0.466	26
Bromoform	25.0	ND	26.2	25.9	105	104	1	29.0-150			0.965	29
Carbon disulfide	25.0	ND	25.3	25.8	101	103	1	10.0-156			1.63	28
Carbon tetrachloride	25.0	ND	28.0	28.6	112	114	1	23.0-159			1.99	28
Chlorobenzene	25.0	ND	25.7	25.6	103	102	1	33.0-152			0.438	27
Chlorodibromomethane	25.0	ND	24.9	26.2	99.8	105	1	37.0-149			4.75	27
Chloroethane	25.0	ND	33.1	33.4	132	133	1	10.0-160			0.942	30
Chloroform	25.0	ND	27.8	28.0	111	112	1	29.0-154			0.824	28
Chloromethane	25.0	ND	19.8	20.4	79.1	81.8	1	10.0-160			3.29	29
1,2-Dibromo-3-Chloropropane	25.0	ND	22.4	24.1	89.7	96.6	1	22.0-151			7.31	34
1,2-Dibromoethane	25.0	ND	24.7	25.5	98.9	102	1	34.0-147			3.16	27
1,2-Dichlorobenzene	25.0	ND	25.2	25.1	101	100	1	34.0-149			0.435	28
1,3-Dichlorobenzene	25.0	ND	25.1	25.2	100	101	1	36.0-146			0.552	27
1,4-Dichlorobenzene	25.0	ND	24.8	24.9	99.2	99.5	1	35.0-142			0.258	27
Dichlorodifluoromethane	25.0	ND	30.6	28.3	122	113	1	10.0-160			7.90	29
1,1-Dichloroethane	25.0	ND	28.1	28.1	112	113	1	25.0-158			0.0659	27
1,2-Dichloroethane	25.0	ND	28.3	28.8	113	115	1	29.0-151			1.72	27
1,1-Dichloroethene	25.0	ND	29.3	28.9	117	115	1	11.0-160			1.44	29
cis-1,2-Dichloroethene	25.0	ND	27.2	27.6	109	110	1	10.0-160			1.57	27
trans-1,2-Dichloroethene	25.0	ND	27.5	27.0	110	108	1	17.0-153			1.86	27
1,2-Dichloropropane	25.0	2.19	26.9	26.6	98.9	97.6	1	30.0-156			1.17	27
cis-1,3-Dichloropropene	25.0	ND	24.3	24.9	97.1	99.8	1	34.0-149			2.75	28
trans-1,3-Dichloropropene	25.0	ND	25.6	26.2	99.8	102	1	32.0-149			2.19	28
Ethylbenzene	25.0	ND	25.2	26.9	101	108	1	30.0-155			6.48	27
2-Hexanone	125	ND	131	131	105	105	1	21.0-160			0.0156	29
Isopropylbenzene	25.0	ND	26.4	26.1	106	105	1	28.0-157			0.928	27
2-Butanone (MEK)	125	ND	130	130	104	104	1	10.0-160			0.0251	32
Methylene Chloride	25.0	ND	25.0	26.3	100	105	1	23.0-144			5.19	28
4-Methyl-2-pentanone (MIBK)	125	ND	126	129	101	103	1	29.0-160			1.83	29
Methyl tert-butyl ether	25.0	ND	26.2	27.3	105	109	1	28.0-150			3.91	29
Naphthalene	25.0	ND	24.4	24.1	97.6	96.4	1	12.0-156			1.23	35
Styrene	25.0	ND	25.6	26.0	102	104	1	33.0-155			1.62	28
1,1,2,2-Tetrachloroethane	25.0	ND	27.0	26.6	108	106	1	33.0-150			1.62	28
Tetrachloroethene	25.0	ND	26.5	26.5	106	106	1	10.0-160			0.227	27
Toluene	25.0	1.97	24.8	25.9	91.2	95.5	1	26.0-154			4.33	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	30.8	29.2	123	117	1	23.0-160			5.13	30
1,2,3-Trichlorobenzene	25.0	ND	24.2	25.2	96.7	101	1	17.0-150			4.05	36

L1025403-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1025403-03 09/14/18 02:04 • (MS) R3342715-5 09/14/18 07:30 • (MSD) R3342715-6 09/14/18 07:51

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 %
1,2,4-Trichlorobenzene	25.0	ND	25.4	24.6	101	98.5	1	24.0-150			2.95	33
1,1,1-Trichloroethane	25.0	ND	30.3	30.1	121	120	1	23.0-160			0.573	28
1,1,2-Trichloroethane	25.0	ND	24.9	26.1	99.7	104	1	35.0-147			4.52	27
Trichloroethene	25.0	ND	26.6	27.2	106	109	1	10.0-160			2.27	25
Trichlorofluoromethane	25.0	ND	31.0	29.4	124	117	1	17.0-160			5.29	31
Vinyl chloride	25.0	ND	28.6	28.7	114	115	1	10.0-160			0.620	27
Xylenes, Total	75.0	ND	75.4	77.0	101	103	1	29.0-154			2.10	28
(S) Toluene-d8					*95.2*	*97.3*		*80.0-120*				
(S) Dibromofluoromethane					*107*	*105*		*75.0-120*				
(S) α,α,α-Trifluorotoluene					*102*	*103*		*80.0-120*				
(S) 4-Bromofluorobenzene					*105*	*104*		*77.0-126*				

Method Blank (MB)

(MB) R3343526-5 09/15/18 22:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*95.0*			*75.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*

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

(LCS) R3343526-1 09/15/18 20:50 • (LCSD) R3343526-2 09/15/18 21:10

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	20.4	19.8	81.5	79.1	70.0-123			2.96	20
Methyl tert-butyl ether	25.0	20.4	20.9	81.6	83.8	68.0-125			2.65	20
Toluene	25.0	22.6	22.9	90.3	91.7	79.0-120			1.60	20
Xylenes, Total	75.0	69.7	71.4	92.9	95.2	79.0-123			2.41	20
(S) Toluene-d8				*105*	*106*	*80.0-120*				
(S) Dibromofluoromethane				*95.6*	*94.6*	*75.0-120*				
(S) 4-Bromofluorobenzene				*94.3*	*92.7*	*77.0-126*				

Method Blank (MB)

(MB) R3342978-3 09/18/18 13:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Bromomethane	U		0.866	5.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*108*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.0*			*77.0-126*

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

(LCS) R3342978-1 09/18/18 12:50 • (LCSD) R3342978-2 09/18/18 13:10

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	24.5	25.0	98.2	100	70.0-123			1.86	20
Bromomethane	25.0	23.8	23.3	95.2	93.2	10.0-160			2.16	25
Ethylbenzene	25.0	27.8	27.8	111	111	79.0-123			0.123	20
Toluene	25.0	24.7	25.5	98.9	102	79.0-120			3.04	20
Xylenes, Total	75.0	76.5	76.6	102	102	79.0-123			0.131	20
(S) Toluene-d8				*106*	*107*	*80.0-120*				
(S) Dibromofluoromethane				*108*	*108*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*101*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*98.9*	*106*	*77.0-126*				

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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
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.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

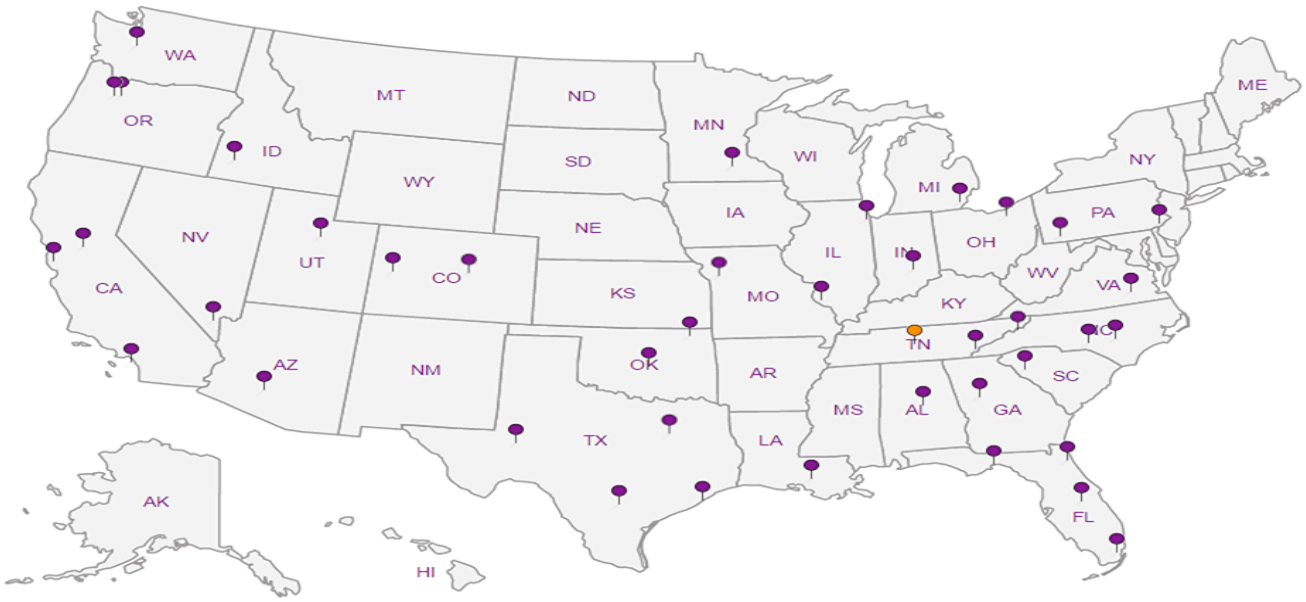
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Chain of Custody

Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

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

L# L025359

B180

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18

Shipped Via: FedEX Ground

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.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 ___ 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	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-25B-091218	GRAB	GW	NA	09/12/18	0715	3				X			-01
MW-25-091218		GW			0720	7	X	X	X	X		MNA	-02
MW-42-091218		GW			0730	7	X	X	X	X		MNA	-03
MW-41-091218		GW			0735	3				X			-04
MW-40-091218		GW			0745	7	X	X	X	X		MNA	-05
MW-39-091218		GW			0755	3				X			-06
MW-39-D-091218		GW			0756	3				X			-07
MW-34-091218		GW			0800	3				X			-08
MW-15B-091218		GW			0810	3				X			-09
MW-15-091218		GW			0815	7	X	X	X	X		MNA	-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.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 4492 6226 1919

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: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	09/12/18	1730		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.8 °C Bottles Received:	
				12	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/13/18 Time: 0845	Hold: Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Pres Chk

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARNER

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y X

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

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	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-38-091218	GRAB	GW	NA	09/12/18	0840	3				X			-11
MW-37-091218		GW			0850	3							-12
MW-24-091218		GW			0900	3							-13
MW-24B-091218		GW			0905	3							-14
MW-43-091218		GW			0910	3							-15
MW-43B-091218		GW			0915	3							-16
MW-13B-091218		GW			0930	3							-17
MW-14-091218		GW			0935	3							-18
MW-14B-091218		GW			0945	3							-19
MW-50B-091218		GW			1000	3							-20

Chain of Custody Page 2 of 4

Pace Analytical®
National Center for Testing & Innovation

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

L# L1025359

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18

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.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4492 6226 1919

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)	Trip Blank Received: Yes / No HCl / MeoH TBR
	09/12/18	1730		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.8 °C Bottles Received: 12
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/13/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature): Melissa Warren

Rush? (Lab MUST Be Notified)
___ Same Day ___ 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

Pace Analytical®
National Center for Testing & Innovation

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

Chain of Custody Page 3 of 4

L# 4025391

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18

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	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-48B-091218	GRAB	GW	NA	09/12/18	1010	3				X			-21
MW-33T-091218		GW			1020	3				X			-22
MW-31-091218		GW			1030	3				X			-23
MW-31-D-091218		GW			1031	3				X			-24
MW-47-091218		GW			1035	3				X			-25
MW-10-091218		GW			1055	7	X	X	X	X			-26
MW-32-091218		GW			1105	7	X	X	X	X		MNA	MT -26
MW-02B-091218		GW			1120	3				X		MNA	-27
MW-02-091218		GW			1125	7	X	X	X	X		1	-28
FB01-091218		GW			1245	3				X		MNA	-29
												FIELD BLANK	-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.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4492 6226 1919

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
Melissa Warren	09/12/18	1730		1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.8 °C Bottles Received: 12
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Tonia	Date: 9/13/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.LD.MRGW

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 ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ 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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
TB01-091218	GRAB	GW	NA	09/12/18	1250	1					X	TRIP BLANK	-31
MW-07-091218	GRAB	GW	NA	09/12/18	1511	3				X			-32
		GW											
		GW											
		GW											
		GW											
		GW											
		GW											
		GW											
		GW											

Chain of Custody Page 4 of 4

Pace Analytical®
National Center for Testing & Innovation

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

L# L025359

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18

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.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4492 6226 1919

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __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)
Melissa Warren	09/12/18	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			BK Farris

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

Temp: 0.8 °C Bottles Received: 121

Date: 9/13/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 25, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1025808
Samples Received:	09/14/2018
Project Number:	699858.LD.MR.GD
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
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-45-091318 L1025808-01 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 09:26 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 00:18	09/15/18 00:18	JCP

MW-44-091318 L1025808-02 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 10:22 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 00:38	09/15/18 00:38	JCP

MW-19-091318 L1025808-03 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 10:55 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167702	1	09/19/18 18:06	09/19/18 18:06	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167702	1	09/19/18 18:06	09/19/18 18:06	GB
Wet Chemistry by Method 9056A	WG1166081	1	09/14/18 19:12	09/14/18 19:12	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1166472	1	09/18/18 11:48	09/18/18 11:48	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 00:58	09/15/18 00:58	JCP

MW-04-091318 L1025808-04 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 12:40 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167702	1	09/19/18 18:12	09/19/18 18:12	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167702	1	09/19/18 18:12	09/19/18 18:12	GB
Wet Chemistry by Method 9056A	WG1166081	1	09/14/18 20:10	09/14/18 20:10	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1166472	1	09/18/18 12:06	09/18/18 12:06	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 01:18	09/15/18 01:18	JCP

MW-05-091318 L1025808-05 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 12:55 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 01:38	09/15/18 01:38	JCP

MW-06-091318 L1025808-06 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 13:05 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 01:58	09/15/18 01:58	JCP

MW-06B-091318 L1025808-07 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 13:10 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 02:18	09/15/18 02:18	JCP

MW-16-091318 L1025808-08 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 13:20 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167702	1	09/19/18 18:17	09/19/18 18:17	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167702	1	09/19/18 18:17	09/19/18 18:17	GB
Wet Chemistry by Method 9056A	WG1166081	1	09/14/18 20:24	09/14/18 20:24	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1166472	1	09/18/18 13:16	09/18/18 13:16	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 02:38	09/15/18 02:38	JCP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167407	10	09/17/18 22:13	09/17/18 22:13	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1170571	25	09/24/18 14:07	09/24/18 14:07	DWR

MW-09B-091318 L1025808-09 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 13:40 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 02:58	09/15/18 02:58	JCP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167407	1	09/17/18 23:00	09/17/18 23:00	TJJ

MW-09-091318 L1025808-10 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 13:55 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167702	1	09/19/18 18:23	09/19/18 18:23	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167702	1	09/19/18 18:23	09/19/18 18:23	GB
Wet Chemistry by Method 9056A	WG1166081	1	09/14/18 20:39	09/14/18 20:39	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1166472	1	09/18/18 13:24	09/18/18 13:24	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 03:18	09/15/18 03:18	JCP

MW-09-D-091318 L1025808-11 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 13:56 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 03:38	09/15/18 03:38	JCP

MW-36B-091318 L1025808-12 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 14:20 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 03:58	09/15/18 03:58	JCP

MW-36-091318 L1025808-13 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 14:25 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 04:18	09/15/18 04:18	JCP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1167407	10	09/17/18 23:20	09/17/18 23:20	TJJ

FB01-091318 L1025808-14 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 14:55 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 04:38	09/15/18 04:38	JCP

TB01-091318 L1025808-15 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 15:00 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166389	1	09/14/18 17:08	09/14/18 17:08	BMB

MW-08-091318 L1025808-16 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 16:05 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167702	1	09/19/18 18:29	09/19/18 18:29	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167702	1	09/19/18 18:29	09/19/18 18:29	GB
Wet Chemistry by Method 9056A	WG1166081	1	09/14/18 20:53	09/14/18 20:53	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1166472	1	09/18/18 13:27	09/18/18 13:27	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 04:58	09/15/18 04:58	JCP

MW-03-091318 L1025808-17 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 16:10 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167702	1	09/19/18 18:35	09/19/18 18:35	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167702	1	09/19/18 18:35	09/19/18 18:35	GB
Wet Chemistry by Method 9056A	WG1166081	1	09/14/18 21:07	09/14/18 21:07	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1166472	1	09/18/18 13:30	09/18/18 13:30	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 05:19	09/15/18 05:19	JCP

MW-22-091318 L1025808-18 GW

Collected by: Melissa Warren | Collected date/time: 09/13/18 16:45 | Received date/time: 09/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1167702	1	09/19/18 18:42	09/19/18 18:42	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1167702	1	09/19/18 18:42	09/19/18 18:42	GB
Wet Chemistry by Method 9056A	WG1166343	1	09/14/18 14:54	09/14/18 14:54	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1166472	1	09/18/18 13:38	09/18/18 13:38	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1166593	1	09/15/18 05:39	09/15/18 05:39	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Sample Handling and Receiving

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1025808-01	MW-45-091318	8260B
L1025808-02	MW-44-091318	8260B
L1025808-03	MW-19-091318	8260B
L1025808-04	MW-04-091318	8260B
L1025808-05	MW-05-091318	8260B
L1025808-06	MW-06-091318	8260B
L1025808-07	MW-06B-091318	8260B
L1025808-08	MW-16-091318	8260B
L1025808-09	MW-09B-091318	8260B
L1025808-10	MW-09-091318	8260B
L1025808-11	MW-09-D-091318	8260B
L1025808-12	MW-36B-091318	8260B
L1025808-13	MW-36-091318	8260B
L1025808-14	FB01-091318	8260B
L1025808-15	TB01-091318	8260B
L1025808-16	MW-08-091318	8260B
L1025808-17	MW-03-091318	8260B
L1025808-18	MW-22-091318	8260B

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	09/15/2018 00:18	WG1166593
Toluene	ND		1.00	1	09/15/2018 00:18	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 00:18	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 00:18	WG1166593
Methyl tert-butyl ether	46.3		1.00	1	09/15/2018 00:18	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 00:18	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 00:18	WG1166593
(S) Toluene-d8	*102*		*80.0-120*		*09/15/2018 00:18*	WG1166593
(S) Dibromofluoromethane	*91.2*		*75.0-120*		*09/15/2018 00:18*	WG1166593
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/15/2018 00:18*	WG1166593

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	09/15/2018 00:38	WG1166593
Toluene	ND		1.00	1	09/15/2018 00:38	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 00:38	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 00:38	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 00:38	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 00:38	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 00:38	WG1166593
(S) Toluene-d8	*104*		*80.0-120*		*09/15/2018 00:38*	WG1166593
(S) Dibromofluoromethane	*90.9*		*75.0-120*		*09/15/2018 00:38*	WG1166593
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/15/2018 00:38*	WG1166593

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	58300		20000	1	09/19/2018 18:06	WG1167702

Sample Narrative:
L1025808-03 WG1167702: 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	76600	T8	20000	1	09/19/2018 18:06	WG1167702

Sample Narrative:
L1025808-03 WG1167702: 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)	176		100	1	09/14/2018 19:12	WG1166081
Sulfate	15300		5000	1	09/14/2018 19:12	WG1166081

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	233		10.0	1	09/18/2018 11:48	WG1166472

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	3.31		1.00	1	09/15/2018 00:58	WG1166593
Toluene	16.0		1.00	1	09/15/2018 00:58	WG1166593
Ethylbenzene	3.53		1.00	1	09/15/2018 00:58	WG1166593
Total Xylenes	96.5		3.00	1	09/15/2018 00:58	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 00:58	WG1166593
Naphthalene	6.55		5.00	1	09/15/2018 00:58	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 00:58	WG1166593
(S) Toluene-d8	*103*		*80.0-120*		*09/15/2018 00:58*	WG1166593
(S) Dibromofluoromethane	*88.4*		*75.0-120*		*09/15/2018 00:58*	WG1166593
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*09/15/2018 00:58*	WG1166593

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 18:12	WG1167702

Sample Narrative:
L1025808-04 WG1167702: 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	46300	T8	20000	1	09/19/2018 18:12	WG1167702

Sample Narrative:
L1025808-04 WG1167702: 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	09/14/2018 20:10	WG1166081
Sulfate	ND		5000	1	09/14/2018 20:10	WG1166081

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	09/18/2018 12:06	WG1166472

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	09/15/2018 01:18	WG1166593
Toluene	ND		1.00	1	09/15/2018 01:18	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 01:18	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 01:18	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 01:18	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 01:18	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 01:18	WG1166593
(S) Toluene-d8	*102*		*80.0-120*		*09/15/2018 01:18*	WG1166593
(S) Dibromofluoromethane	*91.3*		*75.0-120*		*09/15/2018 01:18*	WG1166593
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/15/2018 01:18*	WG1166593

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	09/15/2018 01:38	WG1166593
Toluene	ND		1.00	1	09/15/2018 01:38	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 01:38	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 01:38	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 01:38	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 01:38	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 01:38	WG1166593
(S) Toluene-d8	*104*		*80.0-120*		*09/15/2018 01:38*	WG1166593
(S) Dibromofluoromethane	*91.2*		*75.0-120*		*09/15/2018 01:38*	WG1166593
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/15/2018 01:38*	WG1166593

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	09/15/2018 01:58	WG1166593
Toluene	ND		1.00	1	09/15/2018 01:58	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 01:58	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 01:58	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 01:58	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 01:58	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 01:58	WG1166593
(S) Toluene-d8	*101*		*80.0-120*		*09/15/2018 01:58*	WG1166593
(S) Dibromofluoromethane	*89.4*		*75.0-120*		*09/15/2018 01:58*	WG1166593
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*09/15/2018 01:58*	WG1166593

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	09/15/2018 02:18	WG1166593
Toluene	1.17		1.00	1	09/15/2018 02:18	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 02:18	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 02:18	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 02:18	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 02:18	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 02:18	WG1166593
(S) Toluene-d8	*101*		*80.0-120*		*09/15/2018 02:18*	WG1166593
(S) Dibromofluoromethane	*93.2*		*75.0-120*		*09/15/2018 02:18*	WG1166593
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/15/2018 02:18*	WG1166593

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	09/19/2018 18:17	WG1167702

Sample Narrative:
L1025808-08 WG1167702: 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	40500	T8	20000	1	09/19/2018 18:17	WG1167702

Sample Narrative:
L1025808-08 WG1167702: 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	09/14/2018 20:24	WG1166081
Sulfate	ND		5000	1	09/14/2018 20:24	WG1166081

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	09/18/2018 13:16	WG1166472

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	150		1.00	1	09/15/2018 02:38	WG1166593
Toluene	2100		25.0	25	09/24/2018 14:07	WG1170571
Ethylbenzene	200		1.00	1	09/15/2018 02:38	WG1166593
Total Xylenes	2730		30.0	10	09/17/2018 22:13	WG1167407
Methyl tert-butyl ether	21.5		1.00	1	09/15/2018 02:38	WG1166593
Naphthalene	635		50.0	10	09/17/2018 22:13	WG1167407
1,2-Dichloroethane	ND		1.00	1	09/15/2018 02:38	WG1166593
(S) Toluene-d8	*88.4*		*80.0-120*		*09/15/2018 02:38*	WG1166593
(S) Toluene-d8	*104*		*80.0-120*		*09/17/2018 22:13*	WG1167407
(S) Toluene-d8	*111*		*80.0-120*		*09/24/2018 14:07*	WG1170571
(S) Dibromofluoromethane	*90.1*		*75.0-120*		*09/15/2018 02:38*	WG1166593
(S) Dibromofluoromethane	*89.1*		*75.0-120*		*09/17/2018 22:13*	WG1167407
(S) Dibromofluoromethane	*96.2*		*75.0-120*		*09/24/2018 14:07*	WG1170571
(S) 4-Bromofluorobenzene	*122*		*77.0-126*		*09/15/2018 02:38*	WG1166593
(S) 4-Bromofluorobenzene	*117*		*77.0-126*		*09/17/2018 22:13*	WG1167407
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*09/24/2018 14:07*	WG1170571

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	09/15/2018 02:58	WG1166593
Toluene	5.90		1.00	1	09/15/2018 02:58	WG1166593
Ethylbenzene	ND		1.00	1	09/17/2018 23:00	WG1167407
Total Xylenes	4.44		3.00	1	09/17/2018 23:00	WG1167407
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 02:58	WG1166593
Naphthalene	ND		5.00	1	09/17/2018 23:00	WG1167407
1,2-Dichloroethane	ND		1.00	1	09/15/2018 02:58	WG1166593
(S) Toluene-d8	*104*		*80.0-120*		*09/15/2018 02:58*	WG1166593
(S) Toluene-d8	*107*		*80.0-120*		*09/17/2018 23:00*	WG1167407
(S) Dibromofluoromethane	*86.8*		*75.0-120*		*09/15/2018 02:58*	WG1166593
(S) Dibromofluoromethane	*87.9*		*75.0-120*		*09/17/2018 23:00*	WG1167407
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/15/2018 02:58*	WG1166593
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/17/2018 23:00*	WG1167407

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 18:23	WG1167702

Sample Narrative:
L1025808-10 WG1167702: 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	09/19/2018 18:23	WG1167702

Sample Narrative:
L1025808-10 WG1167702: 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)	1030		100	1	09/14/2018 20:39	WG1166081
Sulfate	ND		5000	1	09/14/2018 20:39	WG1166081

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	09/18/2018 13:24	WG1166472

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	09/15/2018 03:18	WG1166593
Toluene	ND		1.00	1	09/15/2018 03:18	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 03:18	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 03:18	WG1166593
Methyl tert-butyl ether	2.14		1.00	1	09/15/2018 03:18	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 03:18	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 03:18	WG1166593
(S) Toluene-d8	*102*		*80.0-120*		*09/15/2018 03:18*	WG1166593
(S) Dibromofluoromethane	*88.7*		*75.0-120*		*09/15/2018 03:18*	WG1166593
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*09/15/2018 03:18*	WG1166593

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	09/15/2018 03:38	WG1166593
Toluene	ND		1.00	1	09/15/2018 03:38	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 03:38	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 03:38	WG1166593
Methyl tert-butyl ether	2.00		1.00	1	09/15/2018 03:38	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 03:38	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 03:38	WG1166593
(S) Toluene-d8	*101*		*80.0-120*		*09/15/2018 03:38*	WG1166593
(S) Dibromofluoromethane	*92.3*		*75.0-120*		*09/15/2018 03:38*	WG1166593
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*09/15/2018 03:38*	WG1166593

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	09/15/2018 03:58	WG1166593
Toluene	ND		1.00	1	09/15/2018 03:58	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 03:58	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 03:58	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 03:58	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 03:58	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 03:58	WG1166593
(S) Toluene-d8	*103*		*80.0-120*		*09/15/2018 03:58*	WG1166593
(S) Dibromofluoromethane	*90.2*		*75.0-120*		*09/15/2018 03:58*	WG1166593
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/15/2018 03:58*	WG1166593

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	238		10.0	10	09/17/2018 23:20	WG1167407
Toluene	326		10.0	10	09/17/2018 23:20	WG1167407
Ethylbenzene	ND		1.00	1	09/15/2018 04:18	WG1166593
Total Xylenes	238		3.00	1	09/15/2018 04:18	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 04:18	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 04:18	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 04:18	WG1166593
(S) Toluene-d8	*103*		*80.0-120*		*09/15/2018 04:18*	WG1166593
(S) Toluene-d8	*104*		*80.0-120*		*09/17/2018 23:20*	WG1167407
(S) Dibromofluoromethane	*90.7*		*75.0-120*		*09/15/2018 04:18*	WG1166593
(S) Dibromofluoromethane	*89.0*		*75.0-120*		*09/17/2018 23:20*	WG1167407
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/15/2018 04:18*	WG1166593
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*09/17/2018 23:20*	WG1167407

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	09/15/2018 04:38	WG1166593
Toluene	ND		1.00	1	09/15/2018 04:38	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 04:38	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 04:38	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 04:38	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 04:38	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 04:38	WG1166593
(S) Toluene-d8	*106*		*80.0-120*		*09/15/2018 04:38*	WG1166593
(S) Dibromofluoromethane	*88.8*		*75.0-120*		*09/15/2018 04:38*	WG1166593
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/15/2018 04:38*	WG1166593

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	09/14/2018 17:08	WG1166389
Benzene	ND		1.00	1	09/14/2018 17:08	WG1166389
Bromochloromethane	ND		1.00	1	09/14/2018 17:08	WG1166389
Bromodichloromethane	ND		1.00	1	09/14/2018 17:08	WG1166389
Bromoform	ND		1.00	1	09/14/2018 17:08	WG1166389
Bromomethane	ND		5.00	1	09/14/2018 17:08	WG1166389
Carbon disulfide	ND		1.00	1	09/14/2018 17:08	WG1166389
Carbon tetrachloride	ND		1.00	1	09/14/2018 17:08	WG1166389
Chlorobenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
Chlorodibromomethane	ND		1.00	1	09/14/2018 17:08	WG1166389
Chloroethane	ND		5.00	1	09/14/2018 17:08	WG1166389
Chloroform	ND		5.00	1	09/14/2018 17:08	WG1166389
Chloromethane	ND		2.50	1	09/14/2018 17:08	WG1166389
Cyclohexane	ND		1.00	1	09/14/2018 17:08	WG1166389
1,2-Dibromo-3-Chloropropane	ND		5.00	1	09/14/2018 17:08	WG1166389
1,2-Dibromoethane	ND		1.00	1	09/14/2018 17:08	WG1166389
1,2-Dichlorobenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
1,3-Dichlorobenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
1,4-Dichlorobenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
Dichlorodifluoromethane	ND		5.00	1	09/14/2018 17:08	WG1166389
1,1-Dichloroethane	ND		1.00	1	09/14/2018 17:08	WG1166389
1,2-Dichloroethane	ND		1.00	1	09/14/2018 17:08	WG1166389
1,1-Dichloroethene	ND		1.00	1	09/14/2018 17:08	WG1166389
cis-1,2-Dichloroethene	ND		1.00	1	09/14/2018 17:08	WG1166389
trans-1,2-Dichloroethene	ND		1.00	1	09/14/2018 17:08	WG1166389
1,2-Dichloropropane	ND		1.00	1	09/14/2018 17:08	WG1166389
cis-1,3-Dichloropropene	ND		1.00	1	09/14/2018 17:08	WG1166389
trans-1,3-Dichloropropene	ND		1.00	1	09/14/2018 17:08	WG1166389
Ethylbenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
2-Hexanone	ND		10.0	1	09/14/2018 17:08	WG1166389
Isopropylbenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
2-Butanone (MEK)	ND		10.0	1	09/14/2018 17:08	WG1166389
Methyl Acetate	ND		20.0	1	09/14/2018 17:08	WG1166389
Methyl Cyclohexane	ND		1.00	1	09/14/2018 17:08	WG1166389
Methylene Chloride	ND		5.00	1	09/14/2018 17:08	WG1166389
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	09/14/2018 17:08	WG1166389
Methyl tert-butyl ether	ND		1.00	1	09/14/2018 17:08	WG1166389
Styrene	ND		1.00	1	09/14/2018 17:08	WG1166389
1,1,2,2-Tetrachloroethane	ND		1.00	1	09/14/2018 17:08	WG1166389
Tetrachloroethene	ND		1.00	1	09/14/2018 17:08	WG1166389
Toluene	ND		1.00	1	09/14/2018 17:08	WG1166389
1,2,3-Trichlorobenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
1,2,4-Trichlorobenzene	ND		1.00	1	09/14/2018 17:08	WG1166389
1,1,1-Trichloroethane	ND		1.00	1	09/14/2018 17:08	WG1166389
1,1,2-Trichloroethane	ND		1.00	1	09/14/2018 17:08	WG1166389
Trichloroethene	ND		1.00	1	09/14/2018 17:08	WG1166389
Trichlorofluoromethane	ND		5.00	1	09/14/2018 17:08	WG1166389
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	09/14/2018 17:08	WG1166389
Vinyl chloride	ND		1.00	1	09/14/2018 17:08	WG1166389
Xylenes, Total	ND		3.00	1	09/14/2018 17:08	WG1166389
(S) Toluene-d8	*104*		*80.0-120*		*09/14/2018 17:08*	WG1166389
(S) Dibromofluoromethane	*105*		*75.0-120*		*09/14/2018 17:08*	WG1166389
(S) a,a,a-Trifluorotoluene	*103*		*80.0-120*		*09/14/2018 17:08*	WG1166389
(S) 4-Bromofluorobenzene	*88.2*		*77.0-126*		*09/14/2018 17:08*	WG1166389

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 18:29	WG1167702

Sample Narrative:
L1025808-16 WG1167702: 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	09/19/2018 18:29	WG1167702

Sample Narrative:
L1025808-16 WG1167702: 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	09/14/2018 20:53	WG1166081
Sulfate	ND		5000	1	09/14/2018 20:53	WG1166081

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	09/18/2018 13:27	WG1166472

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	09/15/2018 04:58	WG1166593
Toluene	ND		1.00	1	09/15/2018 04:58	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 04:58	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 04:58	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 04:58	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 04:58	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 04:58	WG1166593
(S) Toluene-d8	*102*		*80.0-120*		*09/15/2018 04:58*	WG1166593
(S) Dibromofluoromethane	*90.4*		*75.0-120*		*09/15/2018 04:58*	WG1166593
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*09/15/2018 04:58*	WG1166593

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	09/19/2018 18:35	WG1167702

Sample Narrative:
L1025808-17 WG1167702: 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	09/19/2018 18:35	WG1167702

Sample Narrative:
L1025808-17 WG1167702: 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)	963		100	1	09/14/2018 21:07	WG1166081
Sulfate	ND		5000	1	09/14/2018 21:07	WG1166081

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	09/18/2018 13:30	WG1166472

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	09/15/2018 05:19	WG1166593
Toluene	ND		1.00	1	09/15/2018 05:19	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 05:19	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 05:19	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 05:19	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 05:19	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 05:19	WG1166593
(S) Toluene-d8	*103*		*80.0-120*		*09/15/2018 05:19*	WG1166593
(S) Dibromofluoromethane	*90.7*		*75.0-120*		*09/15/2018 05:19*	WG1166593
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*09/15/2018 05:19*	WG1166593

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	21600		20000	1	09/19/2018 18:42	WG1167702

Sample Narrative:
L1025808-18 WG1167702: 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	30500	T8	20000	1	09/19/2018 18:42	WG1167702

Sample Narrative:
L1025808-18 WG1167702: 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)	141		100	1	09/14/2018 14:54	WG1166343
Sulfate	38600		5000	1	09/14/2018 14:54	WG1166343

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	229		10.0	1	09/18/2018 13:38	WG1166472

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	09/15/2018 05:39	WG1166593
Toluene	ND		1.00	1	09/15/2018 05:39	WG1166593
Ethylbenzene	ND		1.00	1	09/15/2018 05:39	WG1166593
Total Xylenes	ND		3.00	1	09/15/2018 05:39	WG1166593
Methyl tert-butyl ether	ND		1.00	1	09/15/2018 05:39	WG1166593
Naphthalene	ND		5.00	1	09/15/2018 05:39	WG1166593
1,2-Dichloroethane	ND		1.00	1	09/15/2018 05:39	WG1166593
(S) Toluene-d8	*102*		*80.0-120*		*09/15/2018 05:39*	WG1166593
(S) Dibromofluoromethane	*92.7*		*75.0-120*		*09/15/2018 05:39*	WG1166593
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*09/15/2018 05:39*	WG1166593

Method Blank (MB)

(MB) R3343484-1 09/19/18 16:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		2710	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1025405-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025405-01 09/19/18 16:23 • (DUP) R3343484-5 09/19/18 16:30

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	262000	261000	1	0.337		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1025118-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025118-01 09/19/18 19:03 • (DUP) R3343484-9 09/19/18 19:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	126000	126000	1	0.0973		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

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

(LCS) R3343484-7 09/19/18 17:36 • (LCSD) R3343484-8 09/19/18 18:48

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	99300	98900	99.3	98.9	85.0-115			0.385	20

Sample Narrative:

LCS: Endpoint pH 4.5

LCSD: Endpoint pH 4.5

Method Blank (MB)

(MB) R3343484-2 09/19/18 16:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Free Carbon Dioxide	U		6670	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1025405-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025405-01 09/19/18 16:23 • (DUP) R3343484-6 09/19/18 16:30

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	17600	ND	1	11.8	J	20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1025118-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025118-01 09/19/18 19:03 • (DUP) R3343484-10 09/19/18 19:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3342192-1 09/14/18 07:59

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

L1025747-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025747-01 09/14/18 12:12 • (DUP) R3342192-4 09/14/18 12:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	U	0.000	1	0.000		15
Sulfate	12900	13100	1	1.12		15

L1025780-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025780-01 09/14/18 15:22 • (DUP) R3342192-7 09/14/18 15:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	U	0.000	1	0.000		15
Sulfate	42200	42100	1	0.195		15

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

(LCS) R3342192-2 09/14/18 08:13 • (LCSD) R3342192-3 09/14/18 08:27

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	8380	8360	105	105	80.0-120			0.238	15
Sulfate	40000	41100	40900	103	102	80.0-120			0.430	15

L1025747-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1025747-01 09/14/18 12:12 • (MS) R3342192-5 09/14/18 12:57 • (MSD) R3342192-6 09/14/18 13:12

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	U	5000	5010	100	100	1	80.0-120			0.296	15
Sulfate	50000	12900	62400	62600	99.1	99.3	1	80.0-120			0.179	15

L1025780-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1025780-01 09/14/18 15:22 • (MS) R3342192-8 09/14/18 15:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	U	5040	101	1	80.0-120	
Sulfate	50000	42200	91100	97.7	1	80.0-120	

Method Blank (MB)

(MB) R3342042-1 09/14/18 12:18

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

L1025808-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1025808-18 09/14/18 14:54 • (DUP) R3342042-4 09/14/18 15:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Nitrate	141	141	1	0.213		15
Sulfate	38600	38400	1	0.359		15

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

(LCS) R3342042-2 09/14/18 12:34 • (LCSD) R3342042-3 09/14/18 12:50

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	8170	8180	102	102	80.0-120			0.133	15
Sulfate	40000	39500	39400	98.6	98.5	80.0-120			0.158	15

L1025808-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1025808-18 09/14/18 14:54 • (MS) R3342042-5 09/14/18 15:25 • (MSD) R3342042-6 09/14/18 15:41

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	141	5070	5040	98.5	98.0	1	80.0-120			0.479	15
Sulfate	50000	38600	86200	86000	95.2	94.8	1	80.0-120			0.242	15

Method Blank (MB)

(MB) R3342833-1 09/18/18 10:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0

L1025740-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025740-01 09/18/18 10:53 • (DUP) R3342833-2 09/18/18 11:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	64.5	63.7	1	1.26		20

L1025743-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025743-01 09/18/18 10:58 • (DUP) R3342833-3 09/18/18 11:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	136	133	1	1.92		20

L1025745-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025745-01 09/18/18 11:08 • (DUP) R3342833-4 09/18/18 12:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	33.1	32.0	1	3.37		20

L1025756-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025756-01 09/18/18 11:28 • (DUP) R3342833-5 09/18/18 12:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	45.5	46.1	1	1.22		20

L1025814-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1025814-01 09/18/18 13:46 • (DUP) R3342833-6 09/18/18 13:48

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

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

(LCS) R3342833-7 09/18/18 13:56 • (LCSD) R3342833-8 09/18/18 13:59

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	%	%	%			%	%
Methane	67.8	70.6	69.0	104	102	85.0-115			2.39	20

Method Blank (MB)

(MB) R3342279-2 09/14/18 13:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
Methyl Acetate	U		4.30	20.0
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3342279-2 09/14/18 13:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Methyl Cyclohexane	U		0.380	1.00
Toluene	U		0.412	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*100*			*80.0-120*
(S) Dibromofluoromethane	*102*			*75.0-120*
(S) 4-Bromofluorobenzene	*90.6*			*77.0-126*
(S) a,a,a-Trifluorotoluene	*101*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3342279-1 09/14/18 12:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	117	93.5	19.0-160	
Benzene	25.0	22.6	90.5	70.0-123	
Bromodichloromethane	25.0	24.7	98.6	75.0-120	
Bromochloromethane	25.0	25.5	102	76.0-122	
Bromoform	25.0	25.9	103	68.0-132	
Bromomethane	25.0	26.0	104	10.0-160	
Carbon disulfide	25.0	21.3	85.4	61.0-128	
Carbon tetrachloride	25.0	24.6	98.4	68.0-126	
Chlorobenzene	25.0	25.2	101	80.0-121	
Chlorodibromomethane	25.0	27.1	108	77.0-125	
Chloroethane	25.0	21.4	85.7	47.0-150	
Chloroform	25.0	23.7	94.6	73.0-120	
Chloromethane	25.0	23.7	94.6	41.0-142	
1,2-Dibromo-3-Chloropropane	25.0	24.4	97.6	58.0-134	
1,2-Dibromoethane	25.0	26.1	104	80.0-122	
1,2-Dichlorobenzene	25.0	25.1	100	79.0-121	
1,3-Dichlorobenzene	25.0	25.9	104	79.0-120	
1,4-Dichlorobenzene	25.0	23.2	92.6	79.0-120	
Dichlorodifluoromethane	25.0	32.5	130	51.0-149	

Laboratory Control Sample (LCS)

(LCS) R3342279-1 09/14/18 12:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1-Dichloroethane	25.0	21.1	84.4	70.0-126	
1,2-Dichloroethane	25.0	28.0	112	70.0-128	
1,1-Dichloroethene	25.0	20.8	83.3	71.0-124	
cis-1,2-Dichloroethene	25.0	21.9	87.6	73.0-120	
trans-1,2-Dichloroethene	25.0	23.1	92.4	73.0-120	
1,2-Dichloropropane	25.0	22.4	89.5	77.0-125	
cis-1,3-Dichloropropene	25.0	25.3	101	80.0-123	
trans-1,3-Dichloropropene	25.0	25.8	103	78.0-124	
Ethylbenzene	25.0	25.2	101	79.0-123	
2-Hexanone	125	118	94.4	67.0-149	
Isopropylbenzene	25.0	22.4	89.7	76.0-127	
2-Butanone (MEK)	125	112	89.4	44.0-160	
Methylene Chloride	25.0	23.2	92.6	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	123	98.6	68.0-142	
Methyl tert-butyl ether	25.0	23.5	94.0	68.0-125	
Styrene	25.0	22.1	88.5	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	22.0	87.8	65.0-130	
1,1,2-Trichlorotrifluoroethane	25.0	24.4	97.6	69.0-132	
Tetrachloroethene	25.0	25.9	104	72.0-132	
Toluene	25.0	24.3	97.4	79.0-120	
1,2,3-Trichlorobenzene	25.0	24.2	96.7	50.0-138	
1,2,4-Trichlorobenzene	25.0	25.9	104	57.0-137	
1,1,1-Trichloroethane	25.0	26.1	104	73.0-124	
1,1,2-Trichloroethane	25.0	25.8	103	80.0-120	
Trichloroethene	25.0	23.8	95.3	78.0-124	
Trichlorofluoromethane	25.0	28.0	112	59.0-147	
Vinyl chloride	25.0	22.6	90.5	67.0-131	
Xylenes, Total	75.0	73.3	97.7	79.0-123	
(S) Toluene-d8			*103*	*80.0-120*	
(S) Dibromofluoromethane			*101*	*75.0-120*	
(S) 4-Bromofluorobenzene			*93.0*	*77.0-126*	
(S) a,a,a-Trifluorotoluene			*104*	*80.0-120*	

Method Blank (MB)

(MB) R3342570-4 09/14/18 23:19

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	*91.1*			*75.0-120*
(S) 4-Bromofluorobenzene	*108*			*77.0-126*

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

(LCS) R3342570-2 09/14/18 22:19 • (LCSD) R3342570-3 09/14/18 22:39

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	24.0	24.6	96.0	98.6	70.0-123			2.60	20
1,2-Dichloroethane	25.0	20.7	21.1	82.9	84.5	70.0-128			1.93	20
Ethylbenzene	25.0	25.9	26.5	104	106	79.0-123			2.06	20
Naphthalene	25.0	19.9	21.7	79.4	86.9	54.0-135			8.98	20
Methyl tert-butyl ether	25.0	21.7	22.3	86.8	89.3	68.0-125			2.93	20
Toluene	25.0	24.6	25.5	98.6	102	79.0-120			3.50	20
Xylenes, Total	75.0	78.2	79.6	104	106	79.0-123			1.77	20
(S) Toluene-d8				*103*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*86.3*	*85.7*	*75.0-120*				
(S) 4-Bromofluorobenzene				*111*	*112*	*77.0-126*				

Method Blank (MB)

(MB) R3342831-4 09/17/18 19:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	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
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*89.1*			*75.0-120*
(S) 4-Bromofluorobenzene	*111*			*77.0-126*

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

(LCS) R3342831-1 09/17/18 17:27 • (LCSD) R3342831-2 09/17/18 17:47

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	%	%	%			%	%
Benzene	25.0	23.6	23.6	94.6	94.4	70.0-123			0.234	20
Ethylbenzene	25.0	28.0	27.8	112	111	79.0-123			0.768	20
Naphthalene	25.0	23.8	25.4	95.3	102	54.0-135			6.59	20
Toluene	25.0	26.3	26.1	105	104	79.0-120			0.606	20
Xylenes, Total	75.0	82.9	81.4	111	109	79.0-123			1.83	20
(S) Toluene-d8				*104*	*105*	*80.0-120*				
(S) Dibromofluoromethane				*88.5*	*89.1*	*75.0-120*				
(S) 4-Bromofluorobenzene				*115*	*117*	*77.0-126*				

Method Blank (MB)

(MB) R3344583-4 09/24/18 10:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
(S) Toluene-d8	*114*			*80.0-120*
(S) Dibromofluoromethane	*96.1*			*75.0-120*
(S) 4-Bromofluorobenzene	*108*			*77.0-126*

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

(LCS) R3344583-1 09/24/18 09:40 • (LCSD) R3344583-2 09/24/18 09:59

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 %
Toluene	25.0	28.3	26.9	113	108	79.0-120			5.06	20
(S) Toluene-d8				*110*	*110*	*80.0-120*				
(S) Dibromofluoromethane				*96.0*	*96.6*	*75.0-120*				
(S) 4-Bromofluorobenzene				*106*	*104*	*77.0-126*				

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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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.
T8	Sample(s) received past/too close to holding time expiration.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

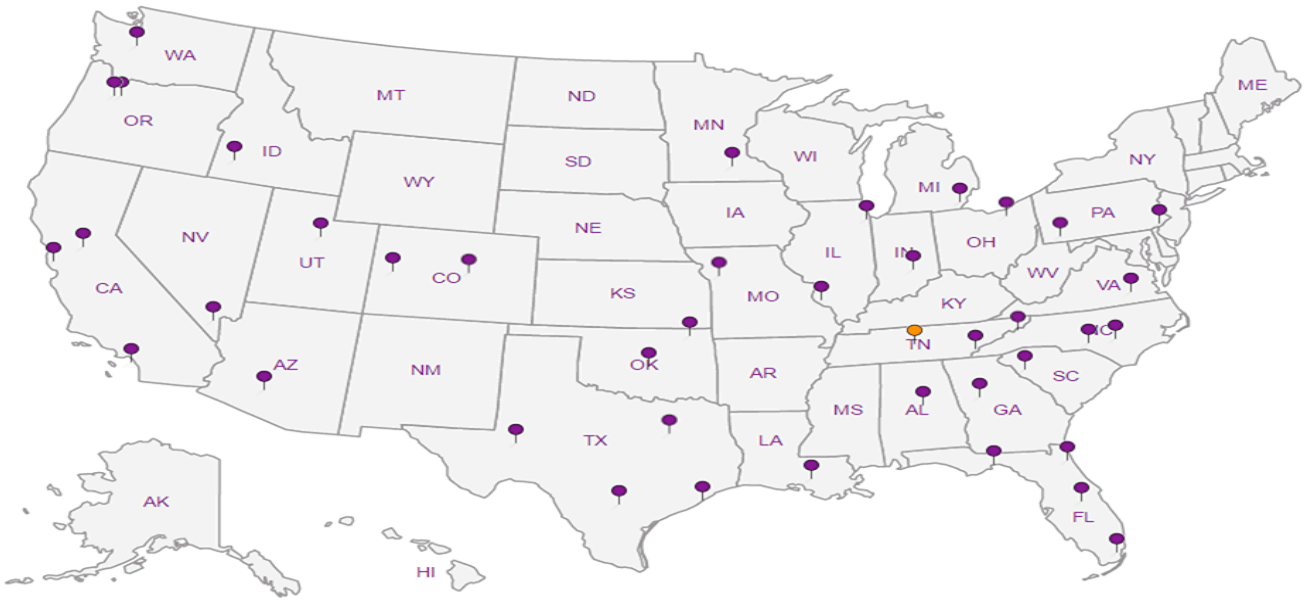
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National 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 # 699858.LD.MR.GD

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 ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed

Quote #

Pres Chk: X

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-HCl-Blk	*Nitrate, Sulfate 125ml HDPE-NoPres	Alk, CO2 125ml HDPE-NoPres	RSK175 40ml Amb HCl	Remarks	Sample # (lab only)
MW-45-091318	GRAB	GW	N/A	09/13/18	0926	3	X						-01
MW-44-091318		GW			1022	3	X						-02
MW-19-091318		GW			1055	3	X						-03
MW-04-091318		GW			1240	3	X		X	X	X	MNA	-04
MW-05-091318		GW			1255	3	X						-05
MW-06-091318		GW			1305	3	X						-06
MW-06B-091318		GW			1310	3	X						-07
MW-16-091318		GW			1320	3	X		X	X	X	MNA	-08
MW-09B-091318		GW			1340	3	X						-09
MW-09-091318		GW			1355	3	X		X	X	X	MNA	-10

Chain of Custody Page 1 of 2

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

L # L1025808

A041

Acctnum: KINCH2MGA
Template: T131319
Prelogin: P646448
TSR: 526 - Chris McCord
PB: 9-2-18

Shipped Via: FedEX Ground

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

Remarks: V8260BTEXMNSC = BTEX,MTBE,Naphthalene,1,2-DCA.
NITRATE/SULFATE HAS A 48hr HOLD TIME-

pH ___ Temp ___
Flow ___ Other ___

Samples returned via: __ UPS X FedEx __ Courier

Tracking # 4492 6214 9970

RAD SCREEN: <0.5 mR/hr

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)
	09/13/18	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: 0.3&0 °C Bottles Received: 79

Date: 9/14/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.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 ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ 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	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-09-D-091318	GRAB	GW	NA	09/13/18	1356	3				X			-11
MW-36B-091318	GRAB	GW	NA	09/13/18	1420	3				X			-12
MW-36-091318	GRAB	GW	NA	09/13/18	1425	3				X			-13
FB01-091318	GRAB	GW	NA	09/13/18	1455	3				X		FIELD BLANK	-14
TB01-091318	GRAB	GW	NA	09/13/18	1500	1					X	TRIP BLANK	-15
MW-08-091318	GRAB	GW	NA	09/13/18	1605	3	X	X	X	X		MNA	-16
MW-03-091318	GRAB	GW	NA	09/13/18	1610	3	X	X	X	X		MNA	-17
MW-22-091318	GRAB	GW	NA	09/13/18	1645	3	X	X	X	X		MNA	-18
		GW											
		GW											

Chain of Custody Page 2 of 2

Pace Analytical®
National Center for Testing & Innovation

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

L# L025808

Table #

Acctnum: KINCH2MGA

Template: T130277

Prelogin: P668773

TSR: 526 - Chris McCord

PB: 8-28-18

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.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4492 4214 9970

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)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
Melissa Warren	09/13/18	1730		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.3+0.4=0.7 °C Bottles Received: 79	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) K Clemens	Date: 9/14/18 Time: 0845	Hold: Condition: NCF / OK

Jeremy W. Watkins

Pace Analytical®
National Center for Testing & Innovation

Login #: L1025808	Client: KINCH2MGA	Date: 9/14/18	Evaluated by: Troy Dunlap

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container	X	Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: For MW-19 received containers for MNA but MNA analysis not marked on the COC. Went ahead and logged for MNA.

Client informed by:		Call	x	Email		Voice Mail		Date:9/14/18	Time:17:46
TSR Initials:CM	Client Contact: Bethany Garvey								

Login Instructions:

MNA parameters are needed on MW-19. Keep as logged.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 10, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1021916
Samples Received:	08/30/2018
Project Number:	
Description:	Lewis Drive Site

Report To: Bethany Garvey
6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW53-0809-082918 L1021916-01 Solid

Collected by: Kyle Sexton
Collected date/time: 08/29/18 08:50
Received date/time: 08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1161544	1	09/05/18 13:02	09/05/18 13:11	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1160971	1	08/29/18 08:50	09/04/18 12:47	DWR

MW53-0809-082918-DUP L1021916-02 Solid

Collected by: Kyle Sexton
Collected date/time: 08/29/18 08:50
Received date/time: 08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1161544	1	09/05/18 13:02	09/05/18 13:11	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1160971	1	08/29/18 08:50	09/04/18 13:07	DWR

TRIP BLANK-01 L1021916-03 Solid

Collected by: Kyle Sexton
Collected date/time: 08/29/18 08:50
Received date/time: 08/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1160971	1	08/29/18 08:50	09/04/18 13:27	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. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	66.3		1	09/05/2018 13:11	WG1161544

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	ug/kg		ug/kg		date / time	
Benzene	ND		1.51	1	09/04/2018 12:47	WG1160971
Toluene	ND		7.54	1	09/04/2018 12:47	WG1160971
Ethylbenzene	ND		3.77	1	09/04/2018 12:47	WG1160971
o-Xylene	ND		3.77	1	09/04/2018 12:47	WG1160971
m&p-Xylenes	ND		6.03	1	09/04/2018 12:47	WG1160971
Xylenes, Total	ND		9.80	1	09/04/2018 12:47	WG1160971
Naphthalene	ND		18.9	1	09/04/2018 12:47	WG1160971
(S) Toluene-d8	*106*		*75.0-131*		*09/04/2018 12:47*	WG1160971
(S) Dibromofluoromethane	*101*		*65.0-129*		*09/04/2018 12:47*	WG1160971
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*09/04/2018 12:47*	WG1160971
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*09/04/2018 12:47*	WG1160971

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	71.3		1	09/05/2018 13:11	WG1161544

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	ug/kg		ug/kg		date / time	
Benzene	ND		1.40	1	09/04/2018 13:07	WG1160971
Toluene	ND		7.02	1	09/04/2018 13:07	WG1160971
Ethylbenzene	ND		3.51	1	09/04/2018 13:07	WG1160971
o-Xylene	ND		3.51	1	09/04/2018 13:07	WG1160971
m&p-Xylenes	ND		5.61	1	09/04/2018 13:07	WG1160971
Xylenes, Total	ND		9.12	1	09/04/2018 13:07	WG1160971
Naphthalene	ND		17.5	1	09/04/2018 13:07	WG1160971
(S) Toluene-d8	*110*		*75.0-131*		*09/04/2018 13:07*	WG1160971
(S) Dibromofluoromethane	*97.8*		*65.0-129*		*09/04/2018 13:07*	WG1160971
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*09/04/2018 13:07*	WG1160971
(S) 4-Bromofluorobenzene	*106*		*67.0-138*		*09/04/2018 13:07*	WG1160971

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00100	1	09/04/2018 13:27	WG1160971
Toluene	ND		0.00500	1	09/04/2018 13:27	WG1160971
Ethylbenzene	ND		0.00250	1	09/04/2018 13:27	WG1160971
o-Xylene	ND		0.00250	1	09/04/2018 13:27	WG1160971
m&p-Xylenes	ND		0.00400	1	09/04/2018 13:27	WG1160971
Xylenes, Total	ND		0.00650	1	09/04/2018 13:27	WG1160971
Naphthalene	ND		0.0125	1	09/04/2018 13:27	WG1160971
(S) Toluene-d8	*107*		*75.0-131*		*09/04/2018 13:27*	WG1160971
(S) Dibromofluoromethane	*102*		*65.0-129*		*09/04/2018 13:27*	WG1160971
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*09/04/2018 13:27*	WG1160971
(S) 4-Bromofluorobenzene	*104*		*67.0-138*		*09/04/2018 13:27*	WG1160971

Method Blank (MB)

(MB) R3339502-1 09/05/18 13:11

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1021904-49 Original Sample (OS) • Duplicate (DUP)

(OS) L1021904-49 09/05/18 13:11 • (DUP) R3339502-3 09/05/18 13:11

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	78.6	83.4	1	5.89		10

Laboratory Control Sample (LCS)

(LCS) R3339502-2 09/05/18 13:11

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3339076-3 09/04/18 08:42

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Benzene	U		0.400	1.00
Ethylbenzene	U		0.530	2.50
Naphthalene	U		3.12	12.5
Toluene	U		1.25	5.00
Xylenes, Total	U		4.78	6.50
o-Xylene	U		1.00	2.50
m&p-Xylenes	U		1.50	4.00
(S) Toluene-d8	*106*			*75.0-131*
(S) Dibromofluoromethane	*100*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*67.0-138*

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

(LCS) R3339076-1 09/04/18 07:21 • (LCSD) R3339076-2 09/04/18 07:41

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	125	108	111	86.2	89.2	70.0-130			3.32	20
Ethylbenzene	125	115	113	91.6	90.8	70.0-130			0.947	20
Naphthalene	125	129	150	103	120	70.0-130			15.1	20
Toluene	125	118	115	94.1	91.7	70.0-130			2.62	20
Xylenes, Total	375	310	310	82.7	82.7	70.0-130			0.000	20
o-Xylene	125	110	109	88.1	87.4	70.0-130			0.848	20
m&p-Xylenes	250	200	201	79.9	80.5	70.0-130			0.763	20
(S) Toluene-d8				*107*	*103*	*75.0-131*				
(S) Dibromofluoromethane				*101*	*102*	*65.0-129*				
(S) a,a,a-Trifluorotoluene				*103*	*103*	*80.0-120*				
(S) 4-Bromofluorobenzene				*101*	*102*	*67.0-138*				

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

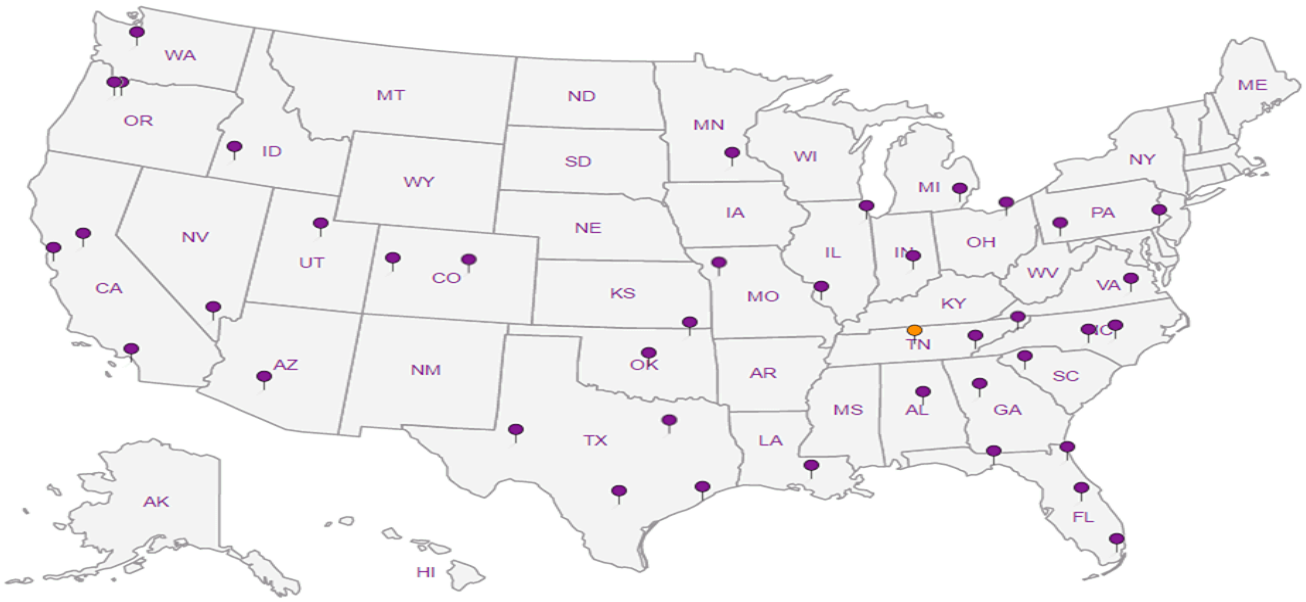
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

L# 1021916

B120

Acctnum: KINCH2MGA
Template: T139912
Prelogin: P668452
TSR: 526 - Chris McCord
PB: 8/24/18 MM
Shipped Via: FedEX Ground

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Project Description: Lewis Drive Site

City/State Collected:

Phone: 770-604-9182
Fax:

Client Project #

Lab Project #: KINCH2MGA-LEWISSOIL

Collected by (print): Kyle Sexton

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Rush? (Lab MUST Be Notified)
___ Same Day ___ 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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TS 4ozClr-NoPres	V8260BTEXNSC 40mlAmb/MeOH5ml/Syr	V8260BTEXNSC-TB 40ml-MEOH-blank	Remarks	Sample # (lab only)
MW53-0809-082918	Grab	SS	8-9	8-29-18	0850	2	X	X			-01
MW53-0809-082918-dup	↓	SS	8-9	8-29-18	0850	2	X	X			-02
~~ ~~		~~SS~~				2	X	X		2 vials, returned DI H₂O	-0
TRIP BLANK		SS GT				~~1~~ 2			X		

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

Remarks:

RAD SCREEN: <0.5 mR/hr

pH ______ Temp ______
Flow ______ Other ______

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

Samples returned via: __UPS X FedEx __Courier ______

Tracking # 4492 6225 6703

Trip Blank Received: (Yes) / No
HCL / (MeOH)
TBR
2 (DI)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp:	Bottles Received:	If preservation required by Login: Date/Time
[signature]	8-29-18	1800		1.0 °C	4	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)			Hold: / Condition: NCF / (OK)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 8/30/18	Time: 0845	

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 10, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1022345
Samples Received:	08/31/2018
Project Number:	
Description:	Lewis Drive Site

Report To: Bethany Garvey
6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW54-0809-083018 L1022345-01 Solid

Collected by: Kyle Sexton
Collected date/time: 08/30/18 13:10
Received date/time: 08/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1162256	1	09/07/18 09:39	09/07/18 09:47	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1161270	1	09/01/18 20:09	09/05/18 01:24	JHH

TRIP BLANK-02 L1022345-02 Solid

Collected by: Kyle Sexton
Collected date/time: 08/30/18 00:00
Received date/time: 08/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1161270	1	09/01/18 20:09	09/04/18 22:23	JHH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.1		1	09/07/2018 09:47	WG1162256

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	ug/kg		ug/kg		date / time	
Benzene	ND		1.31	1	09/05/2018 01:24	WG1161270
Toluene	ND		6.57	1	09/05/2018 01:24	WG1161270
Ethylbenzene	ND		3.29	1	09/05/2018 01:24	WG1161270
o-Xylene	ND		3.29	1	09/05/2018 01:24	WG1161270
m&p-Xylenes	ND		5.26	1	09/05/2018 01:24	WG1161270
Xylenes, Total	ND		8.54	1	09/05/2018 01:24	WG1161270
Naphthalene	ND		16.4	1	09/05/2018 01:24	WG1161270
(S) Toluene-d8	*104*		*75.0-131*		*09/05/2018 01:24*	WG1161270
(S) Dibromofluoromethane	*99.3*		*65.0-129*		*09/05/2018 01:24*	WG1161270
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*09/05/2018 01:24*	WG1161270
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*09/05/2018 01:24*	WG1161270

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00100	1	09/04/2018 22:23	WG1161270
Toluene	ND		0.00500	1	09/04/2018 22:23	WG1161270
Ethylbenzene	ND		0.00250	1	09/04/2018 22:23	WG1161270
o-Xylene	ND		0.00250	1	09/04/2018 22:23	WG1161270
m&p-Xylenes	ND		0.00400	1	09/04/2018 22:23	WG1161270
Xylenes, Total	ND		0.00650	1	09/04/2018 22:23	WG1161270
Naphthalene	ND		0.0125	1	09/04/2018 22:23	WG1161270
(S) Toluene-d8	*110*		*75.0-131*		*09/04/2018 22:23*	WG1161270
(S) Dibromofluoromethane	*96.5*		*65.0-129*		*09/04/2018 22:23*	WG1161270
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*09/04/2018 22:23*	WG1161270
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*09/04/2018 22:23*	WG1161270

Method Blank (MB)

(MB) R3340197-1 09/07/18 09:47

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1022336-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022336-01 09/07/18 09:47 • (DUP) R3340197-3 09/07/18 09:47

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	74.3	74.1	1	0.278		10

Laboratory Control Sample (LCS)

(LCS) R3340197-2 09/07/18 09:47

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3340388-3 09/04/18 22:02

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Benzene	U		0.400	1.00
Ethylbenzene	U		0.530	2.50
Naphthalene	U		3.12	12.5
Toluene	U		1.25	5.00
Xylenes, Total	U		4.78	6.50
o-Xylene	U		1.00	2.50
m&p-Xylenes	U		1.50	4.00
(S) Toluene-d8	*106*			*75.0-131*
(S) Dibromofluoromethane	*98.1*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.6*			*67.0-138*

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

(LCS) R3340388-1 09/04/18 20:43 • (LCSD) R3340388-2 09/04/18 21:02

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	125	107	109	85.8	87.0	70.0-130			1.47	20
Ethylbenzene	125	116	114	92.8	91.4	70.0-130			1.47	20
Naphthalene	125	130	136	104	109	70.0-130			4.08	20
Toluene	125	116	117	92.5	93.9	70.0-130			1.46	20
Xylenes, Total	375	311	312	82.9	83.2	70.0-130			0.321	20
o-Xylene	125	111	109	88.7	87.6	70.0-130			1.26	20
m&p-Xylenes	250	200	203	80.0	81.3	70.0-130			1.55	20
(S) Toluene-d8				*104*	*106*	*75.0-131*				
(S) Dibromofluoromethane				*102*	*102*	*65.0-129*				
(S) a,a,a-Trifluorotoluene				*104*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*105*	*67.0-138*				

L1022419-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022419-08 09/05/18 04:06 • (MS) R3340388-4 09/05/18 05:07 • (MSD) R3340388-5 09/05/18 05:27

Analyte	Spike Amount (dry) ug/kg	Original Result (dry) ug/kg	MS Result (dry) ug/kg	MSD Result (dry) ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	144	ND	701	1300	24.4	45.2	20	10.0-149		J3	59.8	37
Ethylbenzene	144	ND	1170	1550	40.7	53.9	20	10.0-160			27.9	38
Naphthalene	144	ND	3110	1840	108	64.2	20	10.0-160		J3	51.1	36
Toluene	144	ND	788	1450	27.4	50.5	20	10.0-156		J3	59.2	38

L1022419-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022419-08 09/05/18 04:06 • (MS) R3340388-4 09/05/18 05:07 • (MSD) R3340388-5 09/05/18 05:27

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/kg	ug/kg	ug/kg	ug/kg	%	%		%			%	%
Xylenes, Total	431	ND	3290	4160	38.1	48.3	20	10.0-160			23.5	38
o-Xylene	144	ND	1150	1460	40.0	50.9	20	10.0-156			24.2	40
m&p-Xylenes	287	ND	2140	2700	37.2	47.0	20	10.0-156			23.2	40
(S) Toluene-d8					*106*	*105*		*75.0-131*				
(S) Dibromofluoromethane					*98.3*	*99.3*		*65.0-129*				
(S) a,a,a-Trifluorotoluene					*105*	*104*		*80.0-120*				
(S) 4-Bromofluorobenzene					*101*	*106*		*67.0-138*				

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

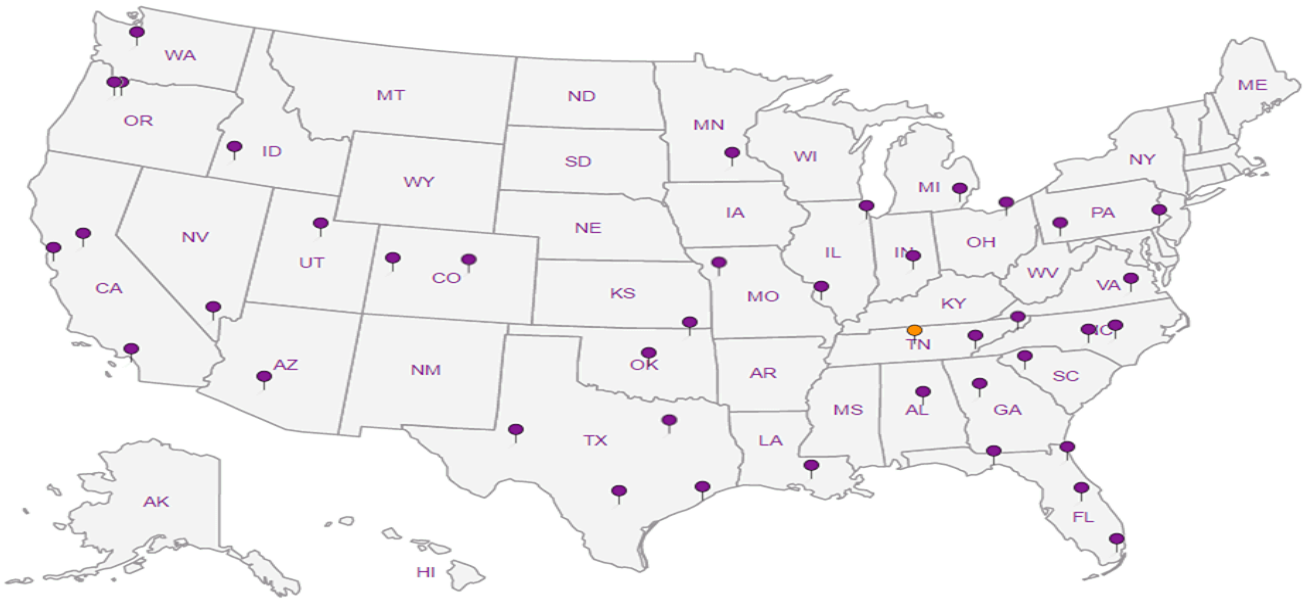
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Project Description: Lewis Drive Site

City/State Collected:

Phone: 770-604-9182
Fax:

Client Project #

Lab Project # KINCH2MGA-LEWISSOIL

Collected by (print): Kyle Sexton

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ 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	TS 4ozClr-NoPres	V8260BTEXNSC 40mlAmb/MeOH5ml/Syr	V8260BTEXNSC-TB 40ml-MEOH-blank	Remarks	Sample # (lab only)
MW54-0809-083018	Grab	SS	8-9'	8-30-18	1310	2	X	X			01
		SS				2	X	X			
		SS				2	X	X			
TRIP BLANK		~~SS~~ O				12			X		02

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

L# 1022345
B158

Acctnum: KINCH2MGA
Template: T139912
Prelogin: P668451
TSR: 526 - Chris McCord
PB: 8/24/18 mvb
Shipped Via: FedEX Ground

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

Remarks:

RAD SCREEN: <0.5 mR/hr Temp _____
Flow _____ Other _____

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

Tracking # 4492 6225 6077

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		X 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)
	8-30-18	1800	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Kathryn Carr

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 5.2 °C Bottles Received: 2

Date: 8/31/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

September 14, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1023821
Samples Received:	09/07/2018
Project Number:	
Description:	Lewis Drive Site

Report To: Bethany Garvey
6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW52-0305-090418 L1023821-01 Solid

Collected by	Collected date/time	Received date/time
Mike K	09/04/18 14:20	09/07/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1164398	1	09/12/18 10:18	09/12/18 10:24	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1163660	1	09/08/18 09:25	09/10/18 01:06	JHH

MW51-0810-090518 L1023821-02 Solid

Collected by	Collected date/time	Received date/time
Mike K	09/05/18 08:50	09/07/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1164398	1	09/12/18 10:18	09/12/18 10:24	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1163660	1	09/08/18 09:25	09/10/18 01:25	JHH

TRIP BLANK-03 L1023821-03 Solid

Collected by	Collected date/time	Received date/time
Mike K	09/04/18 00:00	09/07/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1163660	1	09/08/18 09:25	09/10/18 01:43	JHH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.3		1	09/12/2018 10:24	WG1164398

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	ug/kg		ug/kg		date / time	
Benzene	ND		1.16	1	09/10/2018 01:06	WG1163660
Toluene	ND		5.79	1	09/10/2018 01:06	WG1163660
Ethylbenzene	ND		2.90	1	09/10/2018 01:06	WG1163660
o-Xylene	ND		2.90	1	09/10/2018 01:06	WG1163660
m&p-Xylenes	ND		4.63	1	09/10/2018 01:06	WG1163660
Xylenes, Total	ND		7.53	1	09/10/2018 01:06	WG1163660
Naphthalene	ND		14.5	1	09/10/2018 01:06	WG1163660
(S) Toluene-d8	*102*		*75.0-131*		*09/10/2018 01:06*	WG1163660
(S) Dibromofluoromethane	*103*		*65.0-129*		*09/10/2018 01:06*	WG1163660
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*09/10/2018 01:06*	WG1163660
(S) 4-Bromofluorobenzene	*98.6*		*67.0-138*		*09/10/2018 01:06*	WG1163660

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	09/12/2018 10:24	WG1164398

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	ug/kg		ug/kg		date / time	
Benzene	ND		1.19	1	09/10/2018 01:25	WG1163660
Toluene	ND		5.93	1	09/10/2018 01:25	WG1163660
Ethylbenzene	ND		2.96	1	09/10/2018 01:25	WG1163660
o-Xylene	ND		2.96	1	09/10/2018 01:25	WG1163660
m&p-Xylenes	ND		4.74	1	09/10/2018 01:25	WG1163660
Xylenes, Total	ND		7.71	1	09/10/2018 01:25	WG1163660
Naphthalene	ND		14.8	1	09/10/2018 01:25	WG1163660
(S) Toluene-d8	*104*		*75.0-131*		*09/10/2018 01:25*	WG1163660
(S) Dibromofluoromethane	*96.5*		*65.0-129*		*09/10/2018 01:25*	WG1163660
(S) a,a,a-Trifluorotoluene	*97.4*		*80.0-120*		*09/10/2018 01:25*	WG1163660
(S) 4-Bromofluorobenzene	*107*		*67.0-138*		*09/10/2018 01:25*	WG1163660

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/10/2018 01:43	WG1163660
Toluene	ND		0.00500	1	09/10/2018 01:43	WG1163660
Ethylbenzene	ND		0.00250	1	09/10/2018 01:43	WG1163660
o-Xylene	ND		0.00250	1	09/10/2018 01:43	WG1163660
m&p-Xylenes	ND		0.00400	1	09/10/2018 01:43	WG1163660
Xylenes, Total	ND		0.00650	1	09/10/2018 01:43	WG1163660
Naphthalene	ND		0.0125	1	09/10/2018 01:43	WG1163660
(S) Toluene-d8	*105*		*75.0-131*		*09/10/2018 01:43*	WG1163660
(S) Dibromofluoromethane	*129*		*65.0-129*		*09/10/2018 01:43*	WG1163660
(S) a,a,a-Trifluorotoluene	*107*		*80.0-120*		*09/10/2018 01:43*	WG1163660
(S) 4-Bromofluorobenzene	*93.9*		*67.0-138*		*09/10/2018 01:43*	WG1163660

Method Blank (MB)

(MB) R3341563-1 09/12/18 10:24

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1023821-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1023821-01 09/12/18 10:24 • (DUP) R3341563-3 09/12/18 10:24

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.3	84.5	1	2.21		10

Laboratory Control Sample (LCS)

(LCS) R3341563-2 09/12/18 10:24

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3341710-2 09/09/18 22:23

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Benzene	U		0.400	1.00
Ethylbenzene	U		0.530	2.50
Naphthalene	U		3.12	12.5
Toluene	U		1.25	5.00
Xylenes, Total	U		4.78	6.50
o-Xylene	U		1.00	2.50
m&p-Xylenes	U		1.50	4.00
(S) Toluene-d8	*104*			*75.0-131*
(S) Dibromofluoromethane	*98.0*			*65.0-129*
(S) a,a,a-Trifluorotoluene	*99.0*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*

Laboratory Control Sample (LCS)

(LCS) R3341710-1 09/09/18 21:27

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	125	122	97.8	70.0-130	
Ethylbenzene	125	127	101	70.0-130	
Naphthalene	125	137	110	70.0-130	
Toluene	125	126	100	70.0-130	
Xylenes, Total	375	380	101	70.0-130	
o-Xylene	125	127	102	70.0-130	
m&p-Xylenes	250	253	101	70.0-130	
(S) Toluene-d8			*103*	*75.0-131*	
(S) Dibromofluoromethane			*118*	*65.0-129*	
(S) a,a,a-Trifluorotoluene			*103*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

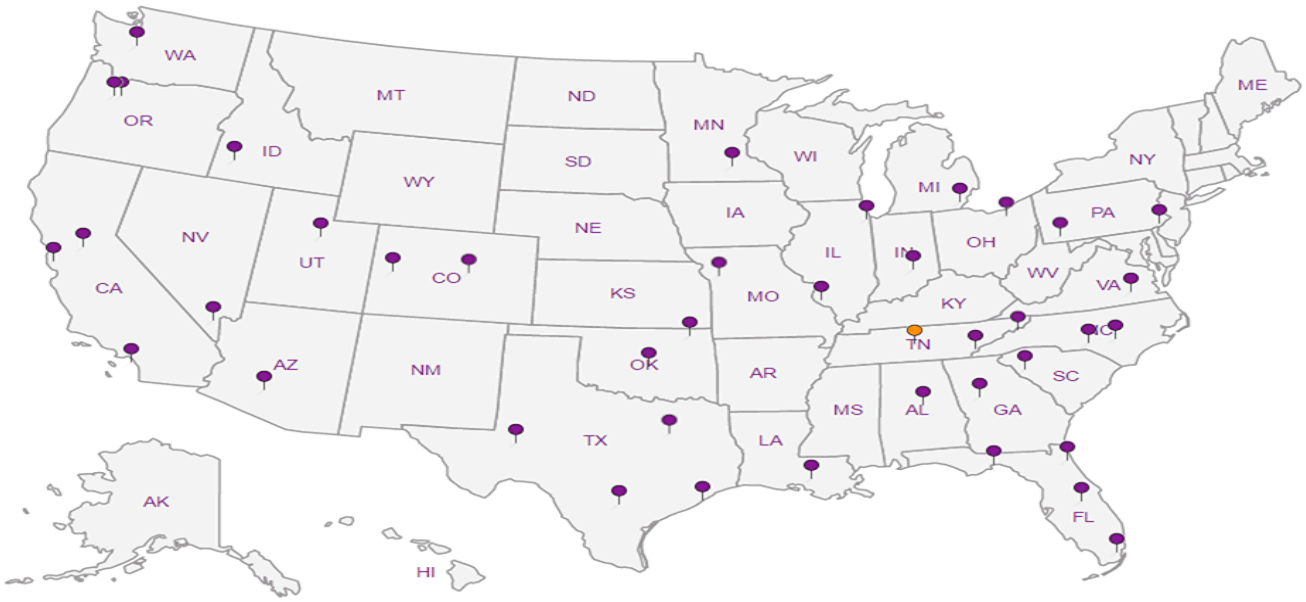
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

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

Project Description: Lewis Drive Site

City/State Collected:

Phone: 770-604-9182
Fax:

Client Project #

Lab Project # KINCH2MGA-LEWISSOIL

Collected by (print): Mike Kurdz

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ 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	TS 4oz Clr-NoPres	V8260BTEXNSC 40mlAmb/MeOH5ml/Syr	V8260BTEXNSC-TB 40ml-MEOH-blank	Remarks	Sample # (lab only)
MW52-0305-090418	G	SS	3-5	9/4/18	1420	2	X	X			01
MW51-0810-090518	G	SS	8-10	9/5/18	0950	2	X	X			02
		SS				2	X	X			
TRIP BLANK		~~SS~~ OT				1			X		03

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

L# 102384
B023

Acctnum: KINCH2MGA
Template: T139912
Prelogin: P668453
TSR: 526 - Chris McCord
PB: 8/24/18 mc
Shipped Via: FedEX Ground

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 4492 6225 6736

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: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	9/6/18	1500		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.7 °C Bottles Received: 4
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9/7/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Conditions: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 21, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1017339
Samples Received:	08/14/2018
Project Number:	699858
Description:	Lewis Drive - Soil RDW
Site:	KM-LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SO-081318 L1017339-01 Waste

Collected by	Collected date/time	Received date/time
TW	08/13/18 14:00	08/14/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Preparation by Method 1311	WG1153192	1	08/16/18 10:53	08/16/18 10:53	RT
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1153768	1	08/17/18 16:40	08/17/18 16:40	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. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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
Project Manager

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP ZHE Extraction	-		8/16/2018 10:53:27 AM	WG1153192

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.0500	0.50	1	08/17/2018 16:40	WG1153768
(S) Toluene-d8	*103*		*80.0-120*			*08/17/2018 16:40*	WG1153768
(S) Dibromofluoromethane	*96.2*		*76.0-123*			*08/17/2018 16:40*	WG1153768
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*			*08/17/2018 16:40*	WG1153768
(S) 4-Bromofluorobenzene	*99.8*		*80.0-120*			*08/17/2018 16:40*	WG1153768

Method Blank (MB)

(MB) R3334577-4 08/17/18 11:37

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0167	0.0500
(S) Toluene-d8	*101*			*80.0-120*
(S) Dibromofluoromethane	*91.5*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.7*			*80.0-120*

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

(LCS) R3334577-1 08/17/18 09:55 • (LCSD) R3334577-2 08/17/18 10:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0243	0.0240	97.0	96.1	69.0-123			0.987	20
(S) Toluene-d8				*101*	*101*	*80.0-120*				
(S) Dibromofluoromethane				*94.0*	*95.0*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*98.7*	*99.9*	*80.0-120*				
(S) 4-Bromofluorobenzene				*98.3*	*98.3*	*80.0-120*				

L1017928-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1017928-02 08/17/18 17:57 • (MS) R3334577-5 08/17/18 18:17 • (MSD) R3334577-6 08/17/18 18:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.25	ND	1.01	1.04	80.3	83.0	1	34.0-147			3.29	20
(S) Toluene-d8					*100*	*99.6*		*80.0-120*				
(S) Dibromofluoromethane					*94.1*	*94.9*		*76.0-123*				
(S) a,a,a-Trifluorotoluene					*98.9*	*98.8*		*80.0-120*				
(S) 4-Bromofluorobenzene					*97.4*	*100*		*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, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

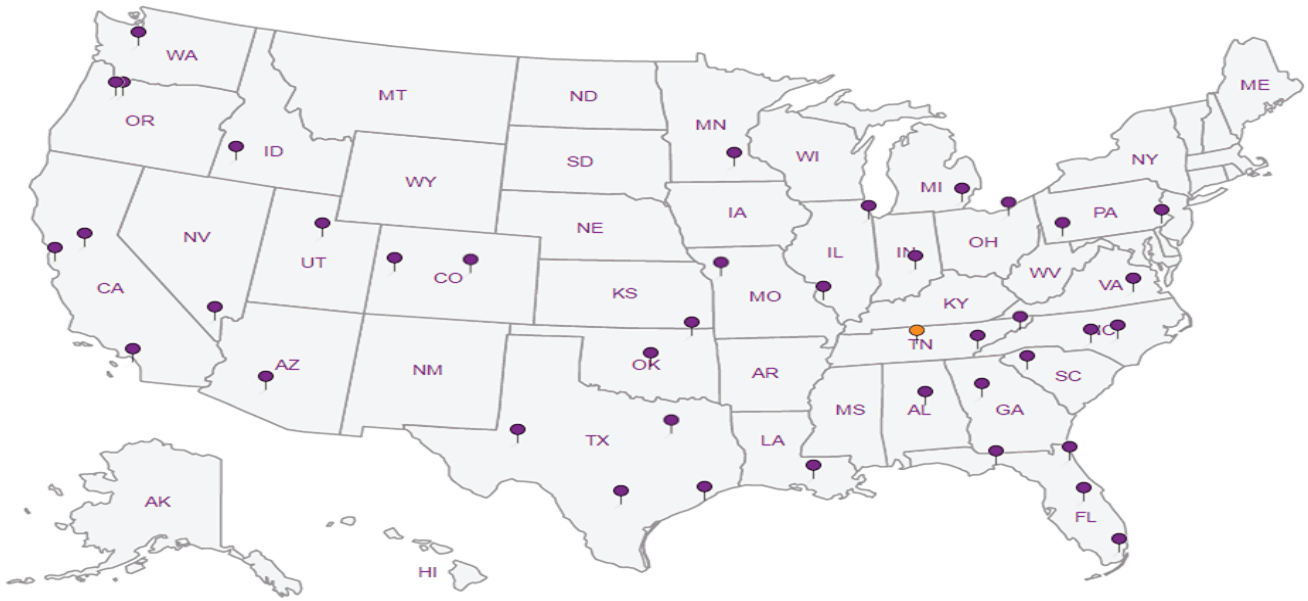
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Attention: Celithia Ball
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Fres Chk

Email To: Bethany.Garvey@jacobs.com
Tom.Wiley@jacobs.com

Report to: Bethany Garvey

Project Description: Lewis Drive - Soil RDW

City/State Collected: Belton, SC

Phone: 770-604-9182
Fax:

Client Project # 699858

Lab Project # KINCH2MGA-Lewis

Collected by (print): TW

Site/Facility ID # KM-Lewis Drive

P.O. #

Collected by (signature): J Wiley

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

TCLP - Benzene

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TCLP - Benzene	Remarks	Sample # (lab only)
SO-081318	Comp	SS	—	8/13/18	1400	1	X		-01

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

Remarks: Composite from Soil RDW roll off

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 7822 7962 7090

Relinquished by : (Signature) J Wiley — Date: 8/13/18 — Time: 1540
Received by: (Signature)

Relinquished by : (Signature)
Received by: (Signature)

Relinquished by : (Signature)
Received for lab by: (Signature) SCI — Date: 08/14/18 — Time: 0845

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

Temp: 5.1 °C Bottles Received: 1

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
LV, 5 mL/HCl

If preservation required by Login: Date/Time

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
a subsidiary of

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

L# 1017339
E185

Acctnum: KINCH2MGA
Template:
Prelogin:
TSR: 526 - Chris McCord
PB:
Shipped Via:

Appendix C
Operation and Maintenance Logs

7/2/18 1030

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/2/18 1030	T. 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	8876	8876
Air Compressor 1 Load Time	(hours)	NA	NA	6175	6175
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	182
Air Compressor 1 Pressure	(psig)	90 - 110	100	62	62
Air Compressor 2 Run Time	(hours)	NA	NA	6846	6846
Air Compressor 2 Load Time	(hours)	NA	NA	5806.5	5806.5
Air Compressor 2 Temp	(F)	60 - 100	110	189	189
Air Compressor 2 Pressure	(psig)	90 - 110	100	63	63
Receiver Tank Pressure	(psig)	90 - 110	100	70	70
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	60	60
Manifold Temperature	(F)	60 - 100	110	100	100
Manifold Flow Rate	(scfm)	TBD	TBD	1794	1794
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525	525
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	522.1	522.1
HAS-1 Valve Position	(%)	TBD	TBD	70.9	70.9
HAS-1 Pressure	(psig)	10 - 20	30	28	28
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	502
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.7	502.7
HAS-2 Valve Position	(%)	TBD	TBD	33.9	33.9
HAS-2 Pressure	(psig)	10 - 20	30	29	29
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	258.2	258.2
HAS-3 Valve Position	(%)	TBD	TBD	28.2	28.2
HAS-3 Pressure	(psig)	10 - 20	30	20	20

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 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
			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		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
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		

No wells were operational when data was collected on 7/2/18

7/24/18 1030

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
~~6/11/18~~ 7/24/18	T. 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		8.6
VAS-18 Pressure	(psig)	10 - 20	30		0
VAS-19 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-19 Pressure	(psig)	10 - 20	30		6
VAS-20 Flow Rate	(scfm)	TBD	TBD		5.3
VAS-20 Pressure	(psig)	10 - 20	30		24
VAS-21 Flow Rate	(scfm)	TBD	TBD		6.4
VAS-21 Pressure	(psig)	10 - 20	30		22
VAS-22 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-22 Pressure	(psig)	10 - 20	30		24
VAS-23 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-23 Pressure	(psig)	10 - 20	30		20
VAS-24 Flow Rate	(scfm)	TBD	TBD		6.7
VAS-24 Pressure	(psig)	10 - 20	30		24
VAS-25 Flow Rate	(scfm)	TBD	TBD		6.9
VAS-25 Pressure	(psig)	10 - 20	30		22
VAS-26 Flow Rate	(scfm)	TBD	TBD		7.8
VAS-26 Pressure	(psig)	10 - 20	30		32
VAS-27 Flow Rate	(scfm)	TBD	TBD		8.0
VAS-27 Pressure	(psig)	10 - 20	30		32
VAS-28 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-28 Pressure	(psig)	10 - 20	30		15
VAS-29 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-29 Pressure	(psig)	10 - 20	30		12
VAS-30 Flow Rate	(scfm)	TBD	TBD		11.0
VAS-30 Pressure	(psig)	10 - 20	30		6
VAS-31 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-31 Pressure	(psig)	10 - 20	30		28
VAS-32 Flow Rate	(scfm)	TBD	TBD		10.0
VAS-32 Pressure	(psig)	10 - 20	30		18
VAS-33 Flow Rate	(scfm)	TBD	TBD		11.8
VAS-33 Pressure	(psig)	10 - 20	30		28
VAS-34 Flow Rate	(scfm)	TBD	TBD		6.9
VAS-34 Pressure	(psig)	10 - 20	30		20

7/2/18 1030

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/2/18 1030	T. 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		6.0
VAS-35 Pressure	(psig)	10 - 20	30		24
VAS-36 Flow Rate	(scfm)	TBD	TBD		10.5
VAS-36 Pressure	(psig)	10 - 20	30		18
VAS-37 Flow Rate	(scfm)	TBD	TBD		10.7
VAS-37 Pressure	(psig)	10 - 20	30		10
VAS-38 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-38 Pressure	(psig)	10 - 20	30		10
VAS-39 Flow Rate	(scfm)	TBD	TBD		8.5
VAS-39 Pressure	(psig)	10 - 20	30		15
VAS-40 Flow Rate	(scfm)	TBD	TBD		4.8
VAS-40 Pressure	(psig)	10 - 20	30		28
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-42 Pressure	(psig)	10 - 20	30		15
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		9.7
VAS-45 Pressure	(psig)	10 - 20	30		18
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD		14.3
BCA-01 Pressure	(psig)	0 - 5	5		18
BCA-02 Flow Rate	(scfm)	TBD	TBD		13.9
BCA-02 Pressure	(psig)	0 - 5	5		18
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
			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		
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:

Maintenance was not performed during visit on 7/2/18

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/9/18/1050	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SC3100102469 Air Permit Exempt

~~Exterior~~ Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	YES	
Air Compressor 1 Run Time	(hours)	NA	NA	9044	
Air Compressor 1 Load Time	(hours)	NA	NA	6343.5	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	181	
Air Compressor 1 Pressure	(psig)	90 - 110	100	73	
Air Compressor 2 Run Time	(hours)	NA	NA	7014.5	
Air Compressor 2 Load Time	(hours)	NA	NA	5975	
Air Compressor 2 Temp	(F)	60 - 100	110	189	
Air Compressor 2 Pressure	(psig)	90 - 110	100	74	
Receiver Tank Pressure	(psig)	90 - 110	100	82	
Receiver Tank Temperature	(F)	60 - 100	110	—	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	70	
Manifold Temperature	(F)	60 - 100	110	100	
Manifold Flow Rate	(scfm)	TBD	TBD	1805	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	522.8	
HAS-1 Valve Position	(%)	TBD	TBD	74.3	
HAS-1 Pressure	(psig)	10 - 20	30	27	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.9	
HAS-2 Valve Position	(%)	TBD	TBD	34.9	
HAS-2 Pressure	(psig)	10 - 20	30	29	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	265.4	
HAS-3 Valve Position	(%)	TBD	TBD	28.6	
HAS-3 Pressure	(psig)	10 - 20	30	20	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/9/18/1050	T. HALLIGAN		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate SCHE0102049 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-01 Pressure	(psig)	10 - 20	30	22	
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
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	13.8	
VAS-13 Pressure	(psig)	10 - 20	30	15	
VAS-14 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	14.6	
VAS-15 Pressure	(psig)	10 - 20	30	10	
VAS-16 Flow Rate	(scfm)	TBD	TBD	14.2	
VAS-16 Pressure	(psig)	10 - 20	30	18	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.5	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/9/13/1050	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20 200 Beko Qwik Pure 350	

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-19 Pressure	(psig)	10 - 20	30	6	
VAS-20 Flow Rate	(scfm)	TBD	TBD	6.2	
VAS-20 Pressure	(psig)	10 - 20	30	22	
VAS-21 Flow Rate	(scfm)	TBD	TBD	7.0	
VAS-21 Pressure	(psig)	10 - 20	30	24	
VAS-22 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-22 Pressure	(psig)	10 - 20	30	24	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-23 Pressure	(psig)	10 - 20	30	20	
VAS-24 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	8.6	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	3.9	
VAS-26 Pressure	(psig)	10 - 20	30	31	
VAS-27 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-27 Pressure	(psig)	10 - 20	30	30	
VAS-28 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-28 Pressure	(psig)	10 - 20	30	15	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-29 Pressure	(psig)	10 - 20	30	13	
VAS-30 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-30 Pressure	(psig)	10 - 20	30	8	
VAS-31 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-31 Pressure	(psig)	10 - 20	30	28	
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	13.1	
VAS-33 Pressure	(psig)	10 - 20	30	20	
VAS-34 Flow Rate	(scfm)	TBD	TBD	7.6	
VAS-34 Pressure	(psig)	10 - 20	30	20	

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	6.0	
VAS-35 Pressure	(psig)	10 - 20	30	24	
VAS-36 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-36 Pressure	(psig)	10 - 20	30	18	
VAS-37 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	9.0	
VAS-38 Pressure	(psig)	10 - 20	30	10	
VAS-39 Flow Rate	(scfm)	TBD	TBD	8.8	
VAS-39 Pressure	(psig)	10 - 20	30	15	
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.8	
VAS-40 Pressure	(psig)	10 - 20	30	28	
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-42 Pressure	(psig)	10 - 20	30	15	
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	10.1	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.5	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.1	
BCA-02 Pressure	(psig)	0 - 5	5	20	
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		

7/9/18 1050 T.HALE/CVL

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
			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		
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:

Maintenance was not performed during visit on 7/9/18

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1200	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	
Air Compressor 1 Run Time	(hours)	NA	NA	9213:44	
Air Compressor 1 Load Time	(hours)	NA	NA	6513:12	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	186	
Air Compressor 1 Pressure	(psig)	90 - 110	100	98	
Air Compressor 2 Run Time	(hours)	NA	NA	7184:3	
Air Compressor 2 Load Time	(hours)	NA	NA	6144:32	
Air Compressor 2 Temp	(F)	60 - 100	110	199	
Air Compressor 2 Pressure	(psig)	90 - 110	100	100	
Receiver Tank Pressure	(psig)	90 - 110	100	110	
Receiver Tank Temperature	(F)	60 - 100	110	—	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	100	
Manifold Temperature	(F)	60 - 100	110	108	
Manifold Flow Rate	(scfm)	TBD	TBD	1758	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	519.3	
HAS-1 Valve Position	(%)	TBD	TBD	76.4	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	498.4	
HAS-2 Valve Position	(%)	TBD	TBD	44.9	
HAS-2 Pressure	(psig)	10 - 20	30	26	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	260.1	
HAS-3 Valve Position	(%)	TBD	TBD	29.9	
HAS-3 Pressure	(psig)	10 - 20	30	20	

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1200	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		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-05 Pressure	(psig)	10 - 20	30	7	
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-06 Pressure	(psig)	10 - 20	30	9	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-07 Pressure	(psig)	10 - 20	30	19	
VAS-08 Flow Rate	(scfm)	TBD	TBD	13.2	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-09 Pressure	(psig)	10 - 20	30	8	
VAS-10 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-10 Pressure	(psig)	10 - 20	30	8	
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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1206	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		
VAS-18 Pressure	(psig)	10 - 20	30		
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	16.0	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.1	
VAS-24 Pressure	(psig)	10 - 20	30	24	
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	10.2	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	12.2	
VAS-33 Pressure	(psig)	10 - 20	30	19	
VAS-34 Flow Rate	(scfm)	TBD	TBD	7	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1200	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	10.1	
VAS-41 Pressure	(psig)	20-Oct	30	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-42 Pressure	(psig)	10 - 20	30	13	
VAS-43 Flow Rate	(scfm)	TBD	TBD	4.3	
VAS-43 Pressure	(psig)	10 - 20	30	32	
VAS-44 Flow Rate	(scfm)	TBD	TBD	3.2	
VAS-44 Pressure	(psig)	10 - 20	30	34	
VAS-45 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	15.0	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.8	
BCA-02 Pressure	(psig)	0 - 5	5	19	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
7/16/2018 1200	Scott Snider	—	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		
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:

- clean air compressor inlet filters
- inspect / test water in condensate drums. clear / ok
- spray compound for weeds
- replaced locks on KS12 and RW03

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 1236	Scott Powell	—	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	
Air Compressor 1 Run Time	(hours)	NA	NA	9405:57	
Air Compressor 1 Load Time	(hours)	NA	NA	6705:24	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	185	
Air Compressor 1 Pressure	(psig)	90 - 110	100	102	
Air Compressor 2 Run Time	(hours)	NA	NA	7376:25	
Air Compressor 2 Load Time	(hours)	NA	NA	6336:44	
Air Compressor 2 Temp	(F)	60 - 100	110	194	
Air Compressor 2 Pressure	(psig)	90 - 110	100	163	
Receiver Tank Pressure	(psig)	90 - 110	100	110	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	100	
Manifold Temperature	(F)	60 - 100	110	164	
Manifold Flow Rate	(scfm)	TBD	TBD	1744	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	522.5	
HAS-1 Valve Position	(%)	TBD	TBD	75.9	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.6	
HAS-2 Valve Position	(%)	TBD	TBD	45.5	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	270.1	
HAS-3 Valve Position	(%)	TBD	TBD	29.0	
HAS-3 Pressure	(psig)	10 - 20	30	20	

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 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		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-05 Pressure	(psig)	10 - 20	30	6	
VAS-06 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-06 Pressure	(psig)	10 - 20	30	9	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-08 Pressure	(psig)	10 - 20	30	20	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-09 Pressure	(psig)	10 - 20	30	9	
VAS-10 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-10 Pressure	(psig)	10 - 20	30	8	
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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 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		
VAS-18 Pressure	(psig)	10 - 20	30		
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	10.3	
VAS-22 Pressure	(psig)	10 - 20	30	22	
VAS-23 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-23 Pressure	(psig)	10 - 20	30	20	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-24 Pressure	(psig)	10 - 20	30	25	
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	10.7	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-33 Pressure	(psig)	10 - 20	30	17	
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-34 Pressure	(psig)	10 - 20	30	20	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 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		
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	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-42 Pressure	(psig)	10 - 20	30	14	
VAS-43 Flow Rate	(scfm)	TBD	TBD	4.0	
VAS-43 Pressure	(psig)	10 - 20	30	35	
VAS-44 Flow Rate	(scfm)	TBD	TBD	4.5	
VAS-44 Pressure	(psig)	10 - 20	30	36	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.9	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.7	
BCA-02 Pressure	(psig)	0 - 5	5	19	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
7/24/2018 1220	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		
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:

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/2018 1010	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	
Air Compressor 1 Run Time	(hours)	NA	NA	9595:15	
Air Compressor 1 Load Time	(hours)	NA	NA	6894:42	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	
Air Compressor 1 Pressure	(psig)	90 - 110	100	88	
Air Compressor 2 Run Time	(hours)	NA	NA	7565:43	
Air Compressor 2 Load Time	(hours)	NA	NA	6526:02	
Air Compressor 2 Temp	(F)	60 - 100	110	187	
Air Compressor 2 Pressure	(psig)	90 - 110	100	89	
Receiver Tank Pressure	(psig)	90 - 110	100	98	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	98	
Manifold Temperature	(F)	60 - 100	110	98	
Manifold Flow Rate	(scfm)	TBD	TBD	1775	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	546.1	
HAS-1 Valve Position	(%)	TBD	TBD	67.8	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Valve Position	(%)	TBD	TBD	37.9	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	285.3	
HAS-3 Valve Position	(%)	TBD	TBD	26.7	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

→ All vertical wells were adjusted to ~10 SCFM after data collection unless pressures already high before adjustment. If SCFM a bit higher than 10 SCFM target but relatively low pressure, flow left as is.

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/2018 1010	Scott Gwaltney		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	16.0	
VAS-01 Pressure	(psig)	10 - 20	30	22	
VAS-02 Flow Rate	(scfm)	TBD	TBD	4.2	
VAS-02 Pressure	(psig)	10 - 20	30	36	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-03 Pressure	(psig)	10 - 20	30	11	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-04 Pressure	(psig)	10 - 20	30	4	
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD	8.9	
VAS-11 Pressure	(psig)	10 - 20	30	21	
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-12 Pressure	(psig)	10 - 20	30	14	
VAS-13 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-13 Pressure	(psig)	10 - 20	30	12	
VAS-14 Flow Rate	(scfm)	TBD	TBD	16.1	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-15 Pressure	(psig)	10 - 20	30	8	
VAS-16 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-16 Pressure	(psig)	10 - 20	30	12	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-17 Pressure	(psig)	10 - 20	30	10	

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/18 1010	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	10.2	
VAS-19 Pressure	(psig)	10 - 20	30	5	
VAS-20 Flow Rate	(scfm)	TBD	TBD	7.2	
VAS-20 Pressure	(psig)	10 - 20	30	26	
VAS-21 Flow Rate	(scfm)	TBD	TBD	7.3	
VAS-21 Pressure	(psig)	10 - 20	30	23	
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-22 Pressure	(psig)	10 - 20	30	22	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	7.3	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	7.3	
VAS-26 Pressure	(psig)	10 - 20	30	26	
VAS-27 Flow Rate	(scfm)	TBD	TBD	3.8	
VAS-27 Pressure	(psig)	10 - 20	30	33	
VAS-28 Flow Rate	(scfm)	TBD	TBD	7.1	
VAS-28 Pressure	(psig)	10 - 20	30	32	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-30 Pressure	(psig)	10 - 20	30	12	
VAS-31 Flow Rate	(scfm)	TBD	TBD	11.6	
VAS-31 Pressure	(psig)	10 - 20	30	8	
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-32 Pressure	(psig)	10 - 20	30	30	
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-34 Pressure	(psig)	10 - 20	30	18	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/16 1010	Scott Sm 16	—	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		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-42 Pressure	(psig)	10 - 20	30	14	
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	14.4	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.2	
BCA-02 Pressure	(psig)	0 - 5	5	20	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/1/2018 1010	Scott Powell	—	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		
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:

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	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	
Air Compressor 1 Run Time	(hours)	NA	NA	9736:20	
Air Compressor 1 Load Time	(hours)	NA	NA	7035.46	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	183	
Air Compressor 1 Pressure	(psig)	90 - 110	100	107	
Air Compressor 2 Run Time	(hours)	NA	NA	7706.49	
Air Compressor 2 Load Time	(hours)	NA	NA	6667:07	
Air Compressor 2 Temp	(F)	60 - 100	110	191	
Air Compressor 2 Pressure	(psig)	90 - 110	100	107	
Receiver Tank Pressure	(psig)	90 - 110	100	112	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	
Manifold Temperature	(F)	60 - 100	110	108	
Manifold Flow Rate	(scfm)	TBD	TBD	1725	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	519.9	
HAS-1 Valve Position	(%)	TBD	TBD	77.4	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.3	
HAS-2 Valve Position	(%)	TBD	TBD	51.0	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	262.7	
HAS-3 Valve Position	(%)	TBD	TBD	27.6	
HAS-3 Pressure	(psig)	10 - 20	30	20	

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	Scott Snider	—	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		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-05 Pressure	(psig)	10 - 20	30	7	
VAS-06 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-06 Pressure	(psig)	10 - 20	30	10	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	11.1	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-09 Pressure	(psig)	10 - 20	30	9	
VAS-10 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-10 Pressure	(psig)	10 - 20	30	8	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	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		
VAS-18 Pressure	(psig)	10 - 20	30		
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	10.8	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.0	
VAS-23 Pressure	(psig)	10 - 20	30	20	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-24 Pressure	(psig)	10 - 20	30	24	
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	10.9	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-34 Pressure	(psig)	10 - 20	30	20	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	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	10.1	
VAS-41 Pressure	(psig)	20-Oct	30	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-42 Pressure	(psig)	10 - 20	30	13	
VAS-43 Flow Rate	(scfm)	TBD	TBD	5.0	
VAS-43 Pressure	(psig)	10 - 20	30	33	
VAS-44 Flow Rate	(scfm)	TBD	TBD	4.8	
VAS-44 Pressure	(psig)	10 - 20	30	34	
VAS-45 Flow Rate	(scfm)	TBD	TBD	16.0	
VAS-45 Pressure	(psig)	10 - 20	30	17	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.8	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.6	
BCA-02 Pressure	(psig)	0 - 5	5	19	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/7/2018 0845	Scott Shuloa	—	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		
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:

→ Clean AC inlet air filters w/ onsite water

→ drain sump tank containment after confirming that storm water not impacted by petroleum. No odor, No sheen.

→ Inspect condensate drain water from oil/water separators, find OK. None greasy/oily feel. Clear water.

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/2018 0930	Scott Shuler		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	
Air Compressor 1 Run Time	(hours)	NA	NA	9881:07	
Air Compressor 1 Load Time	(hours)	NA	NA	7180:33	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	181	
Air Compressor 1 Pressure	(psig)	90 - 110	100	51	
Air Compressor 2 Run Time	(hours)	NA	NA	7851:34	
Air Compressor 2 Load Time	(hours)	NA	NA	6811:52	
Air Compressor 2 Temp	(F)	60 - 100	110	186	
Air Compressor 2 Pressure	(psig)	90 - 110	100	55	
Receiver Tank Pressure	(psig)	90 - 110	100	60	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	48	
Manifold Temperature	(F)	60 - 100	110	98	
Manifold Flow Rate	(scfm)	TBD	TBD	1793	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.6	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	547.6	
HAS-1 Valve Position	(%)	TBD	TBD	1.7	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.1	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	503.1	
HAS-2 Valve Position	(%)	TBD	TBD	30.1	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	253.1	
HAS-3 Valve Position	(%)	TBD	TBD	29.7	
HAS-3 Pressure	(psig)	10 - 20	30	20	

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/2018 0930	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	19	
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.9	
VAS-02 Pressure	(psig)	10 - 20	30	28	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-03 Pressure	(psig)	10 - 20	30	10	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-04 Pressure	(psig)	10 - 20	30	3	
VAS-05 Flow Rate	(scfm)	TBD	TBD	—	
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-11 Pressure	(psig)	10 - 20	30	25	
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-12 Pressure	(psig)	10 - 20	30	14	
VAS-13 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-13 Pressure	(psig)	10 - 20	30	12	
VAS-14 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-15 Pressure	(psig)	10 - 20	30	10	
VAS-16 Flow Rate	(scfm)	TBD	TBD	12.9	
VAS-16 Pressure	(psig)	10 - 20	30	14	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-17 Pressure	(psig)	10 - 20	30	18	

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/18 0932	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	9.6	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-19 Pressure	(psig)	10 - 20	30	5	
VAS-20 Flow Rate	(scfm)	TBD	TBD	7.4	
VAS-20 Pressure	(psig)	10 - 20	30	20	
VAS-21 Flow Rate	(scfm)	TBD	TBD	6.7	
VAS-21 Pressure	(psig)	10 - 20	30	24	
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	7.0	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	3.4	
VAS-26 Pressure	(psig)	10 - 20	30	31	
VAS-27 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-27 Pressure	(psig)	10 - 20	30	33	
VAS-28 Flow Rate	(scfm)	TBD	TBD	8.9	
VAS-28 Pressure	(psig)	10 - 20	30	17	
VAS-29 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-30 Pressure	(psig)	10 - 20	30	10	
VAS-31 Flow Rate	(scfm)	TBD	TBD	8.1	
VAS-31 Pressure	(psig)	10 - 20	30	30	
VAS-32 Flow Rate	(scfm)	TBD	TBD	16.3	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-33 Pressure	(psig)	10 - 20	30	19	
VAS-34 Flow Rate	(scfm)	TBD	TBD	16.5	
VAS-34 Pressure	(psig)	10 - 20	30	21	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/18 0930	Scott Gamble	—	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		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-42 Pressure	(psig)	10 - 20	30	14	
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	14.3	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.1	
BCA-02 Pressure	(psig)	0 - 5	5	19	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/13/2018 0930	Scott Snider	—	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		
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:

→ Inspect / test clarity of condensate water, find ok.
→ Find VAS 02 flow low but psi high and unable to adjust. Inspect area around VAS02, find no observable issues.

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/2018 1130	SCOTT SMIDA	—	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	
Air Compressor 1 Run Time	(hours)	NA	NA	10075:03	
Air Compressor 1 Load Time	(hours)	NA	NA	7374:30	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	181	
Air Compressor 1 Pressure	(psig)	90 - 110	100	47	
Air Compressor 2 Run Time	(hours)	NA	NA	8045:31	
Air Compressor 2 Load Time	(hours)	NA	NA	7005:49	
Air Compressor 2 Temp	(F)	60 - 100	110	184	
Air Compressor 2 Pressure	(psig)	90 - 110	100	48	
Receiver Tank Pressure	(psig)	90 - 110	100	55	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	44	
Manifold Temperature	(F)	60 - 100	110	90	
Manifold Flow Rate	(scfm)	TBD	TBD	1766	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	521.1	
HAS-1 Valve Position	(%)	TBD	TBD	68.7	
HAS-1 Pressure	(psig)	10 - 20	30	25	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	504.1	
HAS-2 Valve Position	(%)	TBD	TBD	30.0	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	251.5	
HAS-3 Valve Position	(%)	TBD	TBD	28.1	
HAS-3 Pressure	(psig)	10 - 20	30	20	

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/18 1130	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	8.8	
VAS-01 Pressure	(psig)	10 - 20	30	20	
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.6	
VAS-02 Pressure	(psig)	10 - 20	30	29	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-03 Pressure	(psig)	10 - 20	30	10	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-04 Pressure	(psig)	10 - 20	30	3	
VAS-05 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-05 Pressure	(psig)	10 - 20	30	6	
VAS-06 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-06 Pressure	(psig)	10 - 20	30	9	
VAS-07 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	16.1	
VAS-09 Pressure	(psig)	10 - 20	30	9	
VAS-10 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-11 Pressure	(psig)	10 - 20	30	14	
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-12 Pressure	(psig)	10 - 20	30	15	
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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/2019 1,36	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		
VAS-18 Pressure	(psig)	10 - 20	30		
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	9.1	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-24 Pressure	(psig)	10 - 20	30	23	
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	9.2	
VAS-32 Pressure	(psig)	10 - 20	30	17	
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-34 Pressure	(psig)	10 - 20	30	20	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/2018 1130	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	11.5	
VAS-35 Pressure	(psig)	10 - 20	30	23	
VAS-36 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-36 Pressure	(psig)	10 - 20	30	17	
VAS-37 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-38 Pressure	(psig)	10 - 20	30	11	
VAS-39 Flow Rate	(scfm)	TBD	TBD	9.1	
VAS-39 Pressure	(psig)	10 - 20	30	18	
VAS-40 Flow Rate	(scfm)	TBD	TBD	5.6	
VAS-40 Pressure	(psig)	10 - 20	30	25	
VAS-41 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-41 Pressure	(psig)	20-Oct	30	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-42 Pressure	(psig)	10 - 20	30	13	
VAS-43 Flow Rate	(scfm)	TBD	TBD	4.1	
VAS-43 Pressure	(psig)	10 - 20	30	32	
VAS-44 Flow Rate	(scfm)	TBD	TBD	3.6	
VAS-44 Pressure	(psig)	10 - 20	30	36	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-45 Pressure	(psig)	10 - 20	30	16	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	12.9	
BCA-01 Pressure	(psig)	0 - 5	5	18	
BCA-02 Flow Rate	(scfm)	TBD	TBD	12.6	
BCA-02 Pressure	(psig)	0 - 5	5	17	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/21/2018 1130	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		
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	11/2018	

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

→ cleaned compressor inlet filters
→ drained secondary containment
→ placed new non-hazy labels on storage tanks
→ check condensate water, found ok.

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18-1400	T. 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	
Air Compressor 1 Run Time	(hours)	NA	NA	10,221	
Air Compressor 1 Load Time	(hours)	NA	NA	7,521	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	186°F	
Air Compressor 1 Pressure	(psig)	90 - 110	100	91	
Air Compressor 2 Run Time	(hours)	NA	NA	8192	
Air Compressor 2 Load Time	(hours)	NA	NA	7152	
Air Compressor 2 Temp	(F)	60 - 100	110	201°F	
Air Compressor 2 Pressure	(psig)	90 - 110	100	94	
Receiver Tank Pressure	(psig)	90 - 110	100	102	
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	92	
Manifold Temperature	(F)	60 - 100	110	110°F	
Manifold Flow Rate	(scfm)	TBD	TBD	1784	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	523.7	
HAS-1 Valve Position	(%)	TBD	TBD	68.8	
HAS-1 Pressure	(psig)	10 - 20	30	25	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	500.1	
HAS-2 Valve Position	(%)	TBD	TBD	39.7	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	269.9	
HAS-3 Valve Position	(%)	TBD	TBD	29.8	
HAS-3 Pressure	(psig)	10 - 20	30	19	

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18 - 1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCIIF03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
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	12.5	
VAS-13 Pressure	(psig)	10 - 20	30	11	
VAS-14 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-15 Pressure	(psig)	10 - 20	30	8	
VAS-16 Flow Rate	(scfm)	TBD	TBD	13.5	
VAS-16 Pressure	(psig)	10 - 20	30	15	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-17 Pressure	(psig)	10 - 20	30	4	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18 1400	T. Wall		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	9.8	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-19 Pressure	(psig)	10 - 20	30	4	
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	10.9	
VAS-22 Pressure	(psig)	10 - 20	30	24	
VAS-23 Flow Rate	(scfm)	TBD	TBD	12.3	
VAS-23 Pressure	(psig)	10 - 20	30	22	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-24 Pressure	(psig)	10 - 20	30	24	
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	11.3	
VAS-29 Pressure	(psig)	10 - 20	30	15	
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	10.9	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	11.1	
VAS-34 Pressure	(psig)	10 - 20	30	21	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18 1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE.0302046.9 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-35 Pressure	(psig)	10 - 20	30	26	
VAS-36 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-36 Pressure	(psig)	10 - 20	30	20	
VAS-37 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	12.2	
VAS-38 Pressure	(psig)	10 - 20	30	11	
VAS-39 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-39 Pressure	(psig)	10 - 20	30	10	
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.7	
VAS-40 Pressure	(psig)	10 - 20	30	29	
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.7	
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	10.5	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.5	
BCA-01 Pressure	(psig)	0 - 5	5	18	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.2	
BCA-02 Pressure	(psig)	0 - 5	5	18	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9/27/18 / 1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: [illegible] 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)		NO AIR MONITOR
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 Airtte 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:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/PAL	Scott Powell/ATL	Lewis Drive, Belton, South Carolina

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18 / 1100	T. HALL		Air Compressors Condensate Treatment	Sullair 15-20-200 Baker Tank Pump 350	[illegible]

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	10,410.5	[illegible] 10/4/12,17
Air Compressor 1 Load Time	(hours)	NA	NA	7,594.4	7,594.4
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	185
Air Compressor 1 Pressure	(psig)	90 - 110	100	111	113
Air Compressor 2 Run Time	(hours)	NA	NA	8,381.4	8382.53
Air Compressor 2 Load Time	(hours)	NA	NA	7,266.6	7268.07
Air Compressor 2 Temp	(F)	60 - 100	110	196	195
Air Compressor 2 Pressure	(psig)	90 - 110	100	113	113
Receiver Tank Pressure	(psig)	90 - 110	100	120	124
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	118	118
Manifold Temperature	(F)	60 - 100	110	100	102
Manifold Flow Rate	(scfm)	TBD	TBD	725	796
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	100	150
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	108.8	154.9
HAS-1 Valve Position	(%)	TBD	TBD	41.8	43.5
HAS-1 Pressure	(psig)	10 - 20	30	12	15
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	100	150
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	101.3	149.1
HAS-2 Valve Position	(%)	TBD	TBD	7.4	10.0
HAS-2 Pressure	(psig)	10 - 20	30	8	10
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	100	150
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	98.2	154.8
HAS-3 Valve Position	(%)	TBD	TBD	22.3	25.7
HAS-3 Pressure	(psig)	10 - 20	30	18	20

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18 1100	T. 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	8.3	8.5
VAS-01 Pressure	(psig)	10 - 20	30	21	20
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.1	
VAS-02 Pressure	(psig)	10 - 20	30	28	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-03 Pressure	(psig)	10 - 20	30	10	
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-04 Pressure	(psig)	10 - 20	30	1	
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.8	10.7
VAS-05 Pressure	(psig)	10 - 20	30	6	6
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.6	10.3
VAS-06 Pressure	(psig)	10 - 20	30	8	10
VAS-07 Flow Rate	(scfm)	TBD	TBD	11.0	11.6
VAS-07 Pressure	(psig)	10 - 20	30	20	20
VAS-08 Flow Rate	(scfm)	TBD	TBD	10.6	11.4
VAS-08 Pressure	(psig)	10 - 20	30	22	20
VAS-09 Flow Rate	(scfm)	TBD	TBD	10.9	10.7
VAS-09 Pressure	(psig)	10 - 20	30	8	10
VAS-10 Flow Rate	(scfm)	TBD	TBD	11.0	11.1
VAS-10 Pressure	(psig)	10 - 20	30	10	10
VAS-11 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-11 Pressure	(psig)	10 - 20	30	23	
VAS-12 Flow Rate	(scfm)	TBD	TBD	8.3	
VAS-12 Pressure	(psig)	10 - 20	30	18	
VAS-13 Flow Rate	(scfm)	TBD	TBD	14.1	13.9
VAS-13 Pressure	(psig)	10 - 20	30	12	12
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	15.7	15.7
VAS-16 Pressure	(psig)	10 - 20	30	15	15
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18/1100	T. 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		
VAS-18 Pressure	(psig)	10 - 20	30		
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	12.2	12.3
VAS-22 Pressure	(psig)	10 - 20	30	24	24
VAS-23 Flow Rate	(scfm)	TBD	TBD	13.4	13.3
VAS-23 Pressure	(psig)	10 - 20	30	22	22
VAS-24 Flow Rate	(scfm)	TBD	TBD	13.6	13.6
VAS-24 Pressure	(psig)	10 - 20	30	27	28
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	12.1	12.2
VAS-32 Pressure	(psig)	10 - 20	30	17	17
VAS-33 Flow Rate	(scfm)	TBD	TBD	13.2	13.0
VAS-33 Pressure	(psig)	10 - 20	30	20	20
VAS-34 Flow Rate	(scfm)	TBD	TBD	11.9	12
VAS-34 Pressure	(psig)	10 - 20	30	22	22

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18 / 1100	T. 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	14.6	
VAS-35 Pressure	(psig)	10 - 20	30	24	
VAS-36 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-36 Pressure	(psig)	10 - 20	30	10	
VAS-37 Flow Rate	(scfm)	TBD	TBD	12.1	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	11.6	
VAS-38 Pressure	(psig)	10 - 20	30	11	
VAS-39 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-39 Pressure	(psig)	10 - 20	30	16	
VAS-40 Flow Rate	(scfm)	TBD	TBD	6.7	
VAS-40 Pressure	(psig)	10 - 20	30	28	
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.0	9.9
VAS-41 Pressure	(psig)	20-Oct	30	10	10
VAS-42 Flow Rate	(scfm)	TBD	TBD	10.1	10.0
VAS-42 Pressure	(psig)	10 - 20	30	12	12
VAS-43 Flow Rate	(scfm)	TBD	TBD	3.1	4.0
VAS-43 Pressure	(psig)	10 - 20	30	32	32
VAS-44 Flow Rate	(scfm)	TBD	TBD	3.8	4.9
VAS-44 Pressure	(psig)	10 - 20	30	34	34
VAS-45 Flow Rate	(scfm)	TBD	TBD	11.5	11.3
VAS-45 Pressure	(psig)	10 - 20	30	16	16
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	15.1	14.9
BCA-01 Pressure	(psig)	0 - 5	5	20	20
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.6	14.4
BCA-02 Pressure	(psig)	0 - 5	5	20	20
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9/4/18/1100	T.HALL/GVL		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)		NO AIR MONITOR
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:

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/0900	T. 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
Air Compressor 1 Run Time	(hours)	NA	NA		10,602.15
Air Compressor 1 Load Time	(hours)	NA	NA		7,594.35
Air Compressor 1 Discharge Temp	(F)	60 - 100	110		181
Air Compressor 1 Pressure	(psig)	90 - 110	100		107
Air Compressor 2 Run Time	(hours)	NA	NA		8572.51
Air Compressor 2 Load Time	(hours)	NA	NA		7446.15
Air Compressor 2 Temp	(F)	60 - 100	110		194
Air Compressor 2 Pressure	(psig)	90 - 110	100		108
Receiver Tank Pressure	(psig)	90 - 110	100		120
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100		110
Manifold Temperature	(F)	60 - 100	110		99
Manifold Flow Rate	(scfm)	TBD	TBD		1030
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD		200
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD		230.1
HAS-1 Valve Position	(%)	TBD	TBD		46.8
HAS-1 Pressure	(psig)	10 - 20	30		20
HAS-2 Target Flow Rate	(scfm)	TBD	TBD		200
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD		198.4
HAS-2 Valve Position	(%)	TBD	TBD		12.5
HAS-2 Pressure	(psig)	10 - 20	30		18
HAS-3 Target Flow Rate	(scfm)	TBD	TBD		150
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD		146.9
HAS-3 Valve Position	(%)	TBD	TBD		100
HAS-3 Pressure	(psig)	10 - 20	30		20

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/0900	T. HAW		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		8.0
VAS-01 Pressure	(psig)	10 - 20	30		20
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
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		16.5
VAS-13 Pressure	(psig)	10 - 20	30		10
VAS-14 Flow Rate	(scfm)	TBD	TBD		11.2
VAS-14 Pressure	(psig)	10 - 20	30		12
VAS-15 Flow Rate	(scfm)	TBD	TBD		12.4
VAS-15 Pressure	(psig)	10 - 20	30		10
VAS-16 Flow Rate	(scfm)	TBD	TBD		14.1
VAS-16 Pressure	(psig)	10 - 20	30		15
VAS-17 Flow Rate	(scfm)	TBD	TBD		10.5
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/0900	T. 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		10.1
VAS-18 Pressure	(psig)	10 - 20	30		0
VAS-19 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-19 Pressure	(psig)	10 - 20	30		5
VAS-20 Flow Rate	(scfm)	TBD	TBD		9.2
VAS-20 Pressure	(psig)	10 - 20	30		18
VAS-21 Flow Rate	(scfm)	TBD	TBD		8.6
VAS-21 Pressure	(psig)	10 - 20	30		24
VAS-22 Flow Rate	(scfm)	TBD	TBD		13.0
VAS-22 Pressure	(psig)	10 - 20	30		24
VAS-23 Flow Rate	(scfm)	TBD	TBD		13.0
VAS-23 Pressure	(psig)	10 - 20	30		22
VAS-24 Flow Rate	(scfm)	TBD	TBD		12.3
VAS-24 Pressure	(psig)	10 - 20	30		25
VAS-25 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-25 Pressure	(psig)	10 - 20	30		22
VAS-26 Flow Rate	(scfm)	TBD	TBD		4.7
VAS-26 Pressure	(psig)	10 - 20	30		31
VAS-27 Flow Rate	(scfm)	TBD	TBD		5.0
VAS-27 Pressure	(psig)	10 - 20	30		34
VAS-28 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-28 Pressure	(psig)	10 - 20	30		15
VAS-29 Flow Rate	(scfm)	TBD	TBD		11.7
VAS-29 Pressure	(psig)	10 - 20	30		15
VAS-30 Flow Rate	(scfm)	TBD	TBD		11.2
VAS-30 Pressure	(psig)	10 - 20	30		10
VAS-31 Flow Rate	(scfm)	TBD	TBD		11.0
VAS-31 Pressure	(psig)	10 - 20	30		30
VAS-32 Flow Rate	(scfm)	TBD	TBD		11.7
VAS-32 Pressure	(psig)	10 - 20	30		18
VAS-33 Flow Rate	(scfm)	TBD	TBD		12.6
VAS-33 Pressure	(psig)	10 - 20	30		20
VAS-34 Flow Rate	(scfm)	TBD	TBD		11.7
VAS-34 Pressure	(psig)	10 - 20	30		22

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/900	T. 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		10.4
VAS-35 Pressure	(psig)	10 - 20	30		28
VAS-36 Flow Rate	(scfm)	TBD	TBD		10.9
VAS-36 Pressure	(psig)	10 - 20	30		20
VAS-37 Flow Rate	(scfm)	TBD	TBD		12.0
VAS-37 Pressure	(psig)	10 - 20	30		10
VAS-38 Flow Rate	(scfm)	TBD	TBD		11.2
VAS-38 Pressure	(psig)	10 - 20	30		12
VAS-39 Flow Rate	(scfm)	TBD	TBD		10.9
VAS-39 Pressure	(psig)	10 - 20	30		13
VAS-40 Flow Rate	(scfm)	TBD	TBD		6.5
VAS-40 Pressure	(psig)	10 - 20	30		28
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD		
VAS-42 Pressure	(psig)	10 - 20	30		18.0
VAS-43 Flow Rate	(scfm)	TBD	TBD		13
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		11.1
VAS-45 Pressure	(psig)	10 - 20	30		18
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD		14.6
BCA-01 Pressure	(psig)	0 - 5	5		20
BCA-02 Flow Rate	(scfm)	TBD	TBD		14.2
BCA-02 Pressure	(psig)	0 - 5	5		20
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9-12-18/0900	T. 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)		
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / (No)		NO AIR MONITOR
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:

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/20/2018 0846 / 9/20/2018 1530	Scott [illegible]	—	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	10791.58	10796:03
Air Compressor 1 Load Time	(hours)	NA	NA	7595:01	7598:31
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	195
Air Compressor 1 Pressure	(psig)	90 - 110	100	108	102
Air Compressor 2 Run Time	(hours)	NA	NA	8762:32	8765:10
Air Compressor 2 Load Time	(hours)	NA	NA	7635:46	7636:12
Air Compressor 2 Temp	(F)	60 - 100	110	190	Not operating
Air Compressor 2 Pressure	(psig)	90 - 110	100	108	—
Receiver Tank Pressure	(psig)	90 - 110	100	120	110
Receiver Tank Temperature	(F)	60 - 100	110	N/A	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	102
Manifold Temperature	(F)	60 - 100	110	90	108
Manifold Flow Rate	(scfm)	TBD	TBD	954.2	832.5
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	266	175
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	222.2	178.5
HAS-1 Valve Position	(%)	TBD	TBD	46.8	47.4
HAS-1 Pressure	(psig)	10 - 20	30	19	17
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	260	175
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	199.8	179.4
HAS-2 Valve Position	(%)	TBD	TBD	13.0	9.5
HAS-2 Pressure	(psig)	10 - 20	30	19	15
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	260	150
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	199.5	149.1
HAS-3 Valve Position	(%)	TBD	TBD	32.6	30.1
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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/20/2018 0940	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		NOT COLLECTED
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-05 Pressure	(psig)	10 - 20	30	6	
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD	.9	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-09 Pressure	(psig)	10 - 20	30	↑	
VAS-10 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-10 Pressure	(psig)	10 - 20	30	16	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/20/2018 0840 9/21/18	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		Not collected
VAS-18 Pressure	(psig)	10 - 20	30		
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	11.9	
VAS-22 Pressure	(psig)	10 - 20	30	24	
VAS-23 Flow Rate	(scfm)	TBD	TBD	12.9	
VAS-23 Pressure	(psig)	10 - 20	30	23	
VAS-24 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-24 Pressure	(psig)	10 - 20	30	25	
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	1	
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	11.5	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	12.3	
VAS-33 Pressure	(psig)	10 - 20	30	20	
VAS-34 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-34 Pressure	(psig)	10 - 20	30	22	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/20/2018 9/21/18 0846	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 collected
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	9.9	
VAS-41 Pressure	(psig)	20-Oct	30	9	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-42 Pressure	(psig)	10 - 20	30	14	
VAS-43 Flow Rate	(scfm)	TBD	TBD	5.8	
VAS-43 Pressure	(psig)	10 - 20	30	33	
VAS-44 Flow Rate	(scfm)	TBD	TBD	5.2	
VAS-44 Pressure	(psig)	10 - 20	30	36	
VAS-45 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.4	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.0	
BCA-02 Pressure	(psig)	0 - 5	5	20	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9/20/2018 0846	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		
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	Replace filter cartridges, New	9/20/18
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	New annual AQH2 ✓	
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:

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	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/24/2018 1330 1000	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	10910:37	16914:00
Air Compressor 1 Load Time	(hours)	NA	NA	7713:05	7716:28
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	187	192
Air Compressor 1 Pressure	(psig)	90 - 110	100	102	102
Air Compressor 2 Run Time	(hours)	NA	NA	8765:10	8768:18
Air Compressor 2 Load Time	(hours)	NA	NA	7636:12	7638:42
Air Compressor 2 Temp	(F)	60 - 100	110	Not operating	186
Air Compressor 2 Pressure	(psig)	90 - 110	100	Not operating	102
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	102	102
Manifold Temperature	(F)	60 - 100	110	160	106
Manifold Flow Rate	(scfm)	TBD	TBD	920.2	1336
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	175.0	325.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	1756	324.7
HAS-1 Valve Position	(%)	TBD	TBD	47.4	52.9
HAS-1 Pressure	(psig)	10 - 20	30	18	23
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	175.0	325.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	173.4	323.7
HAS-2 Valve Position	(%)	TBD	TBD	10.1	19.3
HAS-2 Pressure	(psig)	10 - 20	30	18	23
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	150.0	225.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	149.9	227.0
HAS-3 Valve Position	(%)	TBD	TBD	29.7	36.0
HAS-3 Pressure	(psig)	10 - 20	30	15	19

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, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/26/2018 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		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
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	11.3	
VAS-13 Pressure	(psig)	10 - 20	30	8	
VAS-14 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-15 Pressure	(psig)	10 - 20	30	11	
VAS-16 Flow Rate	(scfm)	TBD	TBD	12.8	
VAS-16 Pressure	(psig)	10 - 20	30	16	
VAS-17 Flow Rate	(scfm)	TBD	TBD	10.0	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/26/2018 1000	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-18 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-18 Pressure	(psig)	10 - 20	30	1	
VAS-19 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-19 Pressure	(psig)	10 - 20	30	5	
VAS-20 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-20 Pressure	(psig)	10 - 20	30	19	
VAS-21 Flow Rate	(scfm)	TBD	TBD	7.6	
VAS-21 Pressure	(psig)	10 - 20	30	24	
VAS-22 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	12.3	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	7.7	
VAS-25 Pressure	(psig)	10 - 20	30	22	
VAS-26 Flow Rate	(scfm)	TBD	TBD	5.3	
VAS-26 Pressure	(psig)	10 - 20	30	31	
VAS-27 Flow Rate	(scfm)	TBD	TBD	4.0	
VAS-27 Pressure	(psig)	10 - 20	30	37	
VAS-28 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-28 Pressure	(psig)	10 - 20	30	16	
VAS-29 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-30 Pressure	(psig)	10 - 20	30	9	
VAS-31 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-31 Pressure	(psig)	10 - 20	30	29	
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-32 Pressure	(psig)	10 - 20	30	17	
VAS-33 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-34 Pressure	(psig)	10 - 20	30	21	

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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/24/2018 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-35 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-35 Pressure	(psig)	10 - 20	30	27	
VAS-36 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-36 Pressure	(psig)	10 - 20	30	21	
VAS-37 Flow Rate	(scfm)	TBD	TBD	16.5	
VAS-37 Pressure	(psig)	10 - 20	30	11	
VAS-38 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-38 Pressure	(psig)	10 - 20	30	12	
VAS-39 Flow Rate	(scfm)	TBD	TBD	16.1	
VAS-39 Pressure	(psig)	10 - 20	30	17	
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.3	
VAS-40 Pressure	(psig)	10 - 20	30	29	
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	13	
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	14.9	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.4	
BCA-02 Pressure	(psig)	0 - 5	5	18	
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	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9/26/2018 1000	Scott Shuler	—	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		
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:

Appendix D
Soil Boring Logs and Well Completion Diagrams

JACOBS

Depth to water was not recorded in the field log books for MW51 & MW52. Gauging for these 4 wells was not done until Oct which is after this quarterly period. Need to add soils sample depths to this PDF. MW53 & MW54 had soil collected from 8-9ft, MW52 soil was 3-5ft, and MW51 soil was collected 8-10ft.

R MW-51

CLIENT Plant

PROJECT NUMBER 684910 **PROJECT LOCATION** Belton, South Carolina

DATE STARTED 9/5/18 **COMPLETED** 9/5/18 **GROUND ELEVATION:** 831.92 **HOLE SIZE** 6.25 inches

DRILLING CONTRACTOR AE Drilling **GROUND WATER LEVELS:**

DRILLING METHOD DPT, CME 750 **AT TIME OF DRILLING** ---

LOGGED BY M. Karafa **CHECKED BY** **AT END OF DRILLING** ---

NOTES **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0			SM		(SM) Silty sand (SM), 10YR 5/6 yellowish brown, 5YR 7/8 reddish yellow, dry, fine grained, hard, friable, micas		Portland I/II with 3-5% Bentonite
5	SPT 1	100				PID = 9.6	3/8" Bentonite Chips
8.0							
10	SPT 2	100			(SM) Silty sand (SM) 10YR 6/6 yellowish brown, 10YR 3/6 dark yellowish brown, slightly damp, fine grained, soft, banded, very micaceous	PID = 16.6	
15	SPT 3	100	SM			PID = 12.2	GP#1 Sand; 0.010 Slot, 2" Sch40 PVC
20	SPT 4	100				PID = 16.2	
22.5							Flat bottom cap

Refusal at 22.5 feet.
Bottom of borehole at 22.5 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 10/4/18 16:57 - \\ATLFPP01\PROJ\KINDERMORGAN\654558LEWISDRER\GINT\9-26-17\DATABASE\LEWIS DRIVE ISA BORING LOGS.GPJ

JACOBS
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-52

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 9/4/18 **COMPLETED** 9/4/18
GROUND ELEVATION: 830.09 **HOLE SIZE** 6.25 inches
DRILLING CONTRACTOR AE Drilling
GROUND WATER LEVELS:
DRILLING METHOD DPT, CME 750
AT TIME OF DRILLING ---
LOGGED BY M. Karafa **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0			SM		(SM) Silty sand (SM), 2.5YR 4/8 red, dry, fine grained, hard, friable	
5	SPT 1	100				PID = 24
					8.0	
10	SPT 2	100	ML		(ML) Clayey silt (ML), 2.5YR 5/8 red, 10YR 7/6 yellow, slightly damp, fine grained, stiff, hard, slightly saprolitic boundary	PID = 20
					13.0	
15	SPT 3	100	SM		(SM) Silty sand (SM), 10YR 6/6 yellowish brown, 10YR 3/6 dark yellowish brown, 10YR 7/4 pale yellow brown, damp, fines grained, soft, banded, micaceous, weatherd qtz grains	PID = 16.7
20	SPT 4	100				PID = 21.1
					23.0	
25	SPT 5	100	CL		(CL) Silty clay (CL), 10YR 5/6 yellowish brown, 7.5 YR 6/8 reddish yellow, wet, fine grained, soft, mottled	PID = 11.8
					28.0	
	SPT 6	400	SM		28.5 (SM) Silty sand (SM), 10YR 3/6 dark yellowish brown, wet, fine grained, banded, very micaceous	PID = 23.6

WELL DIAGRAM:
- Portland I/II with 3-5% Bentonite
- 3/8" Bentonite Chips
- GP#1 Sand
- 0.010 Slot, 2" Sch40 PVC
- Flat bottom cap

Refusal at 28.0 feet.
Bottom of borehole at 28.5 feet.

GENERAL BH / TP / WELL - GINT STD US LAB.GDT - 10/4/18 16:57 - \\ATLFPP01\PROJ\KINDERMORGAN\654558LEWISDRER\GINT\9-26-17\DATABASE\LEWIS DRIVE ISA BORING LOGS.GPJ

JACOBS
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-53

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 8/29/18 **COMPLETED** 8/29/18
GROUND ELEVATION: 837.24 **HOLE SIZE** 8 inches
DRILLING CONTRACTOR AE Drilling
GROUND WATER LEVELS:
DRILLING METHOD DPT, CME 750
▽ **AT TIME OF DRILLING** 16.00 ft depth bgs
LOGGED BY K. Sexton **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0				0.5	Topsoil		Portland I/II with 3-5% Bentonite
					(SC) Clayey sand (SC), 2.5YR 5/8 bright brown, dry, loose, massive		
5	SPT 1	100	SC			PID = 0.2	3/8" Bentonite Chips
				8.0			
10	SPT 2	100			(SW) Sand with trace silt (SW), 10YR 4/4 brown, damp, loose, fine grained, very micaceous	PID = 0.2	
15	SPT 3	100	SW		see above, saprolitic structure	PID = 0.3	GP#1 Sand 0.010 Slot, 2" Sch40 PVC
					▽		
20	SPT 4	100			see above, saturated	PID = 0.3	
				21.5			Flat bottom cap

Refusal at 21.5 feet.
Bottom of borehole at 21.8 feet.

JACOBS
6600 Peachtree Dunwoody Rd
400 Embassy Row, Suite 600
Atlanta, GA

Telephone: 770-604-9095
Fax: 770-604-9183

WELL NUMBER MW-54

CLIENT Plantation Pipe Line Company
PROJECT NAME Lewis Drive Remediation
PROJECT NUMBER 684910
PROJECT LOCATION Belton, South Carolina
DATE STARTED 8/30/18 **COMPLETED** 8/31/18
GROUND ELEVATION: 840.83 **HOLE SIZE** 8 inches
DRILLING CONTRACTOR AE Drilling
GROUND WATER LEVELS:
DRILLING METHOD DPT, CME 750
▽ **AT TIME OF DRILLING** 17.50 ft depth bgs
LOGGED BY K. Sexton **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0				SC		(SC) Clayey sand (SC), 2.5 YR 5/8 bright brown, dry, loose, massive		Portland I/II with 3-5% Bentonite
	SPT 1	100					PID = 0	
						6.0		3/8" Bentonite Chips
				SW-SM		(SW-SM) Sand with silt (SW), 10YR 4/4 brown, damp, loose, highly micaceous		
10	SPT 2	100					PID = 0.1	
						13.0		
	SPT 3	100		SW-SC		(SW-SC) Sand with clay (SW), 10YR 6/8 bright yellowish brown, moist, loose, saprolitic structure	PID = 0.3	GP#1 Sand
						▽		0.010 Slot, 2" Sch40 PVC
20	SPT 4	100				see above, wet	PID = 0.3	
						23.0		
	SPT 5	100	slow drilling	SP		(SP) Sand, N 2/0 black, wet loose, fine grained, gniessic structure, contains coarse mica and qtz grains	PID = 0.1	Flat bottom cap
30	SPT 6	100						
	SPT 7	100				see above, contains clay		
						see above, damp to dry		
40	SPT 8	100						
			stop drilling at 48', no recovery from 40'-48', backfill up to 25.2'			48.0		

Refusal at 48.0 feet.
Bottom of borehole at 48.0 feet.

Appendix E
Remediation-Derived Waste Documentation

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

1809-0274

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
SCD 987598331	001	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
Plantation Pipe Line 112 Lewis Dr Belton, Sc f. Phone:336-434-7752	A&D Enveironmental Services PO Box 484 High Point, NC 27261 g. Phone:336-434-7752
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
31151814500	8/14/2019	Soil				
		CUSTOMER# 423				

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:

7
b. Phone:

c. Driver Name (Print)	d. Signature	e. Date
Richard Williams		9/13/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Union County Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 b. Phone: 864-969-4460		

I herby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 3115 Union County Regional MSW LF SC

Waste Profile #
Sales Rep #:

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Plantation Pipe Line			
Generator Site Address: 112 Lewis Dr			
City: Belton	County: Anderson	State: South Carolina	Zip: 29627
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☐ 112 Lewis Dr			
City: Belton	County:	State: South Carolina	Zip: 29627
Generator Contact Name: Johnny Tapia		Email: Johnny_Tapia@Kindermorgan.com	
Phone Number: (704) 399-6327	Ext:	Fax Number:	

II. Billing Information

Bill To: A&D Environmental Services		Contact Name: Susie Bennett	
Billing Address: PO Box 484		Email: sbennett@adenviro.com	
City: High Point	State: NC	Zip: 27261	Phone: (336) 434-7752

III. Waste Stream Information

Name of Waste: Soil	
Process Generating Waste: Excavation of soil during assessment of virgin unleaded gasoline release from underground pipeline	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	100 Tons
Frequency:	J.T. ☑ ONE TIME ☒ ~~ONGOING~~ J.T.
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☑ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☑ GRAB SAMPLE	
Sample Date: 8/13/18	
Sample ID Numbers: SO-081318	

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	>85%
2. Water	<15%
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Brown	None	☐ YES or ☑ NO	>85%	5-8	NA °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

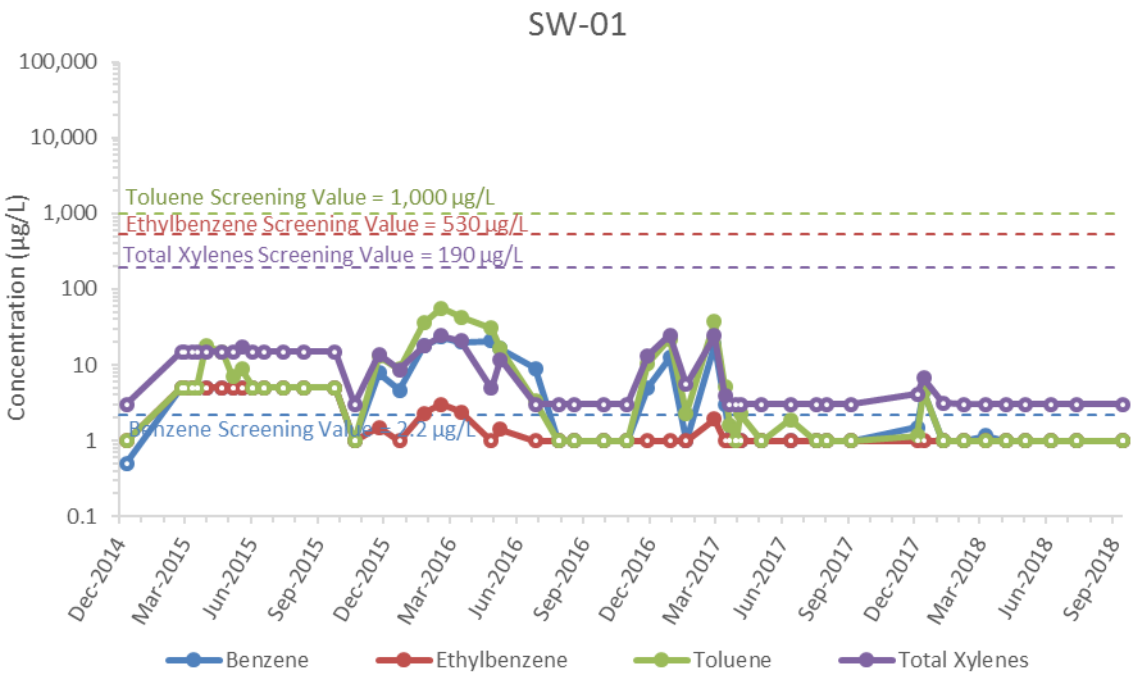
Johnny Tapia – EHS Specialist
Authorized Representative Name And Title (Type or Print)

Kinder Morgan
Company Name

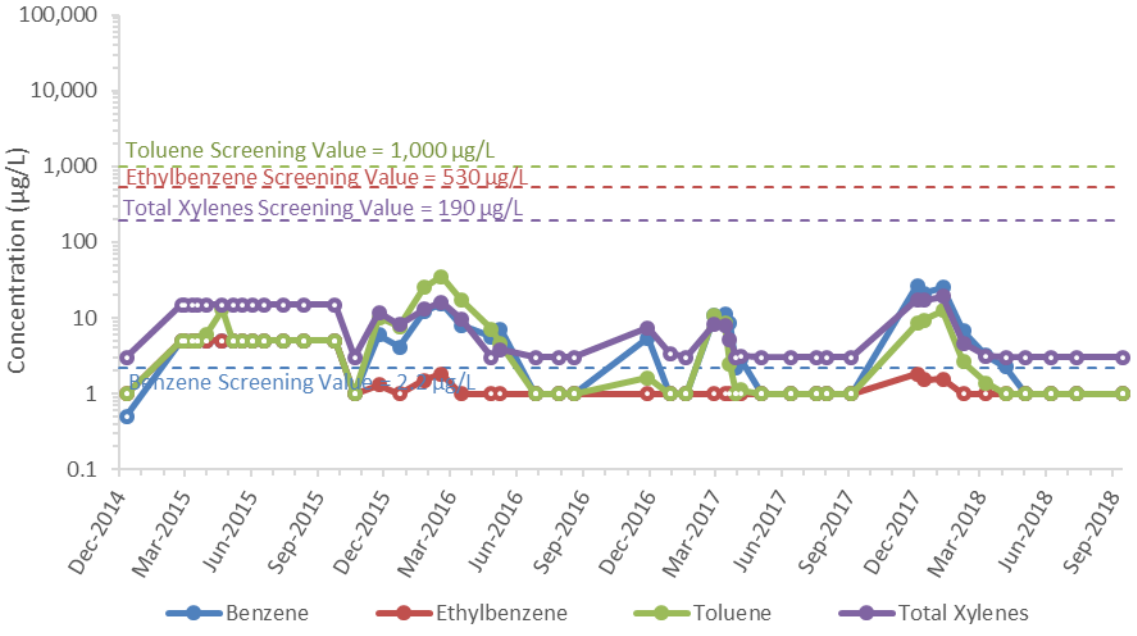
Authorized Representative Signature

8/29/18
Date

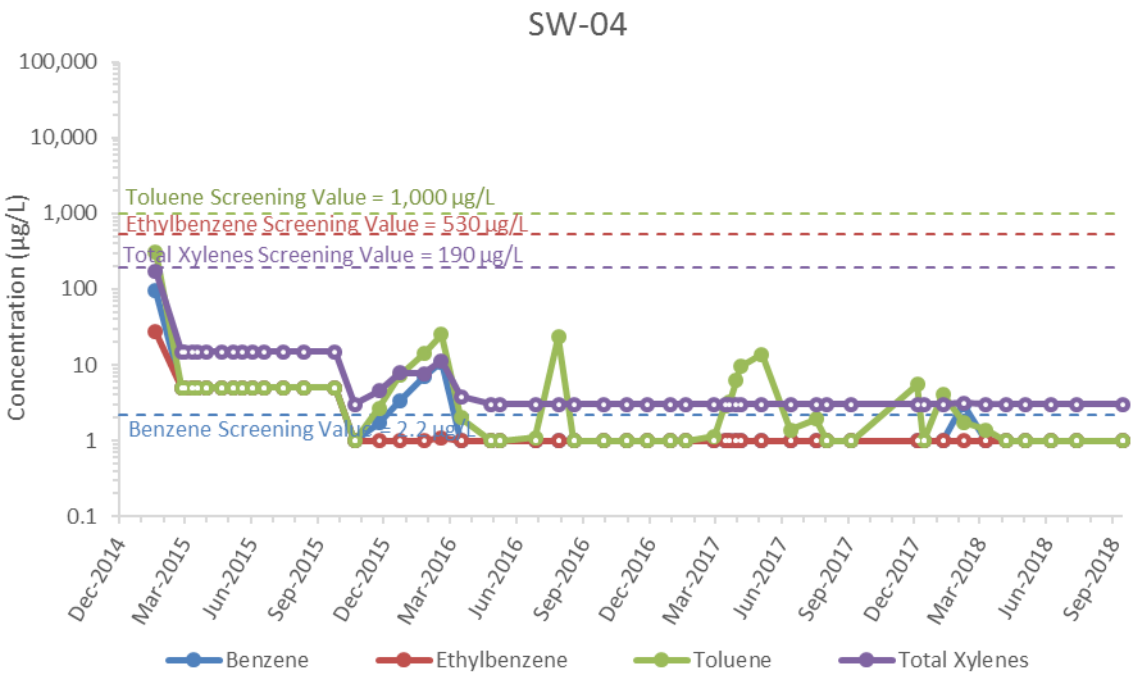
Appendix F
Surface Water Analytical Trends



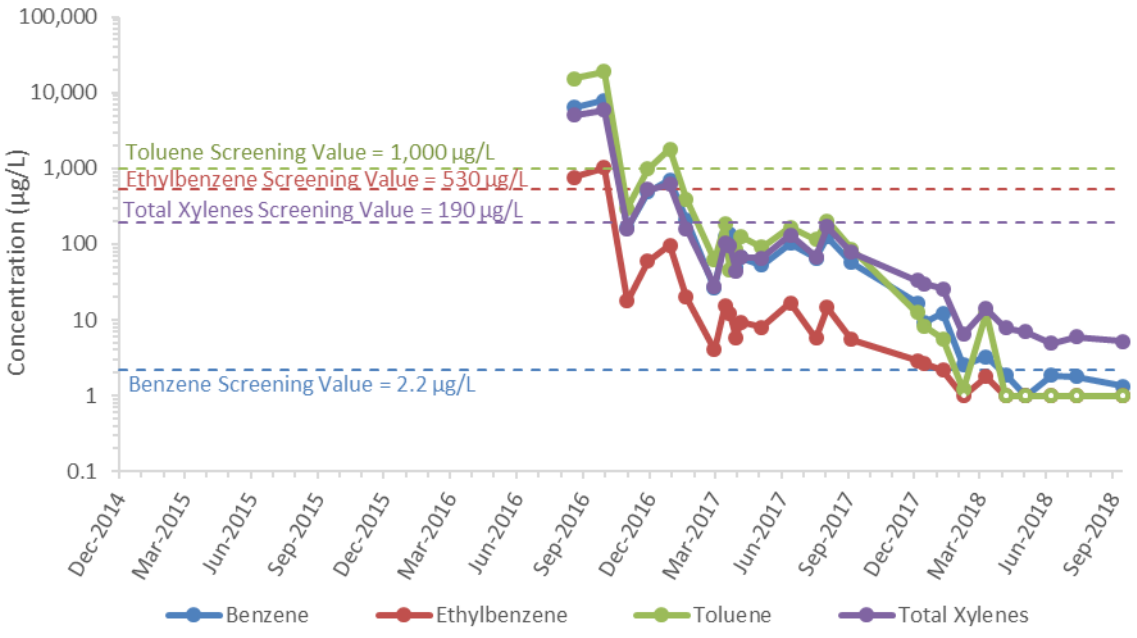
Open circles are drawn at the reporting limit when a compound was not detected in the sample.



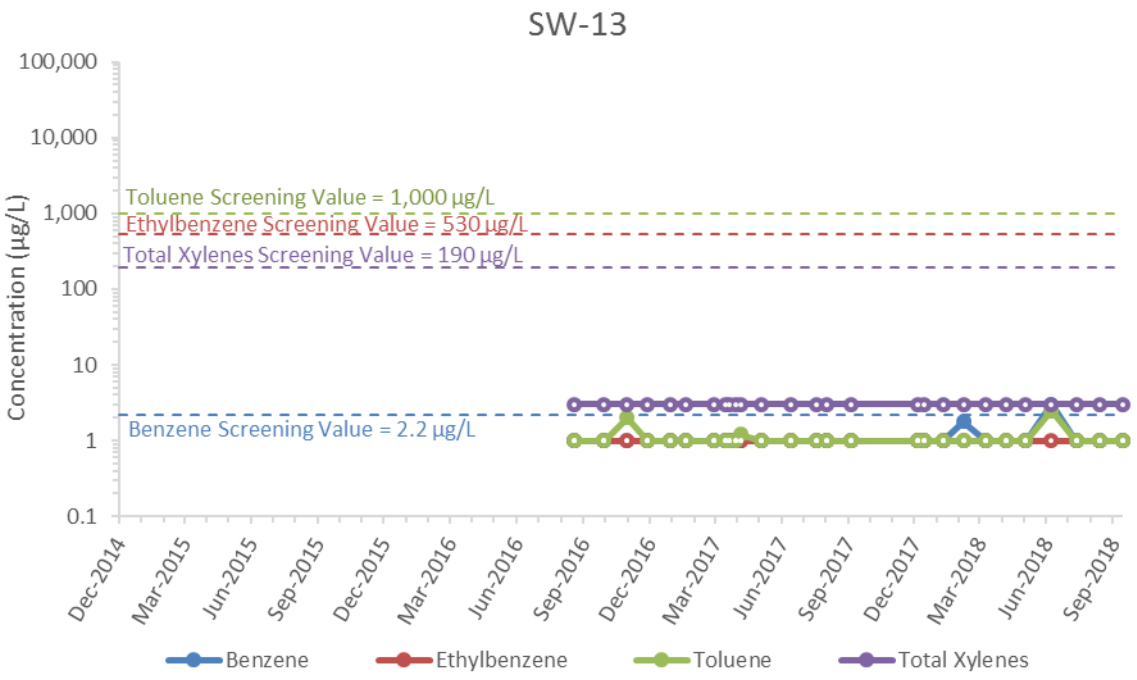
Open circles are drawn at the reporting limit when a compound was not detected in the sample.



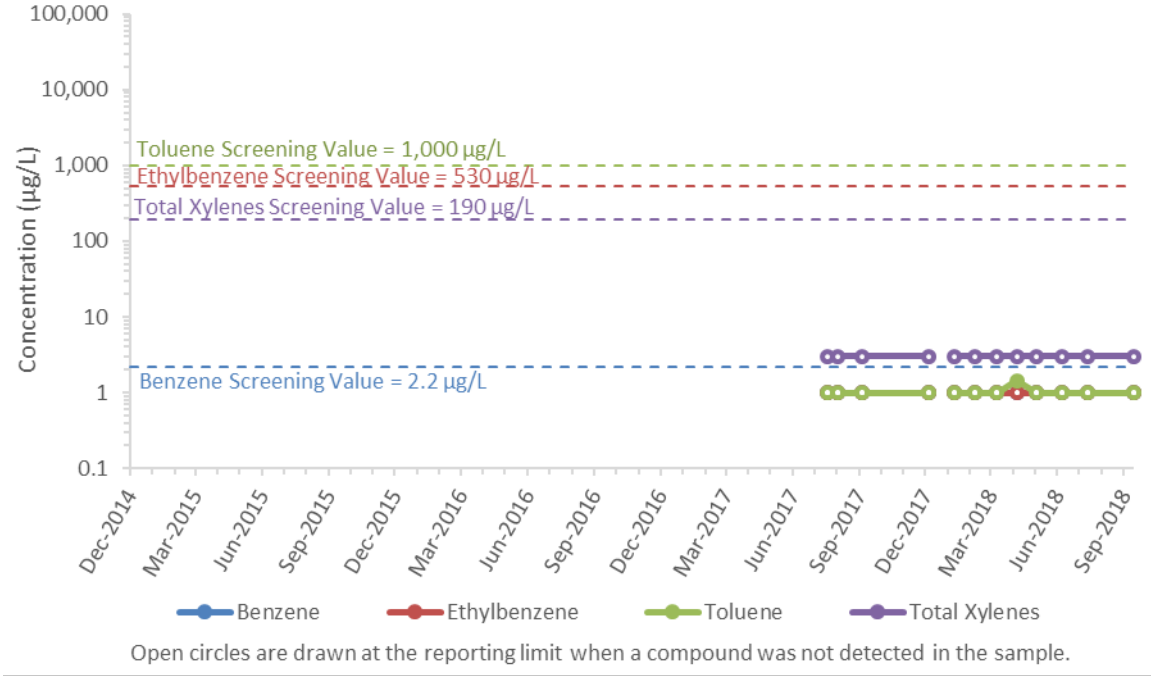
Open circles are drawn at the reporting limit when a compound was not detected in the sample.



Open circles are drawn at the reporting limit when a compound was not detected in the sample.

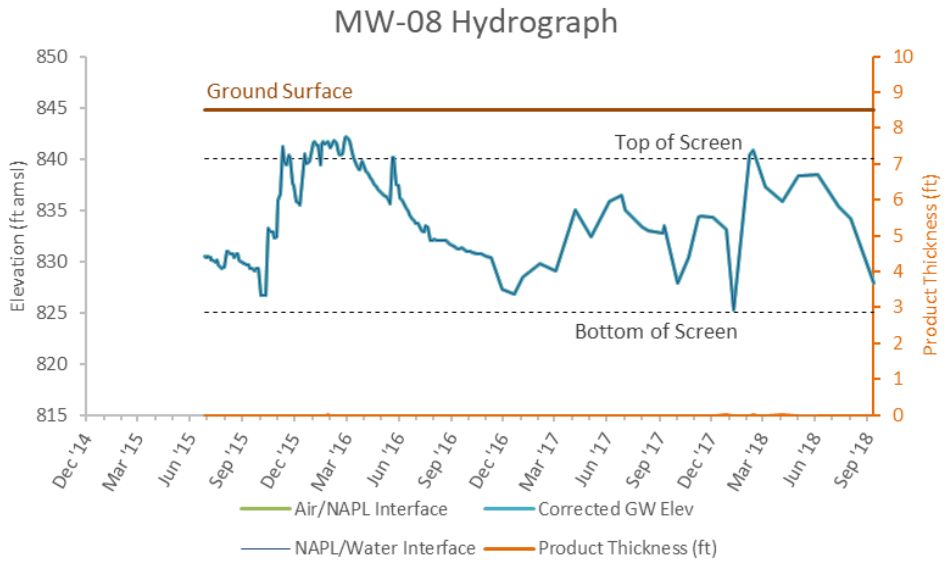


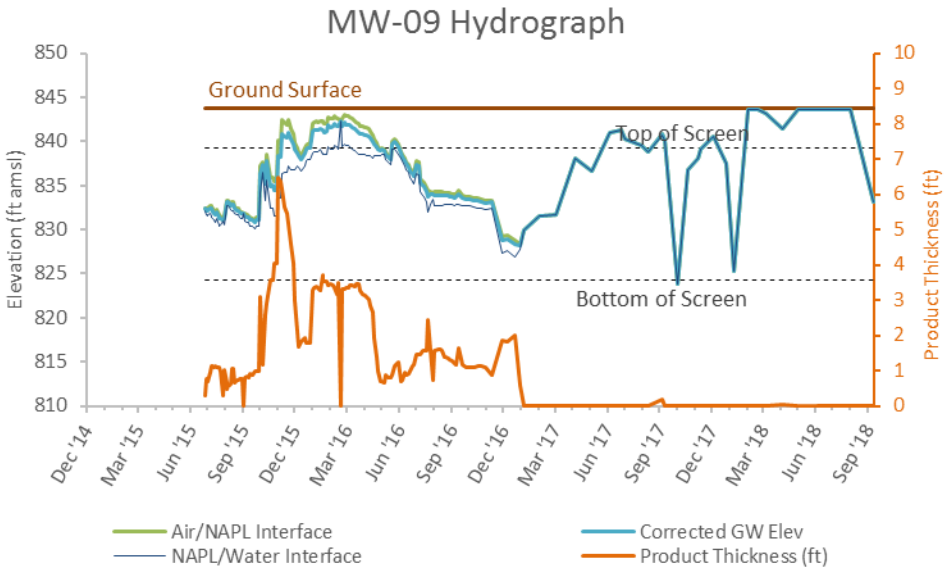
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

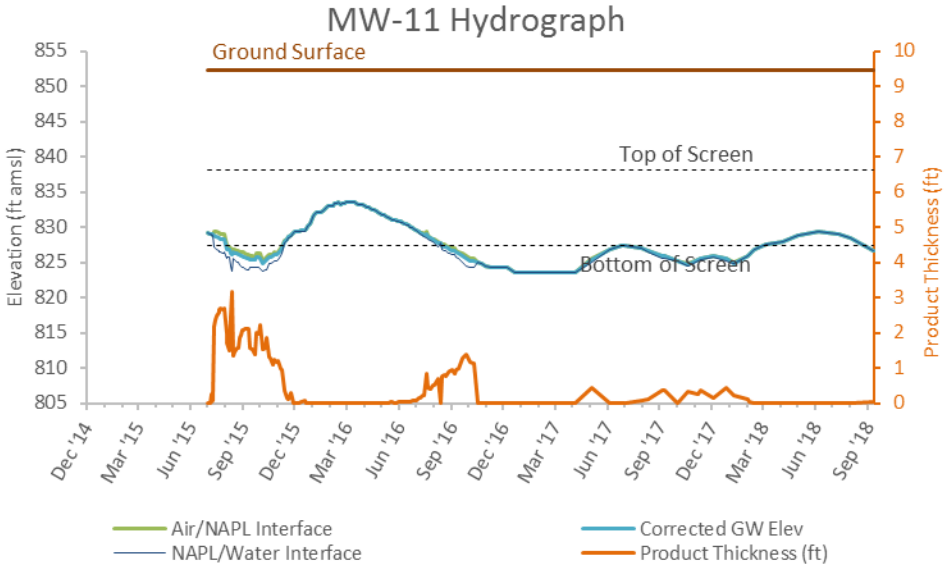


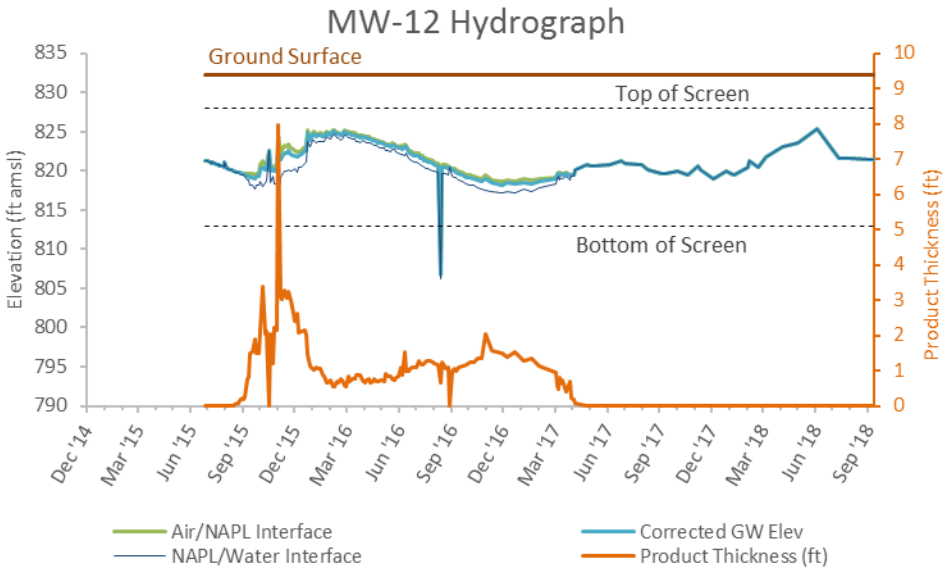
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

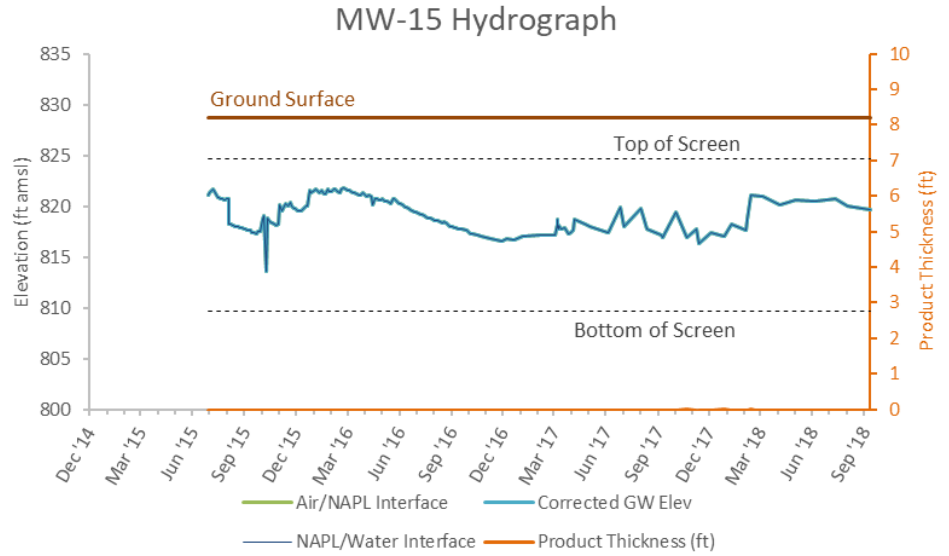
Appendix G
Product Thickness Trends

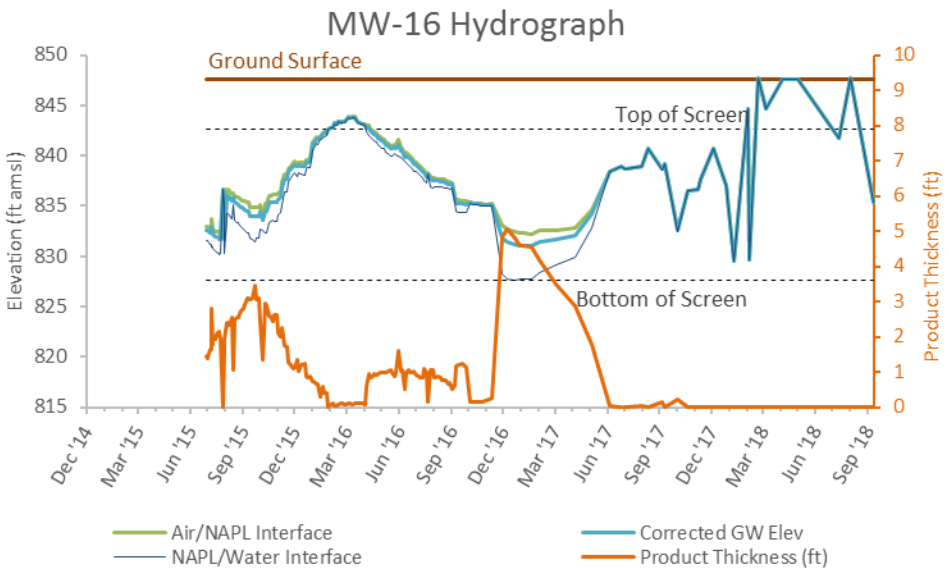

MW-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

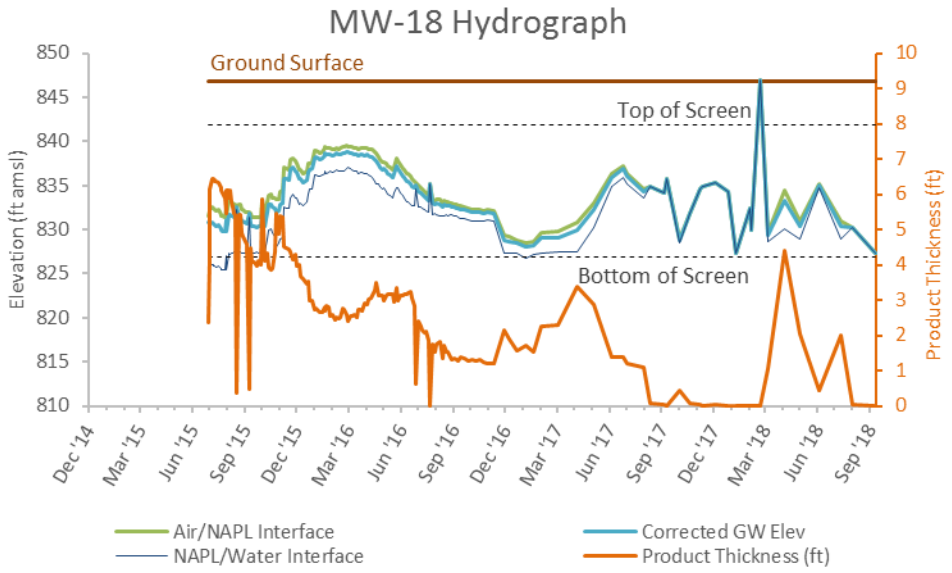

MW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

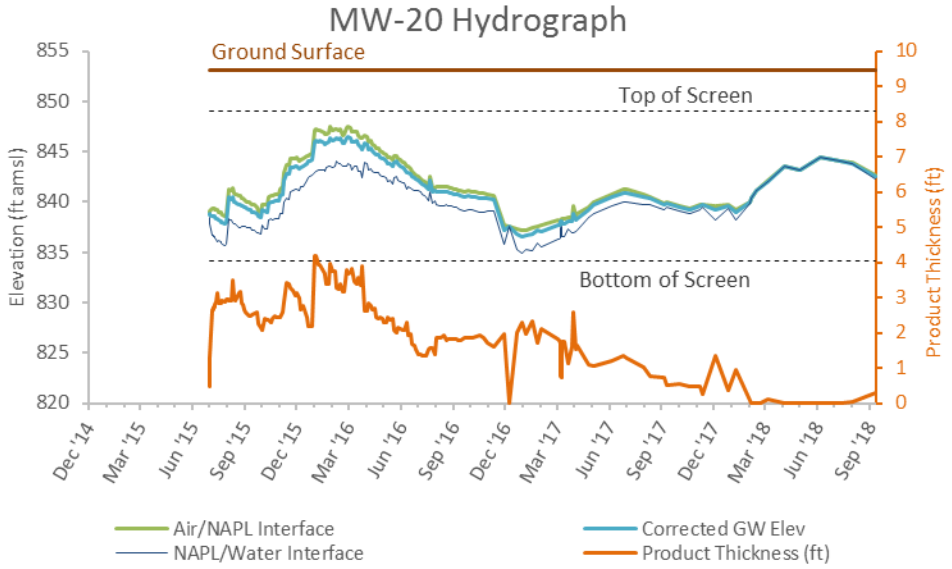

MW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
810
805
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

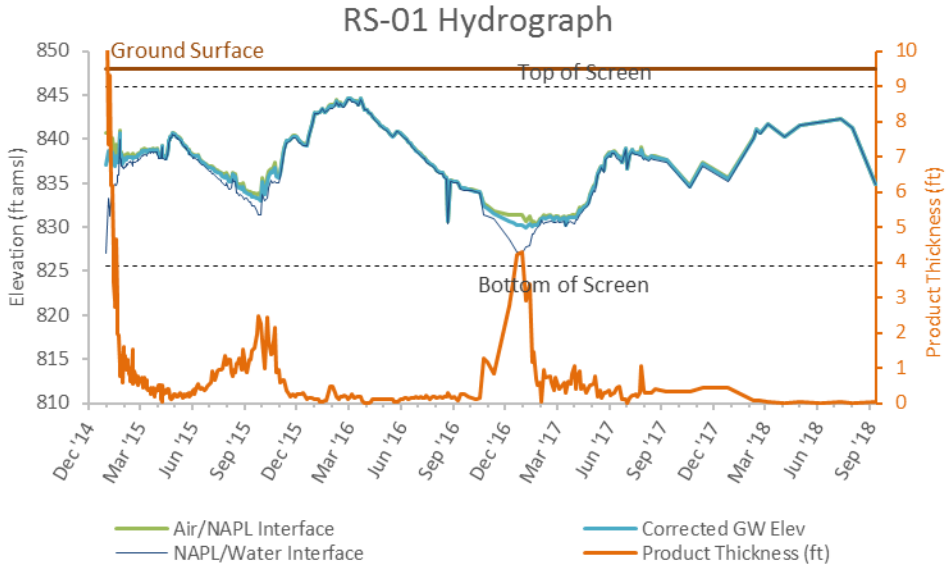

MW-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
835
830
825
820
815
810
805
800
795
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

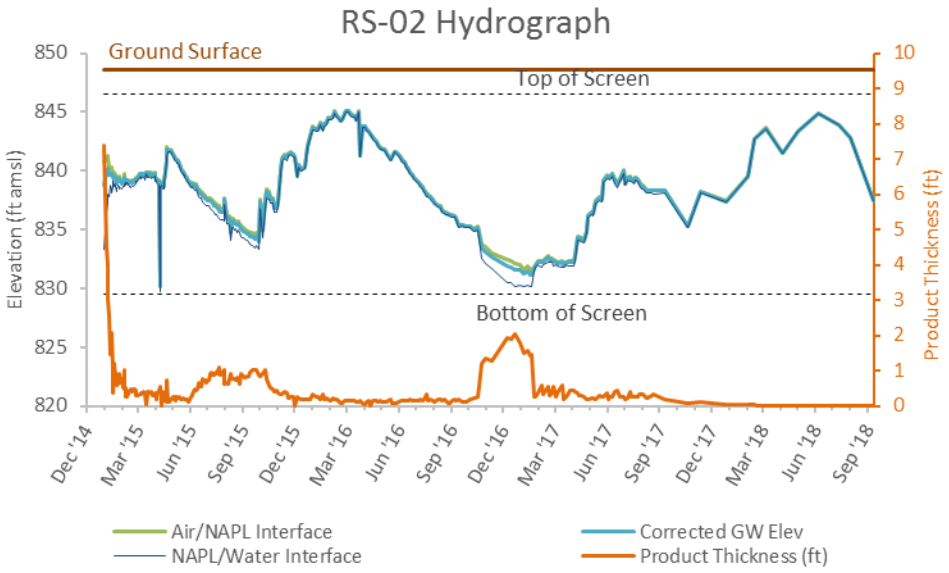

MW-15 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
835
830
825
820
815
810
805
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

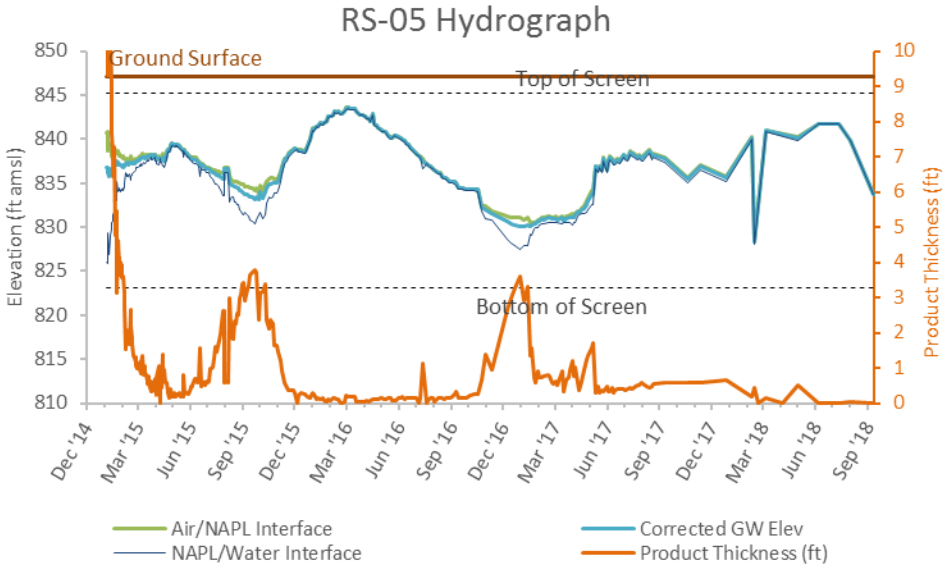

MW-16 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

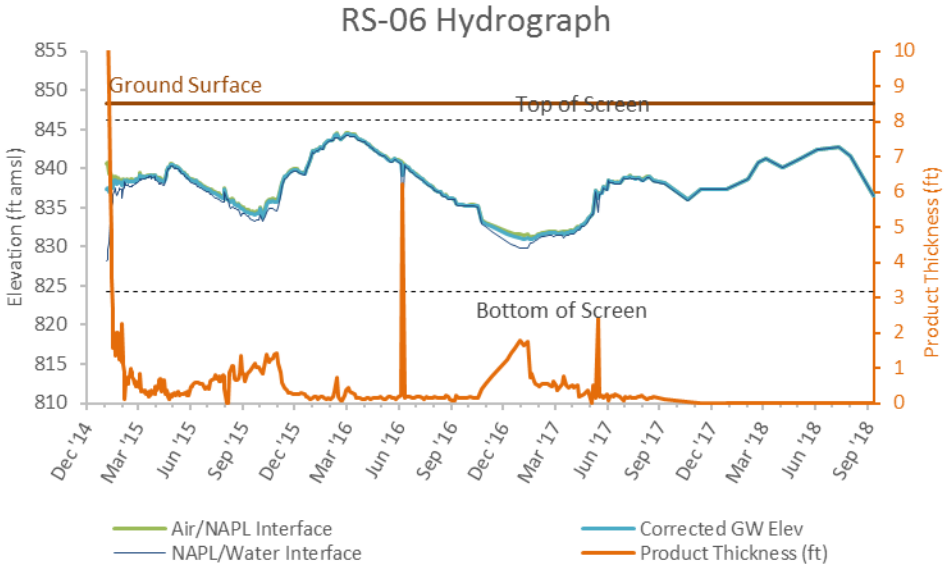

MW-18 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

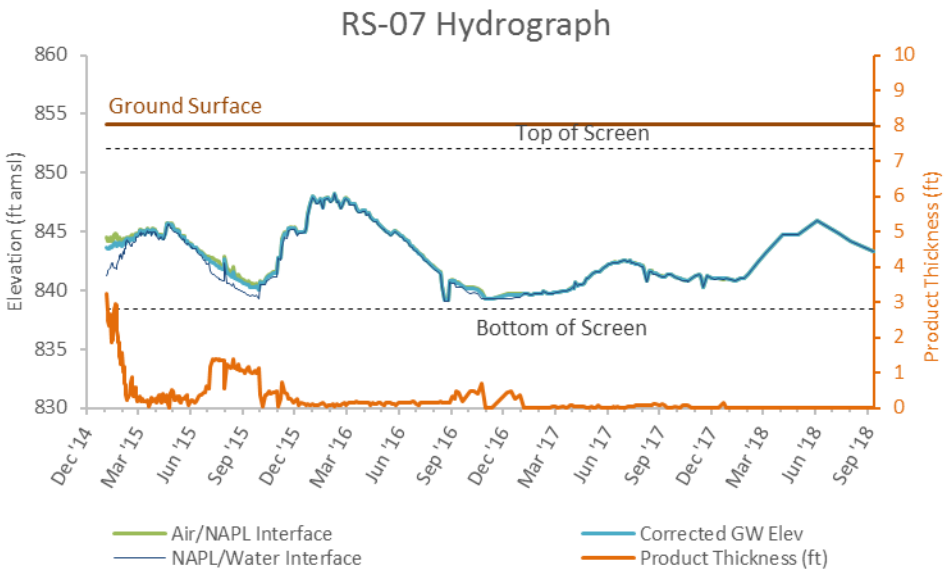

MW-20 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

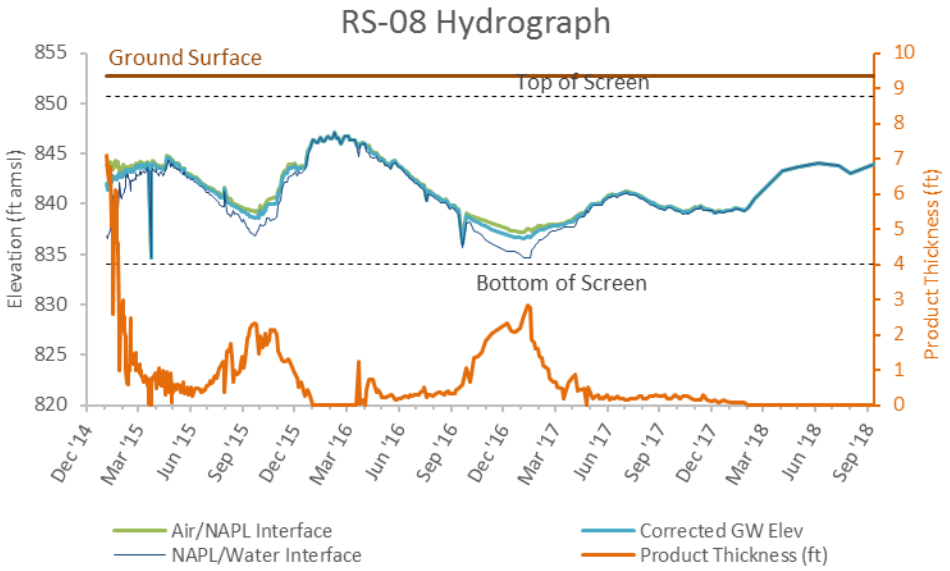

RS-01 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

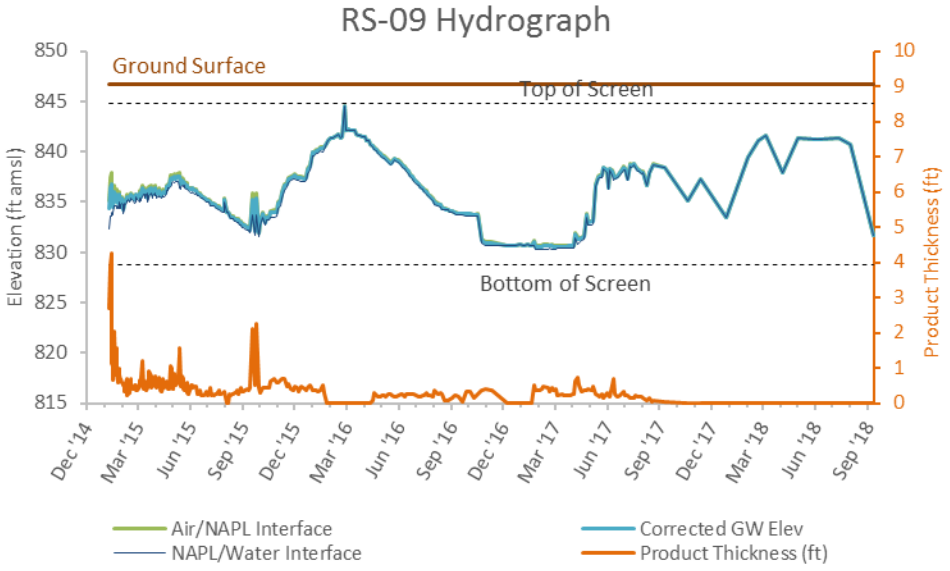

RS-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

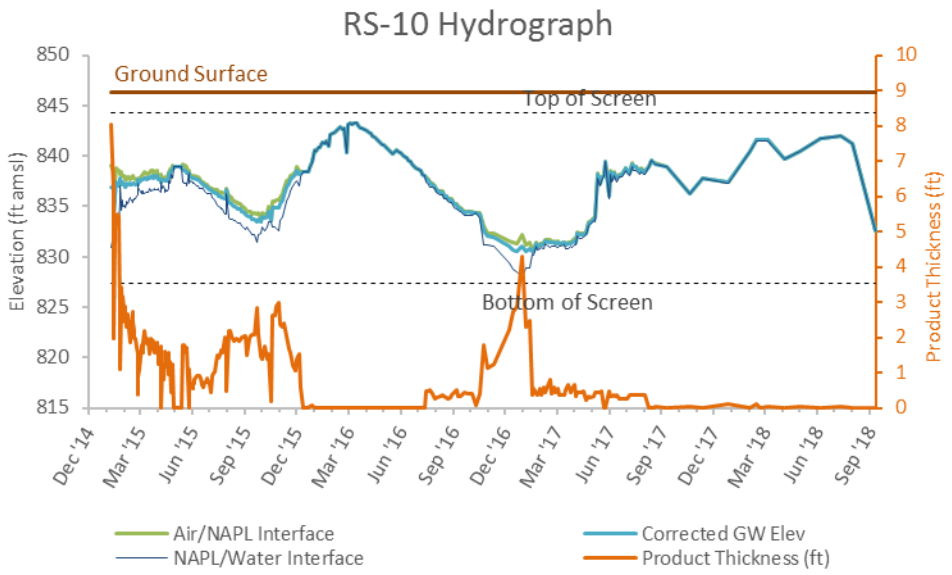

RS-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

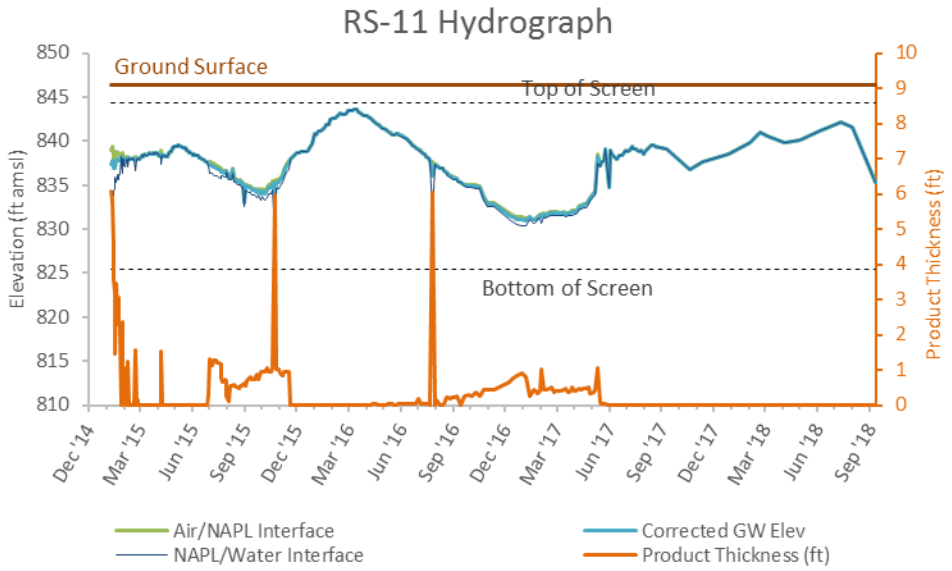

RS-06 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

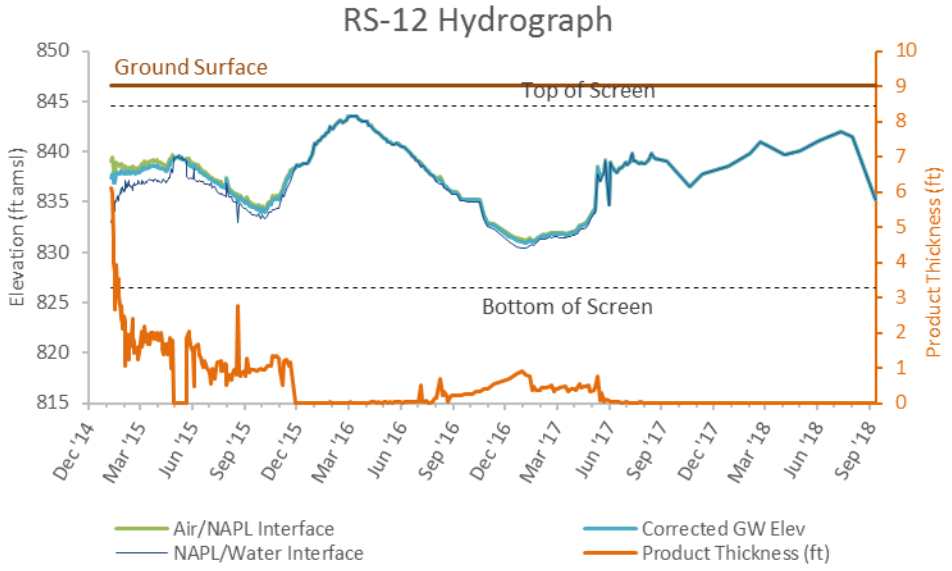

RS-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
855
850
845
840
835
830
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

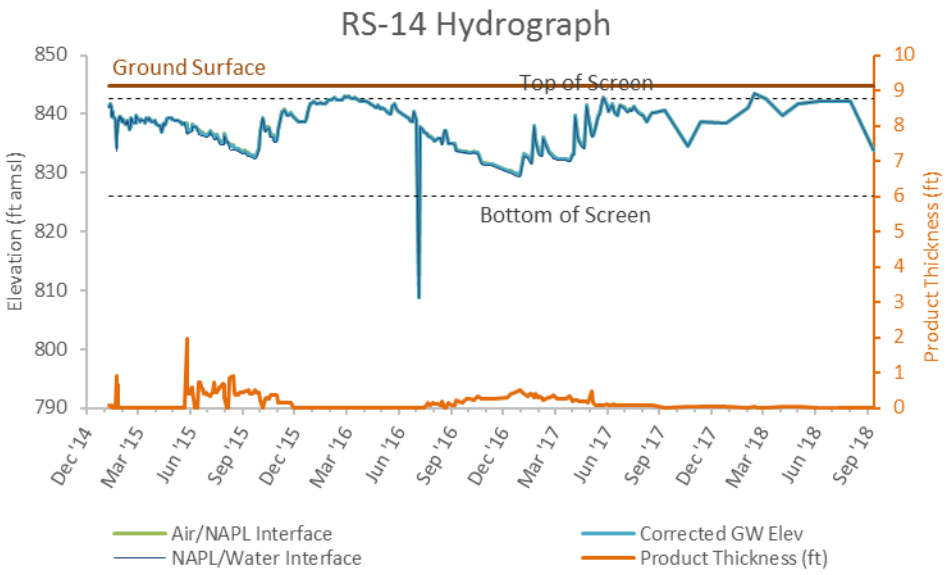

RS-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

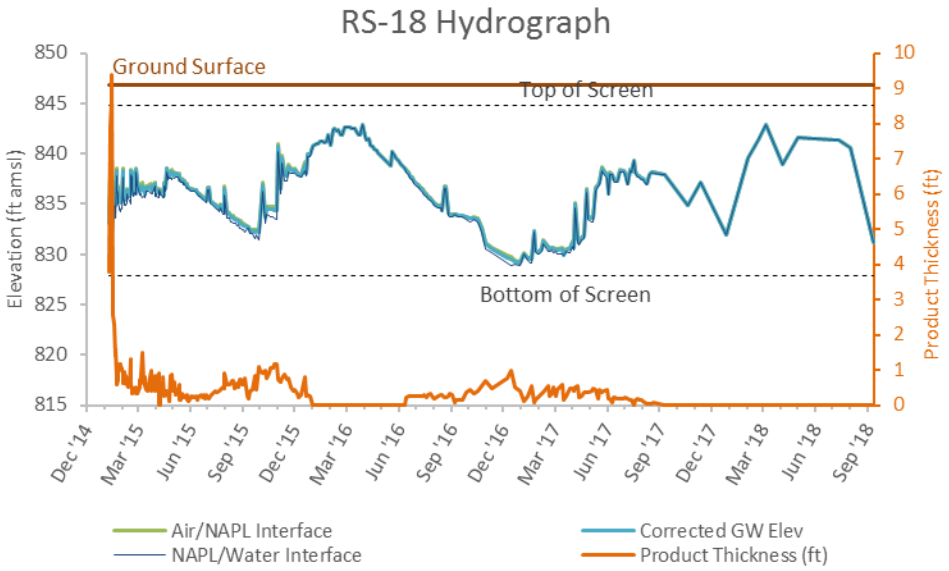

RS-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

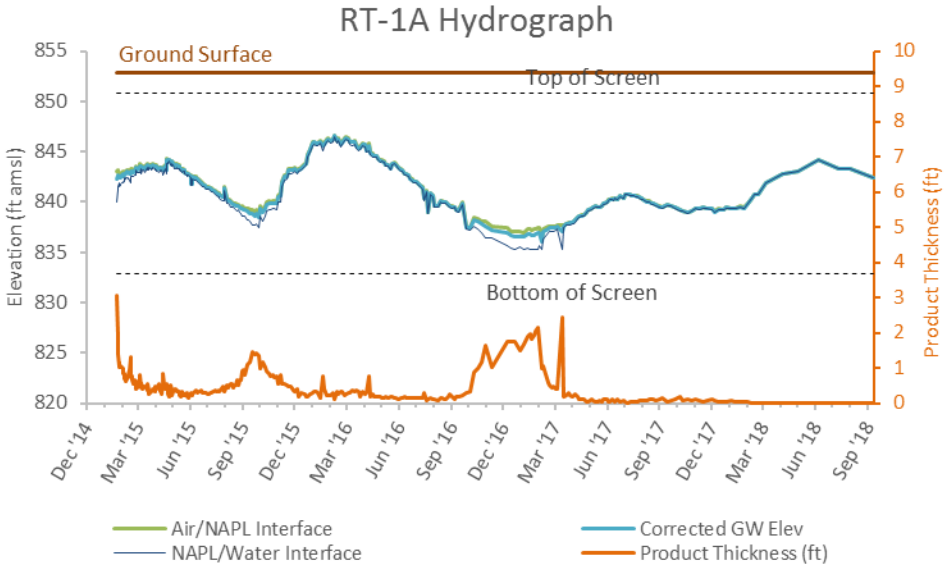

RS-10 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

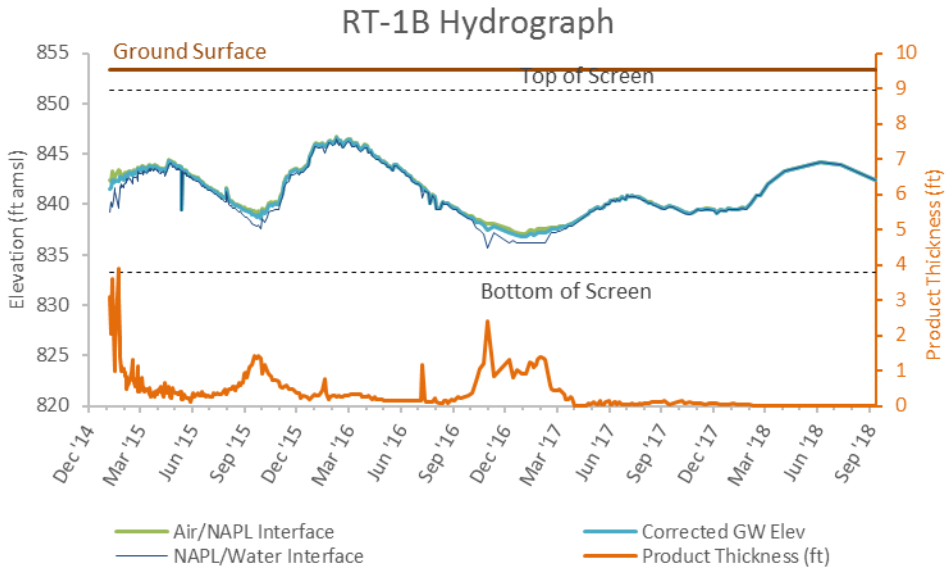

RS-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

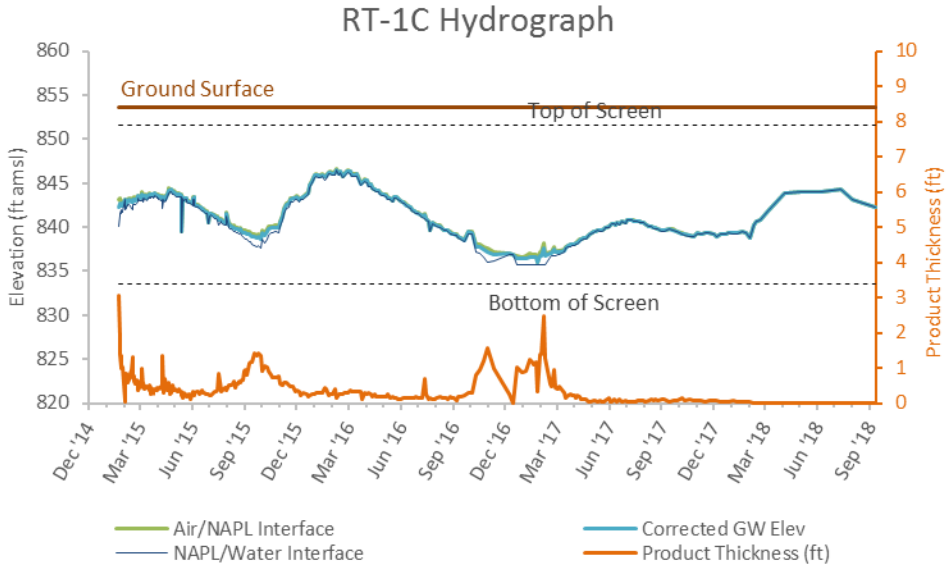

RS-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

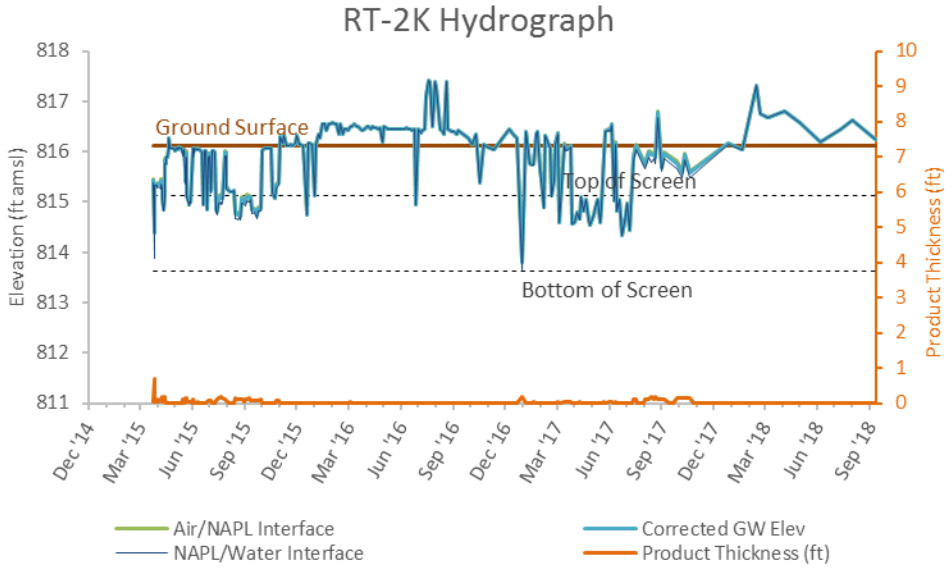

RS-14 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

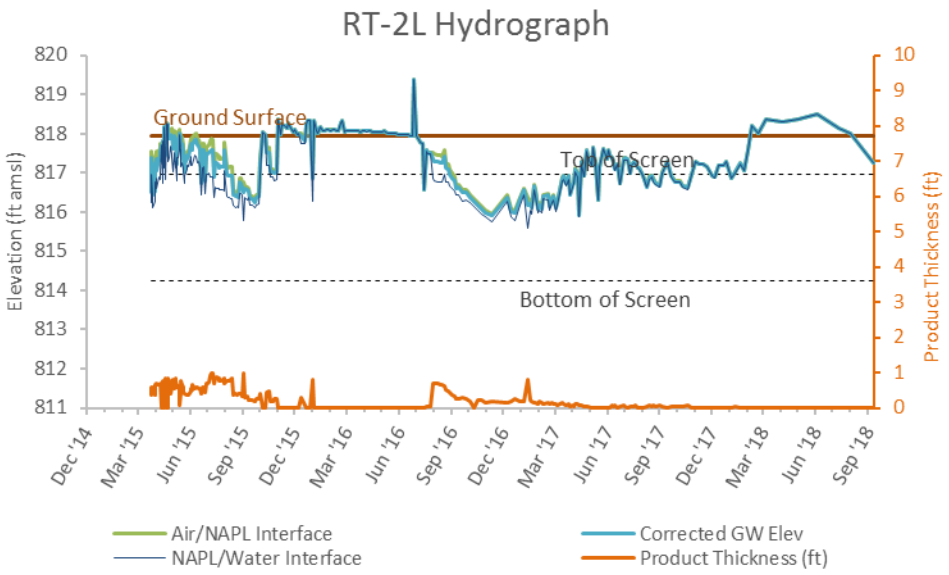

RS-18 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

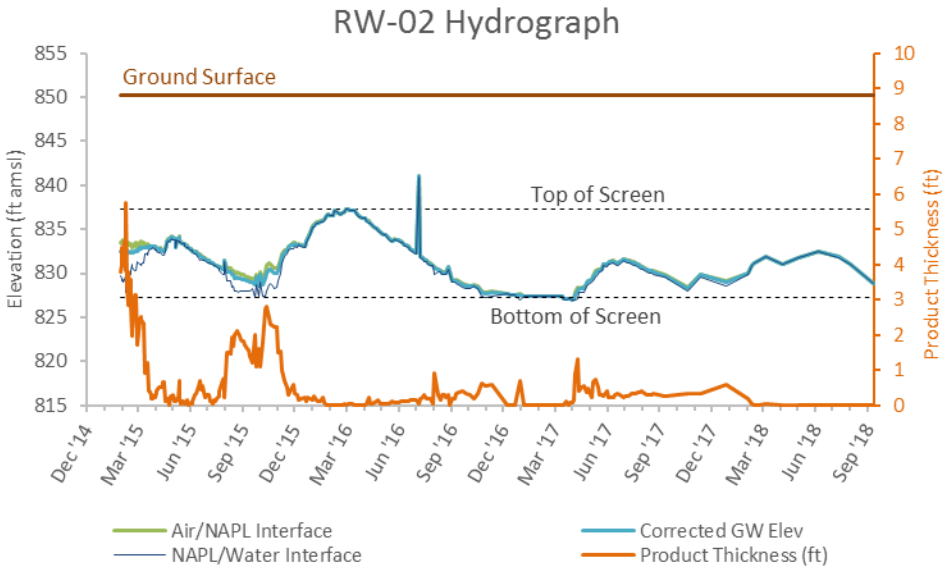

RT-1A Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

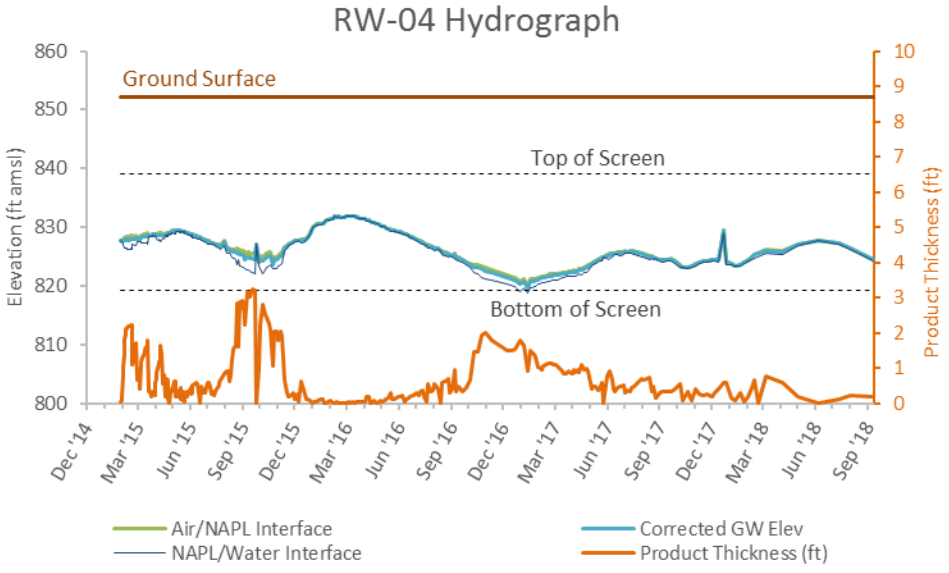

RT-1B Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

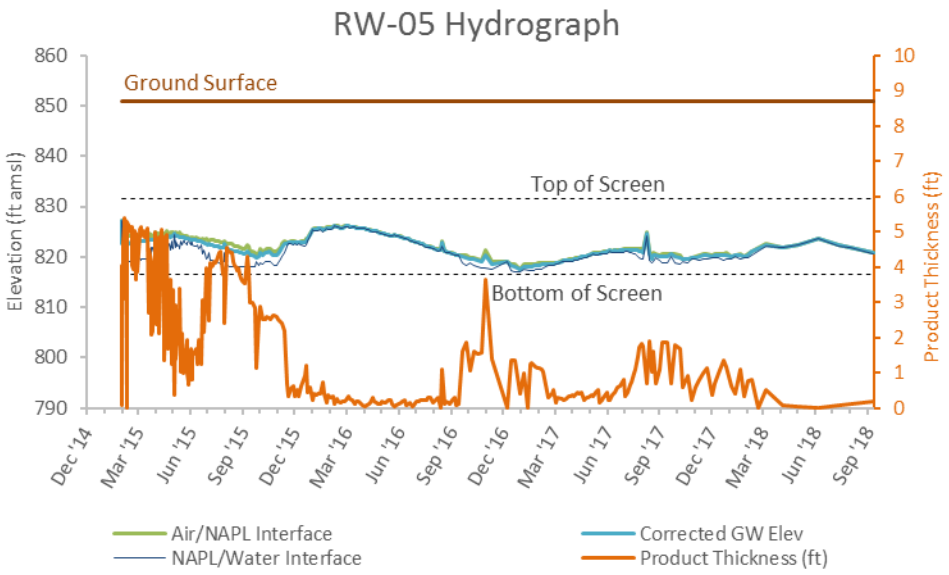

RT-1C Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

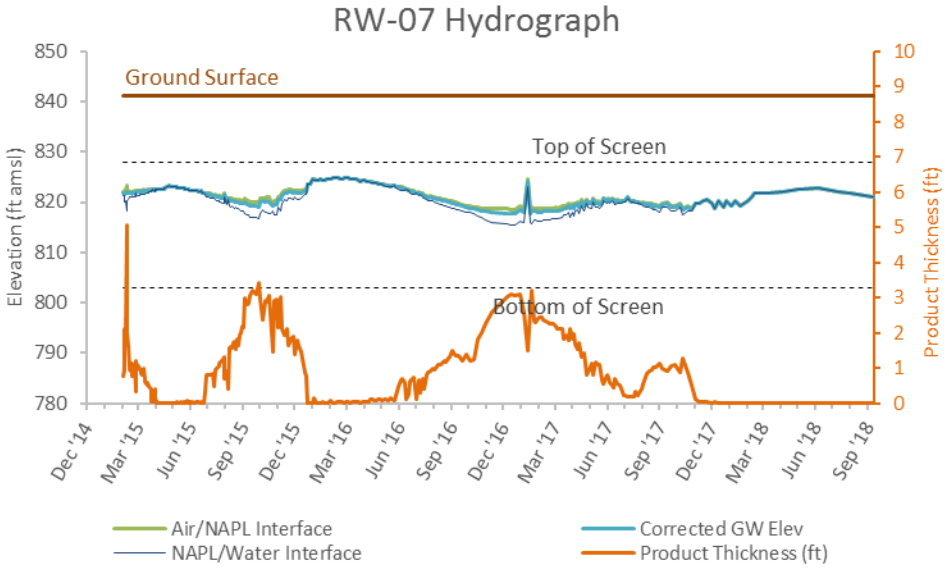

RT-2K Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
818
817
816
815
814
813
812
811
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

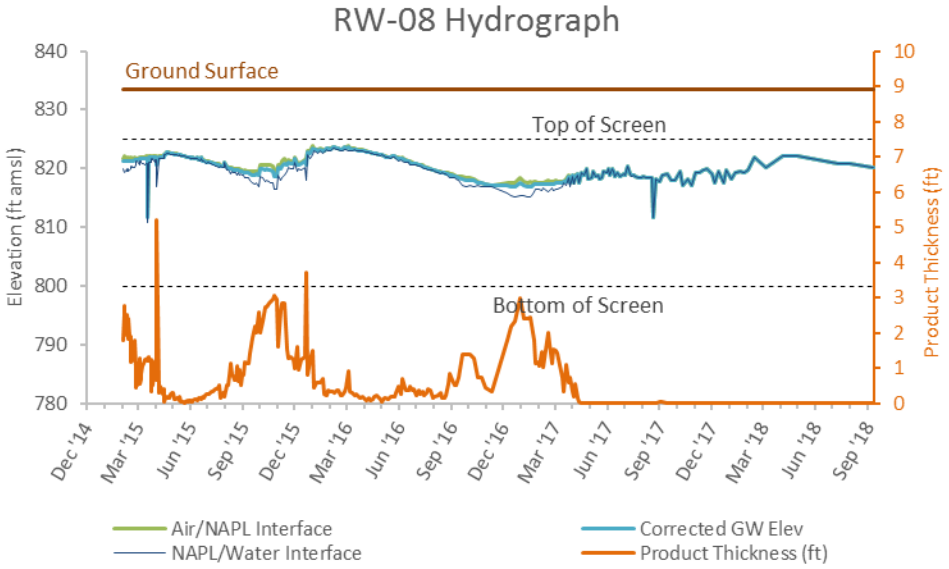

RT-2L Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

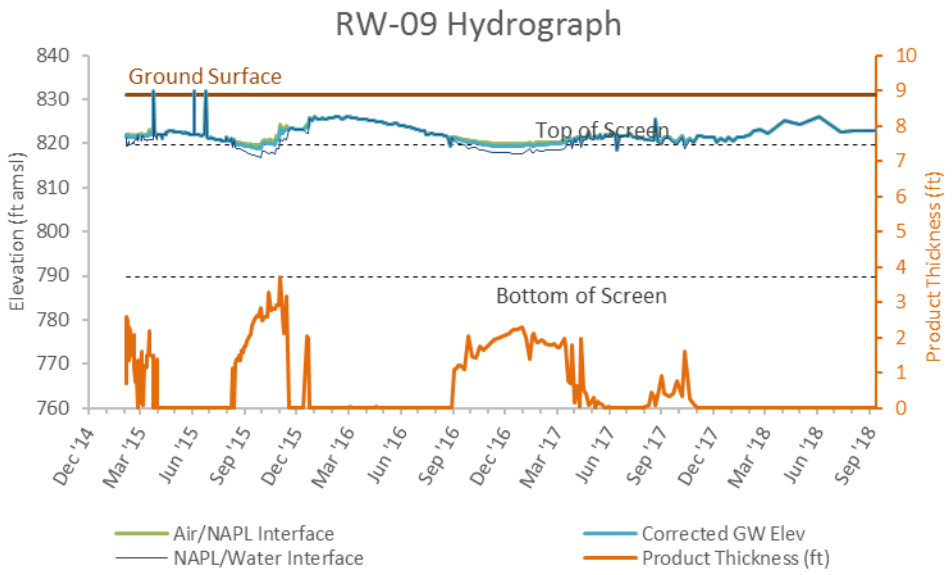

RW-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

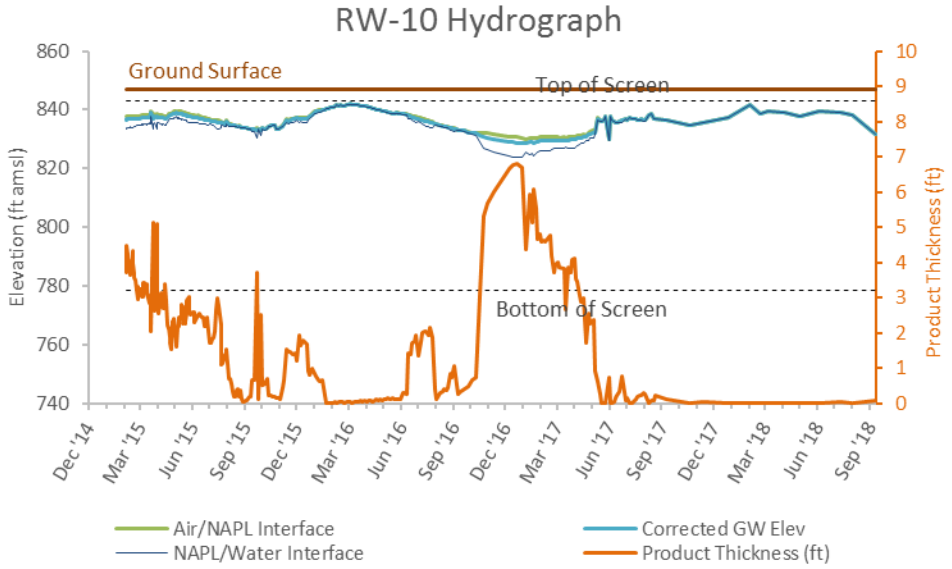

RW-04 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

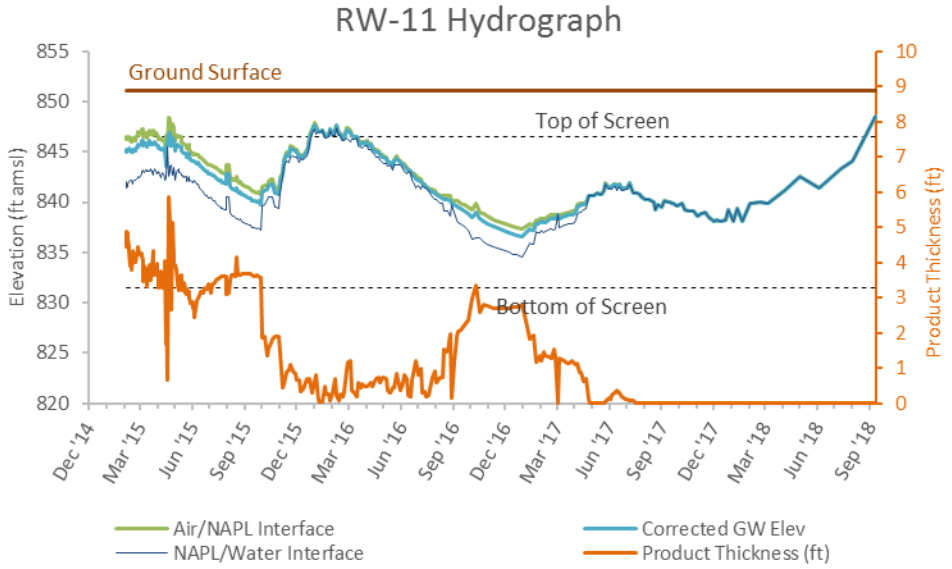

RW-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

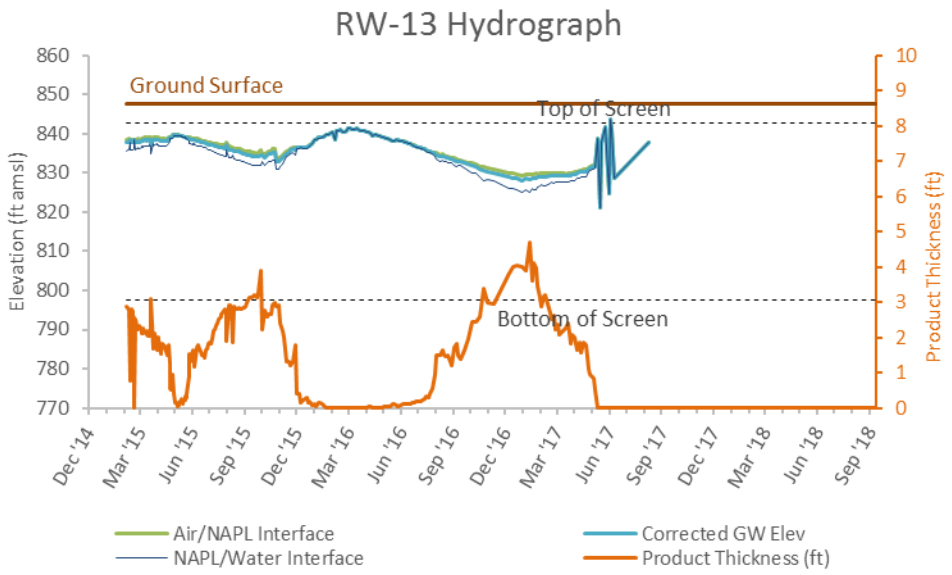

RW-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

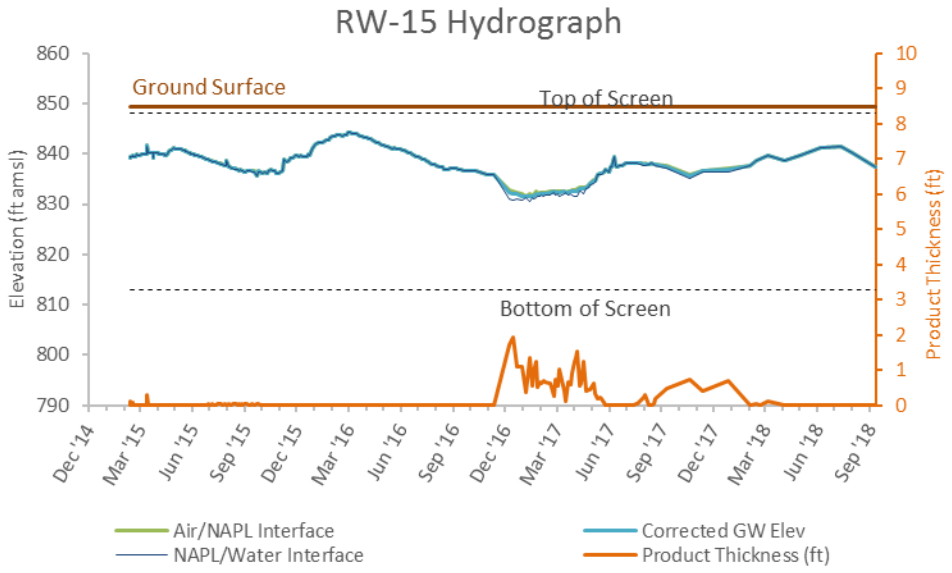

RW-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

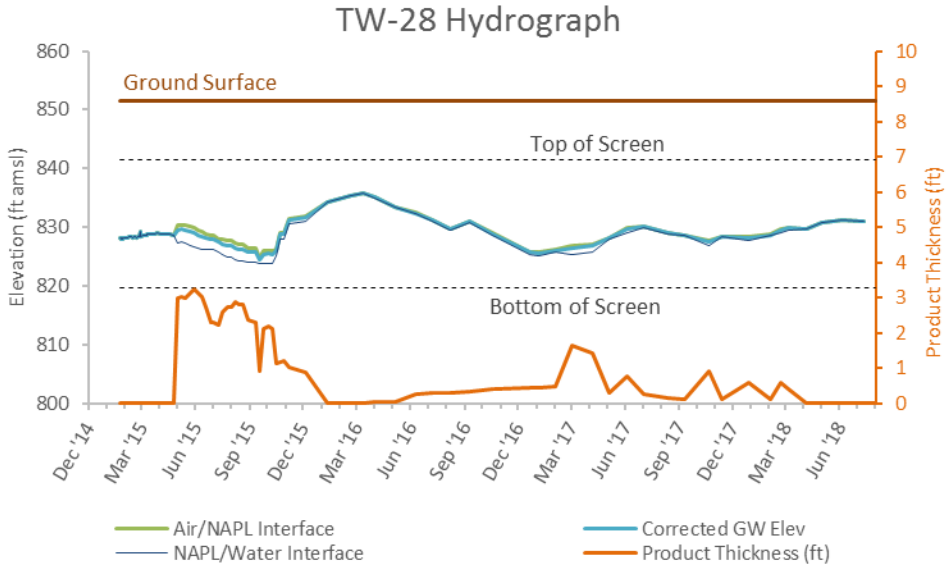

RW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
770
760
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

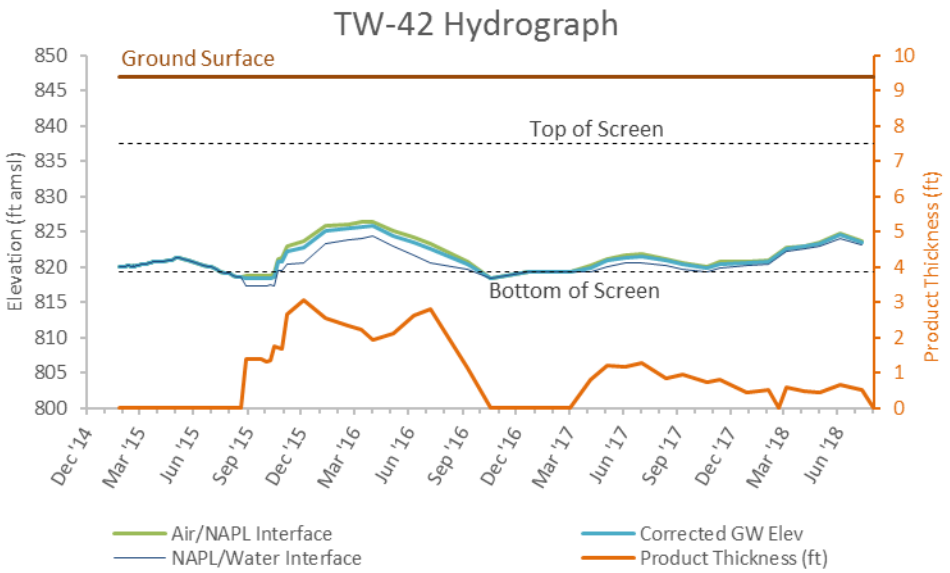

RW-10 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
840
820
800
780
760
740
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

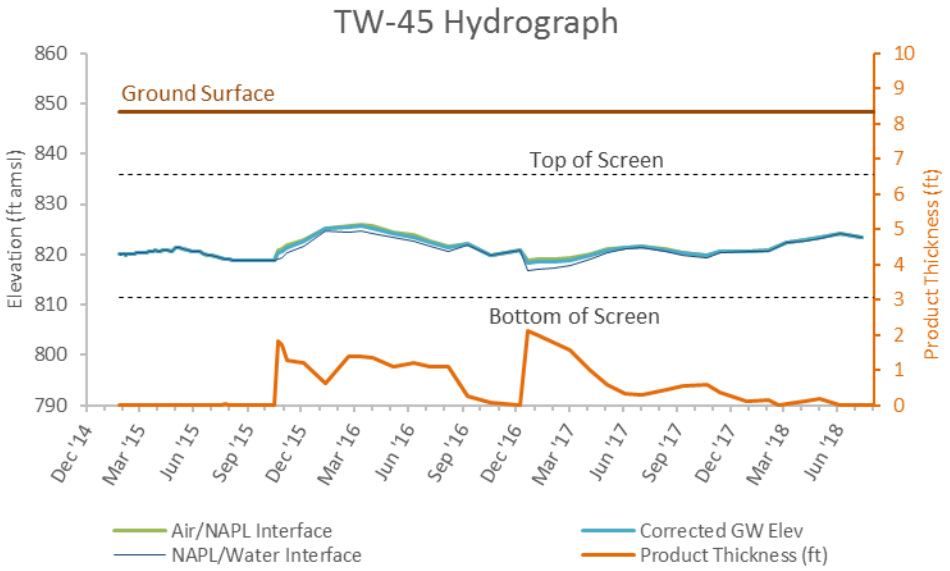

RW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
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
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
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
Mar '18
Jun '18
Sep '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

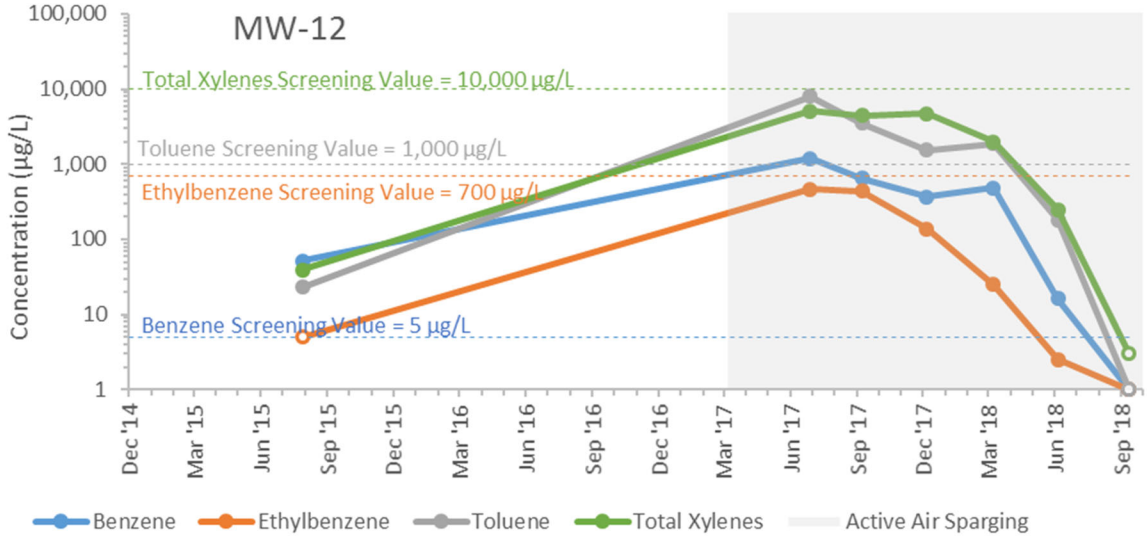

TW-28 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
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
Mar '18
Jun '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

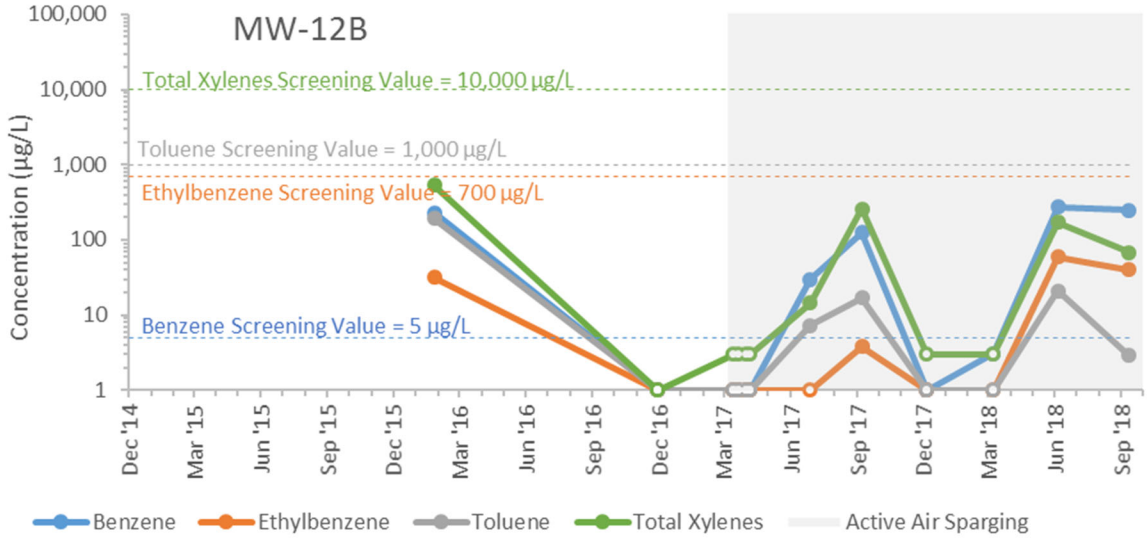

TW-45 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Air/NAPL Interface
NAPL/Water Interface
Corrected GW Elev
Product Thickness (ft)

Appendix H
Groundwater Analytical Trends

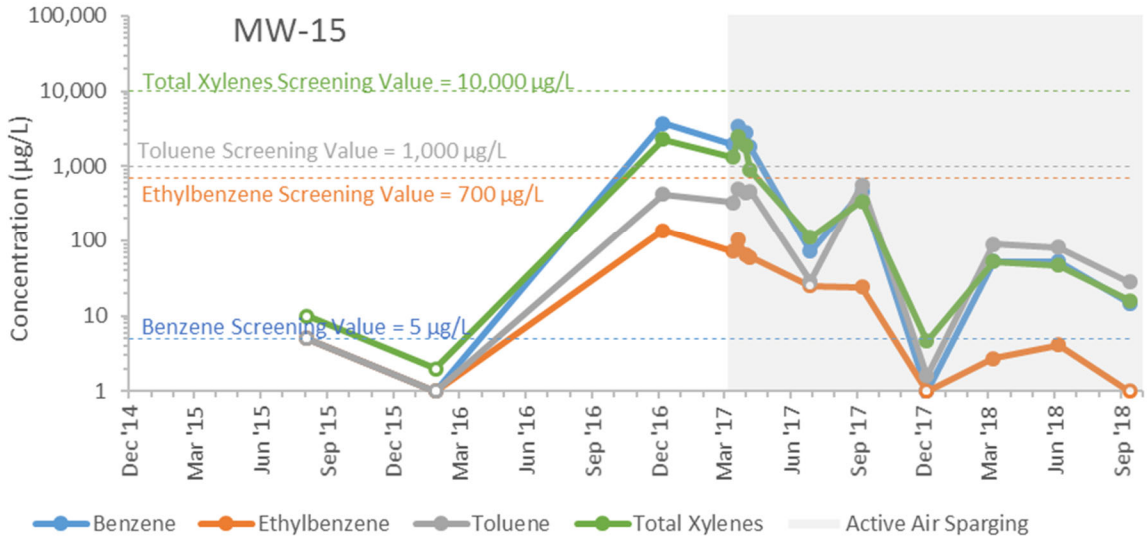
Brown's Creek Monitoring Well Trends:



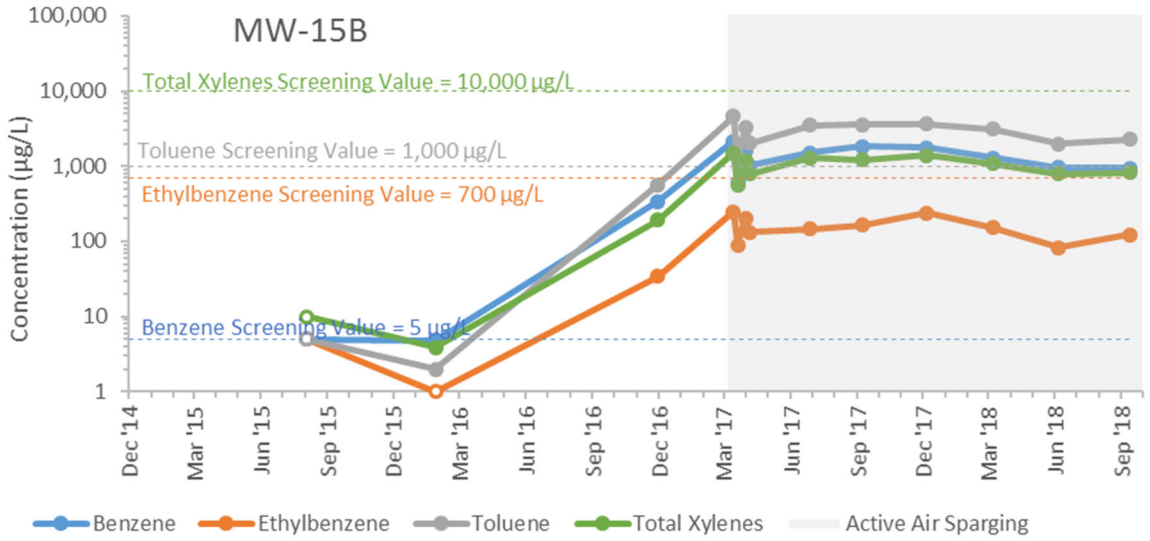
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



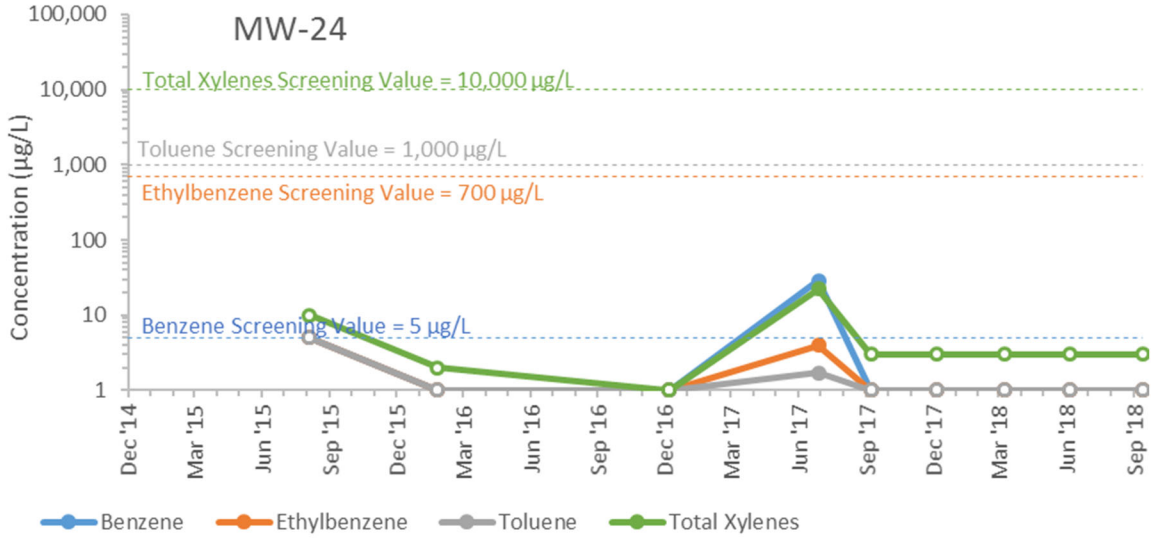
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



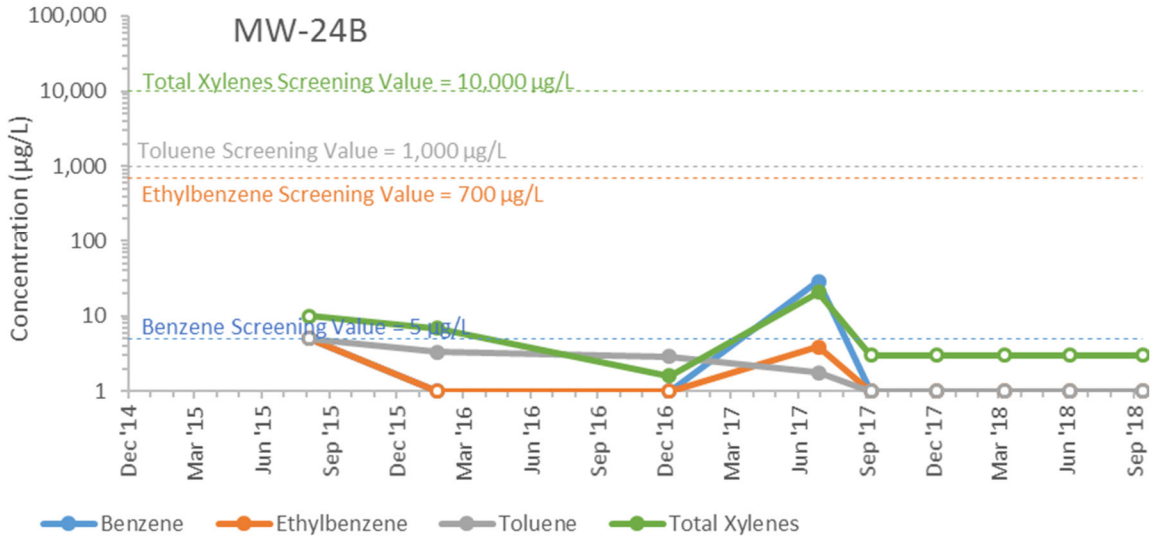
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



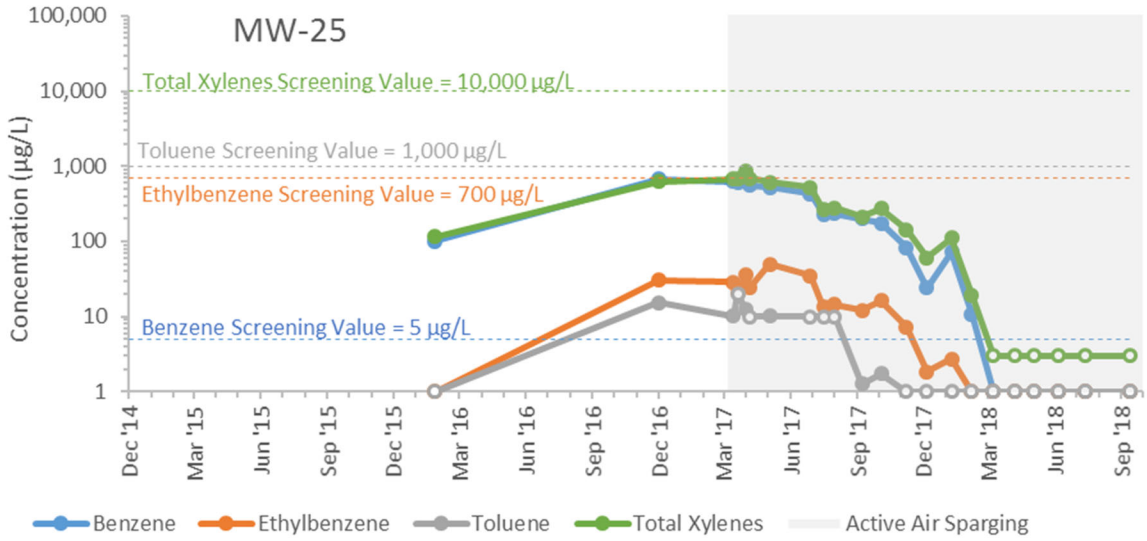
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



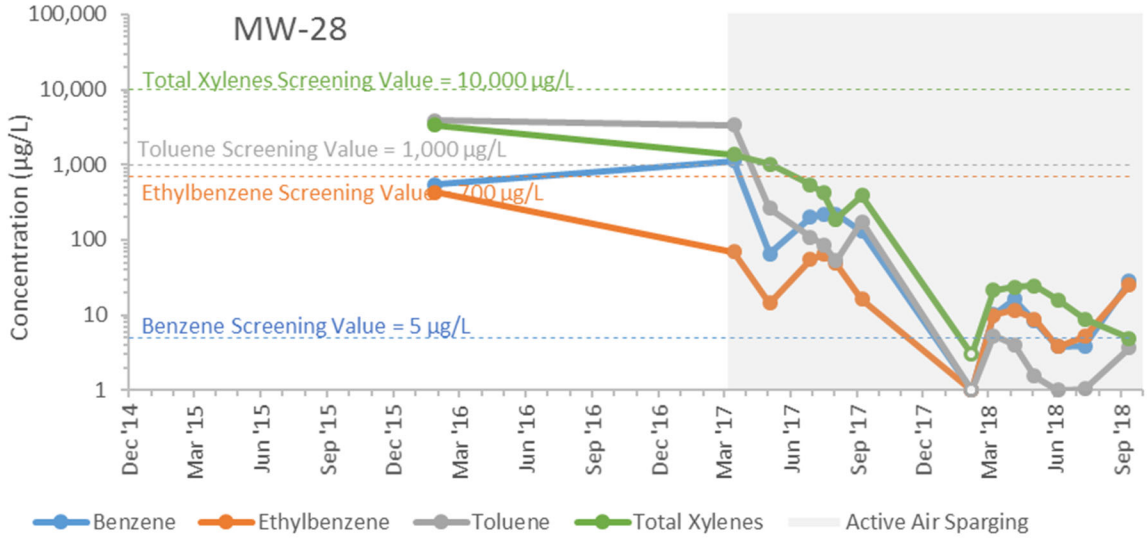
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



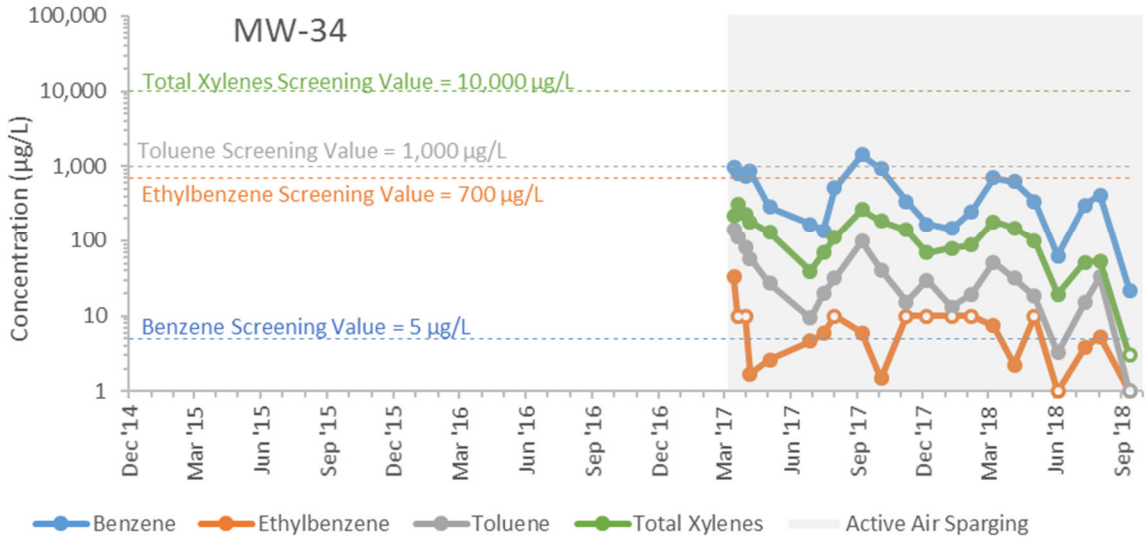
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



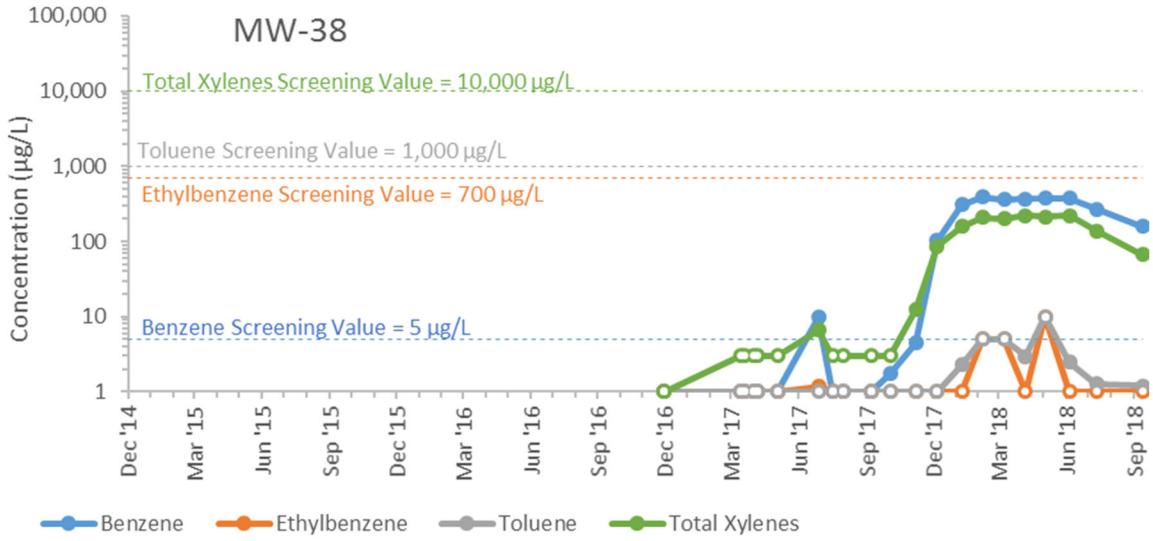
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



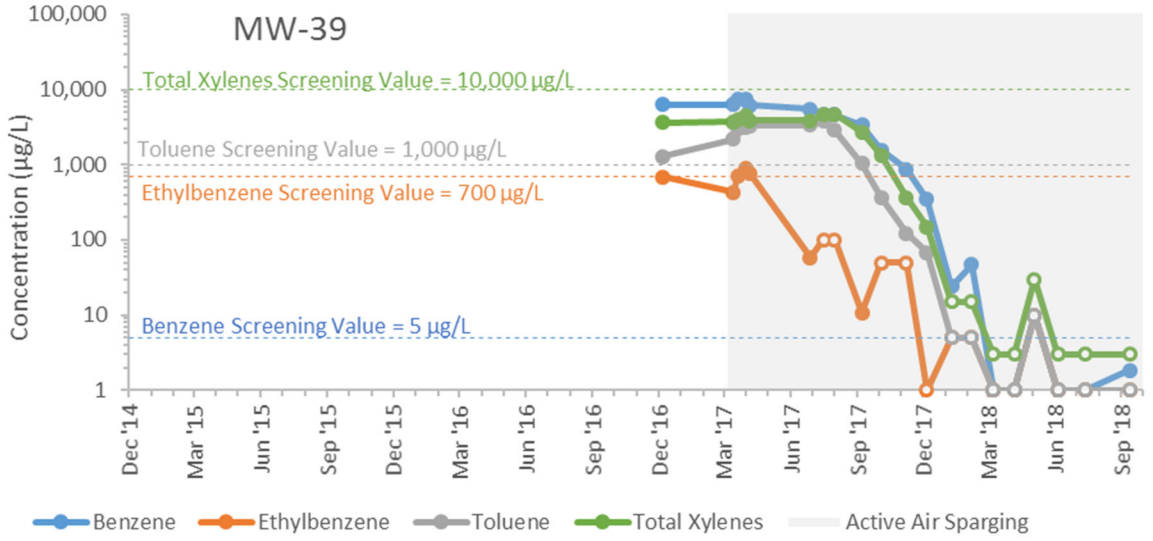
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



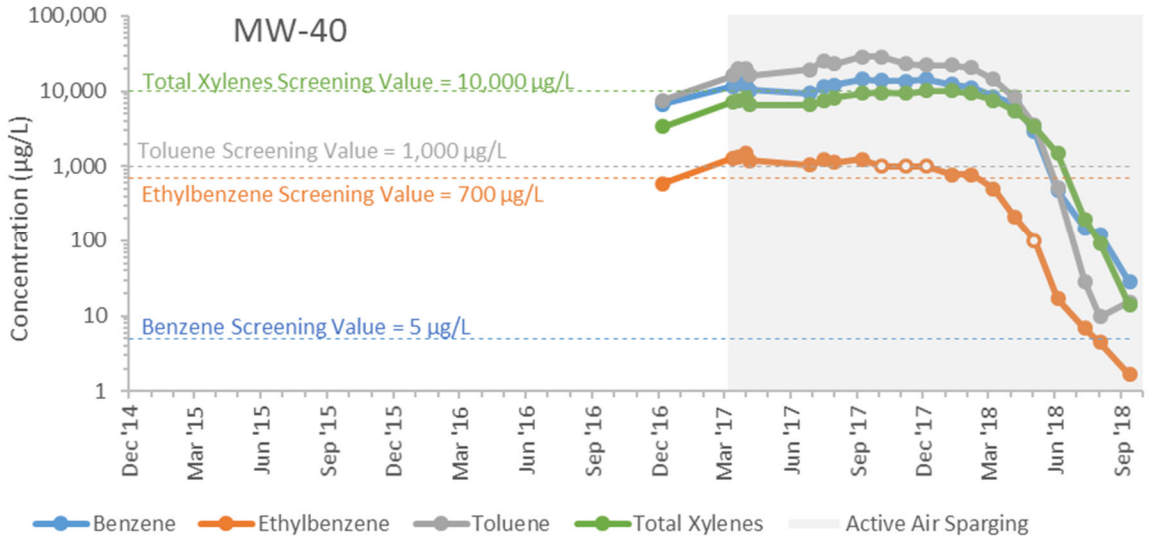
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



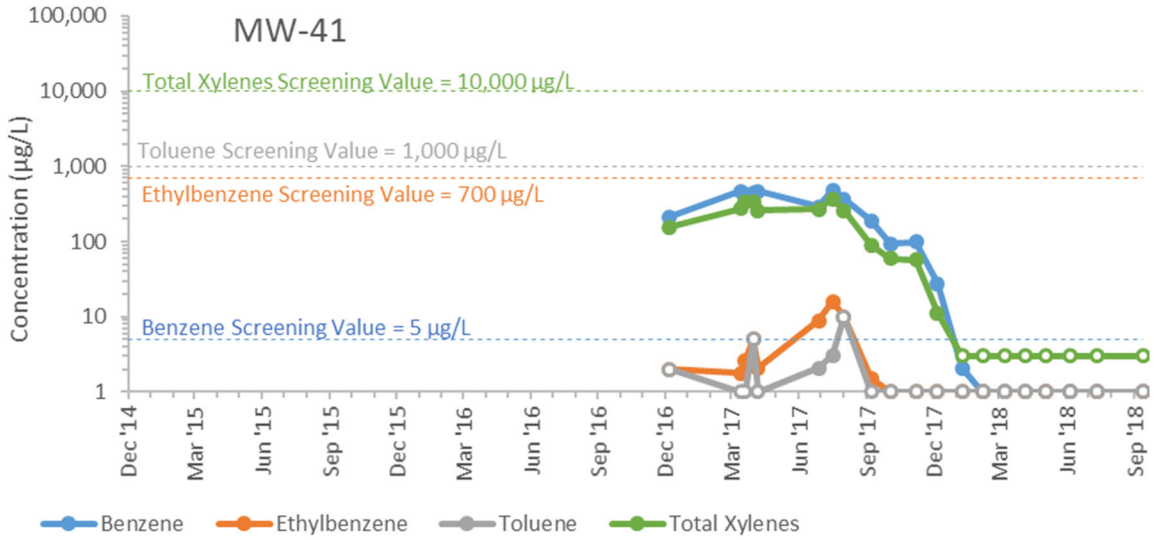
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



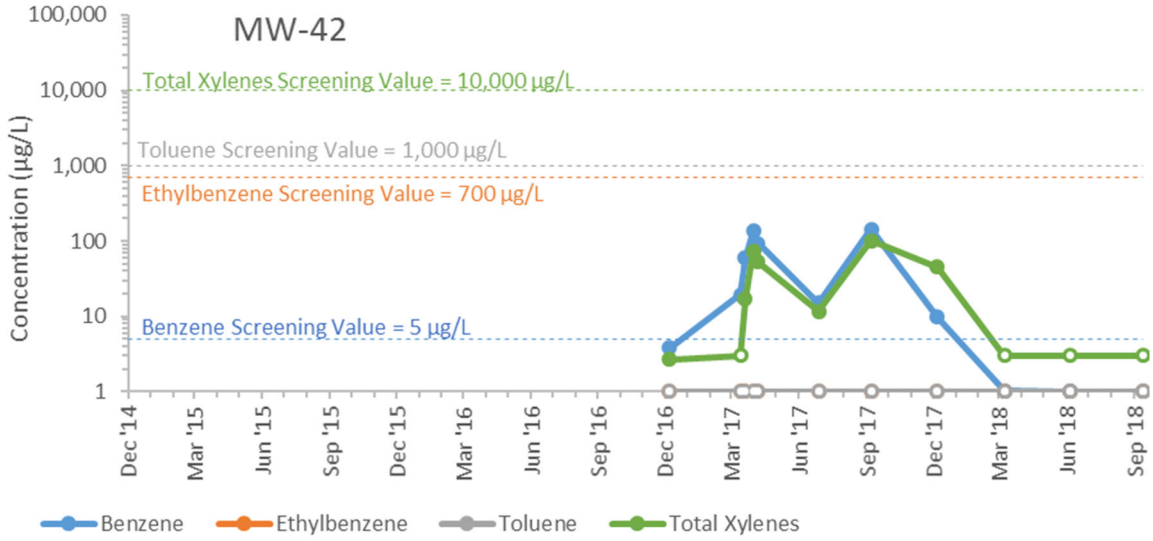
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

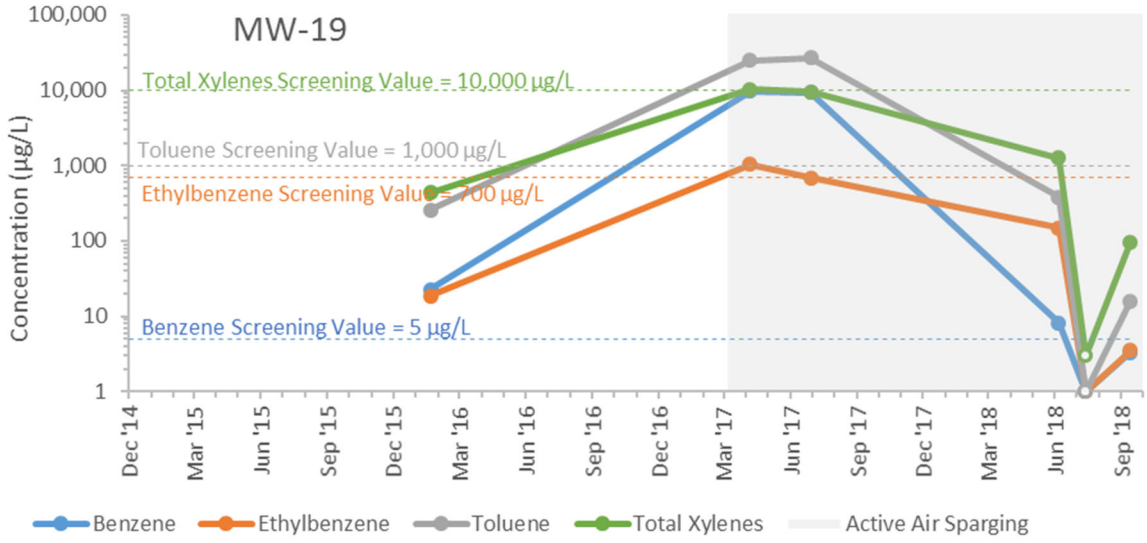


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



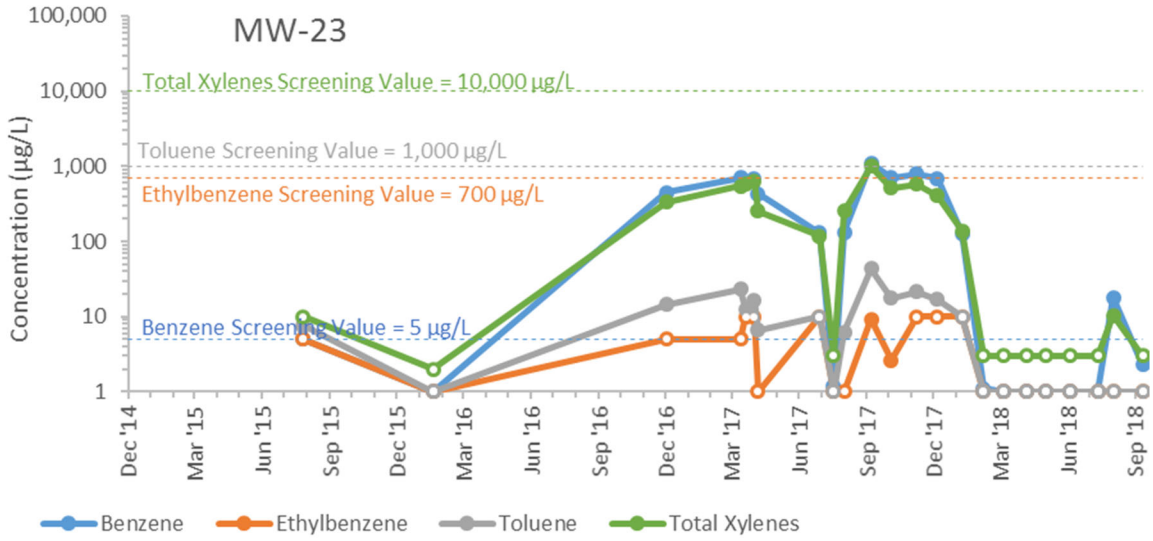
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

Cupboard Creek Monitoring Well Trends:

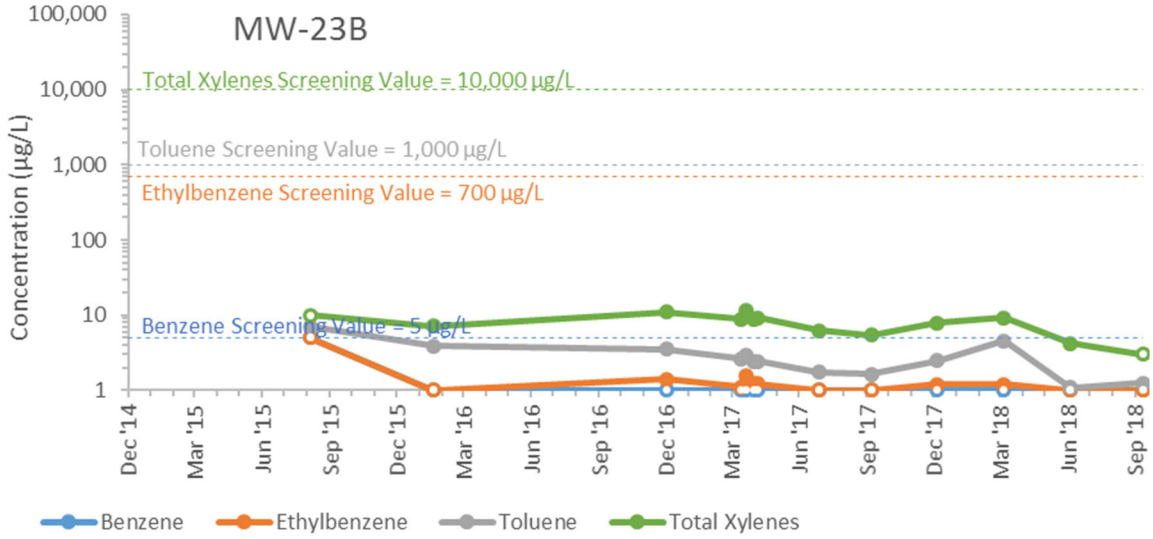


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

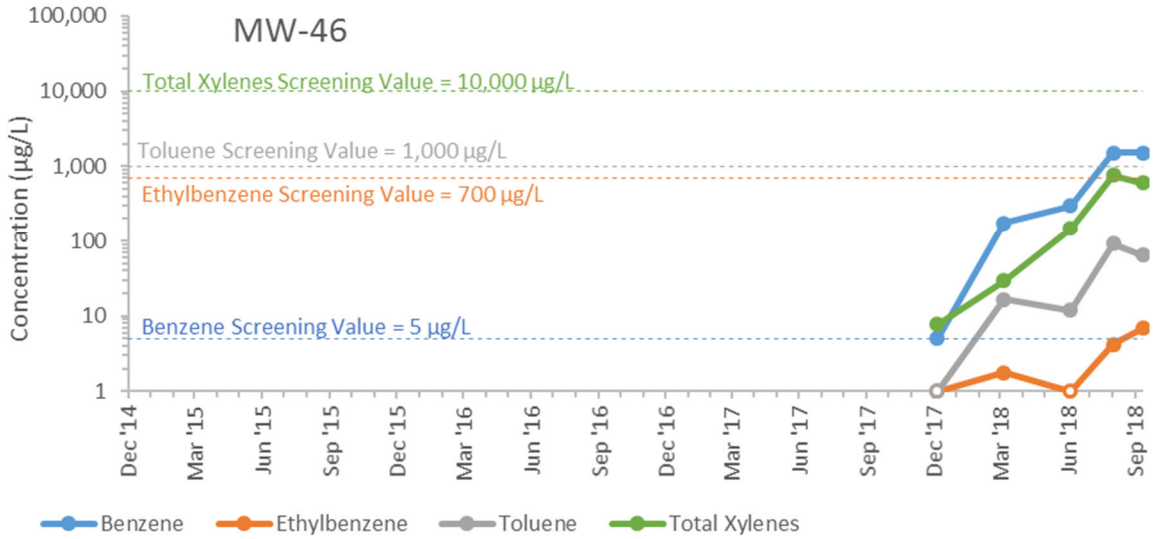
s:



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

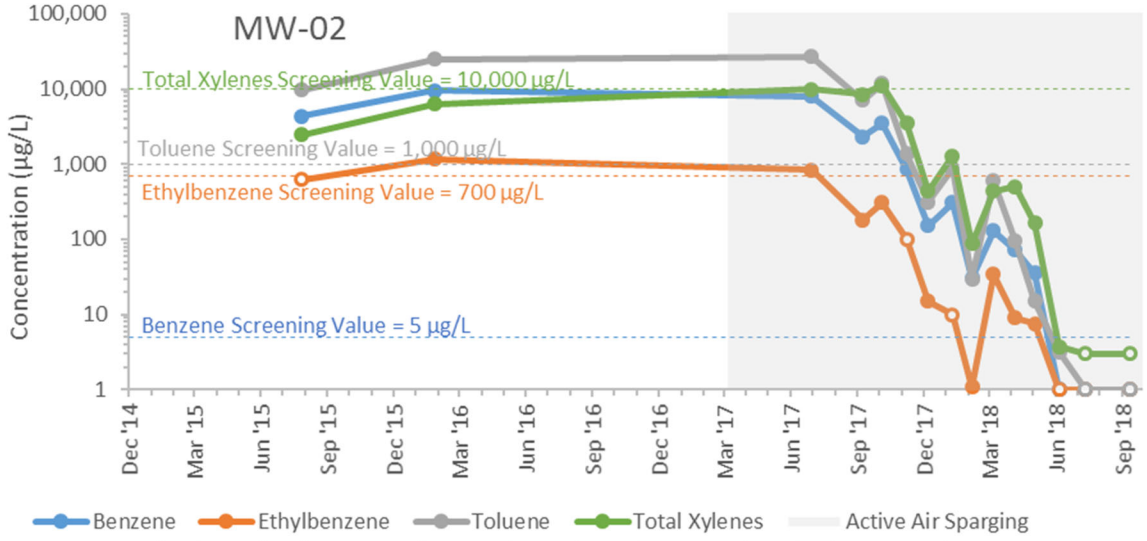


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

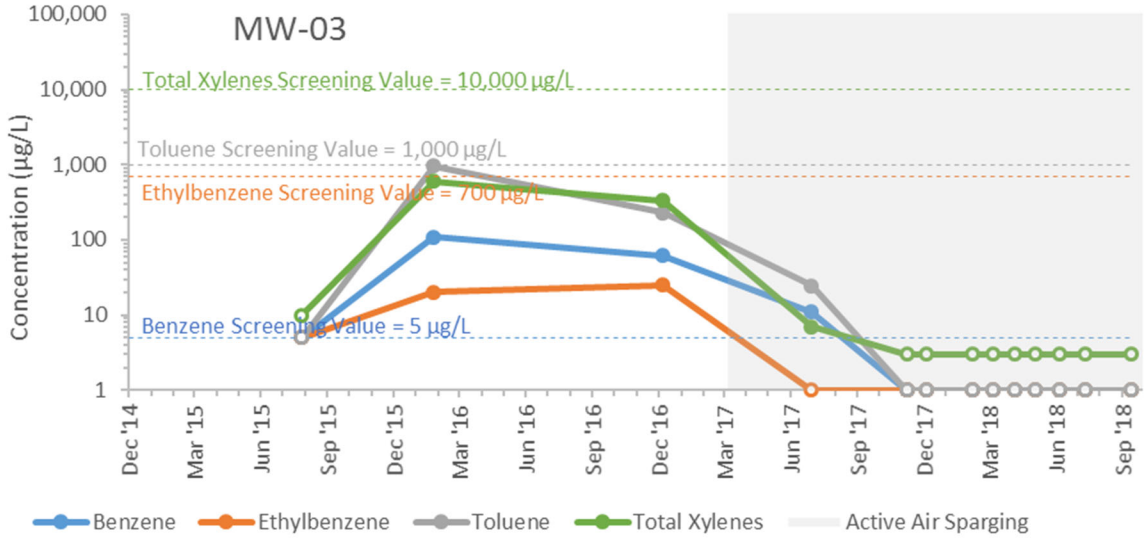


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

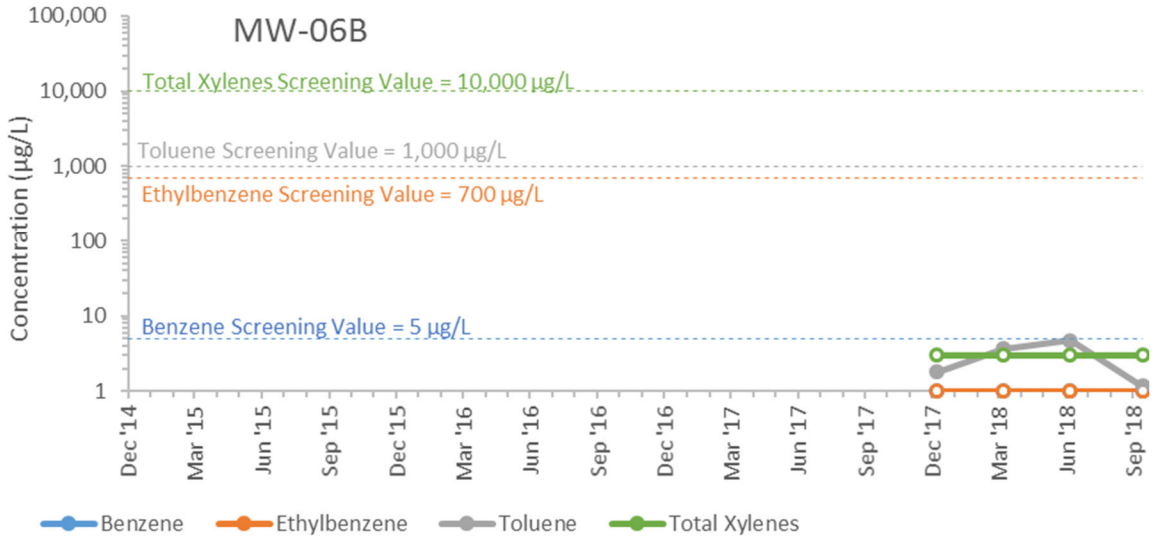
Hayfield Monitoring Well Trends:



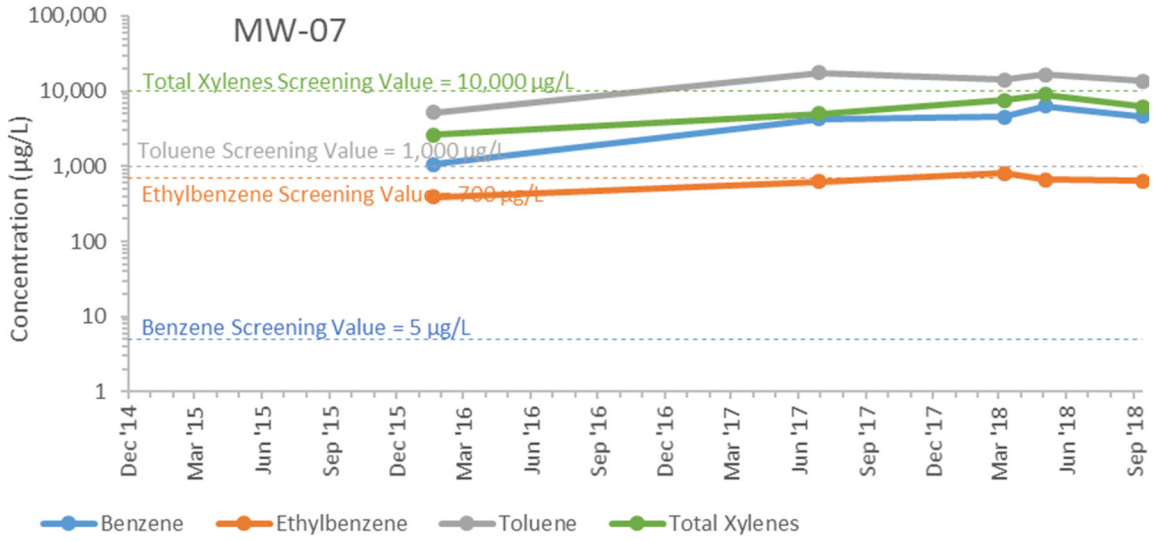
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



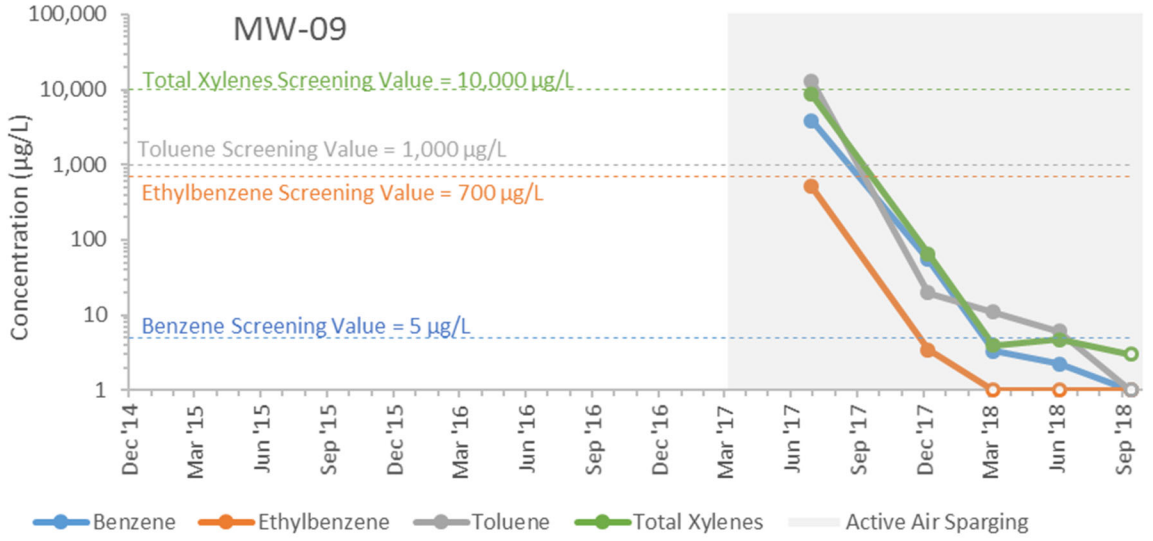
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



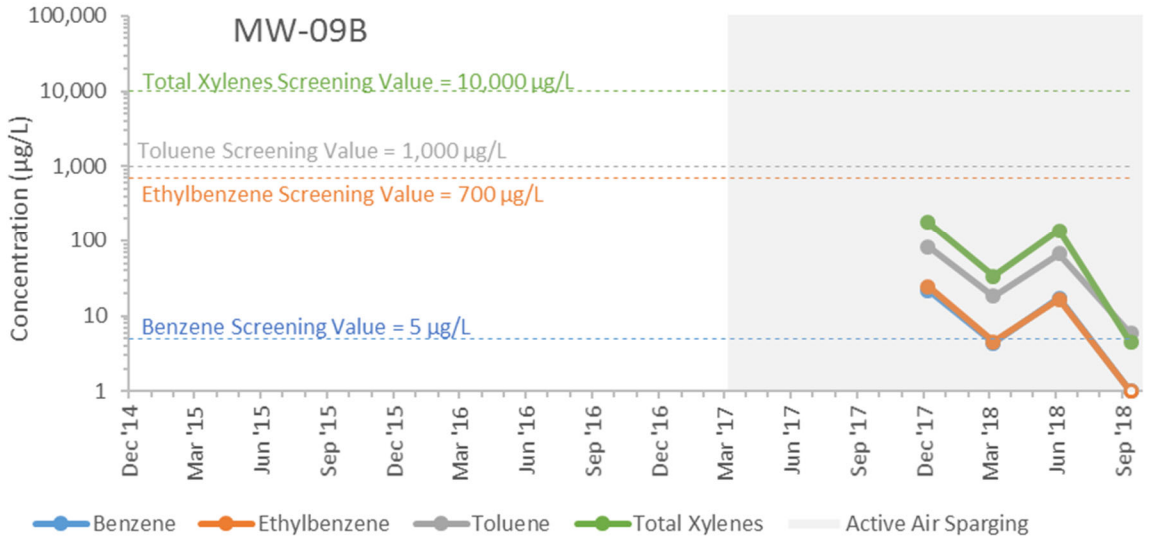
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



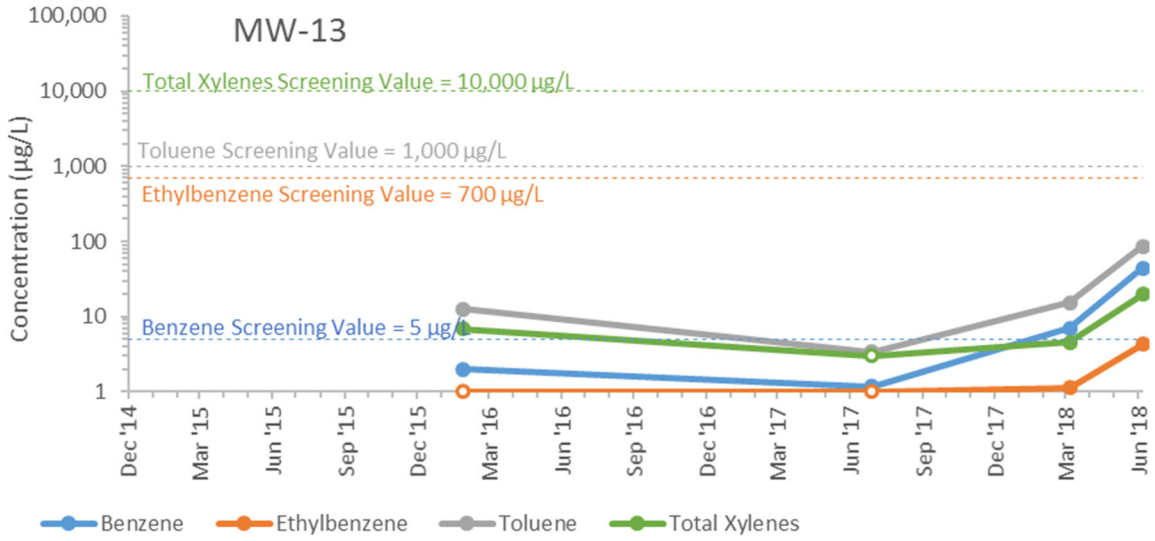
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



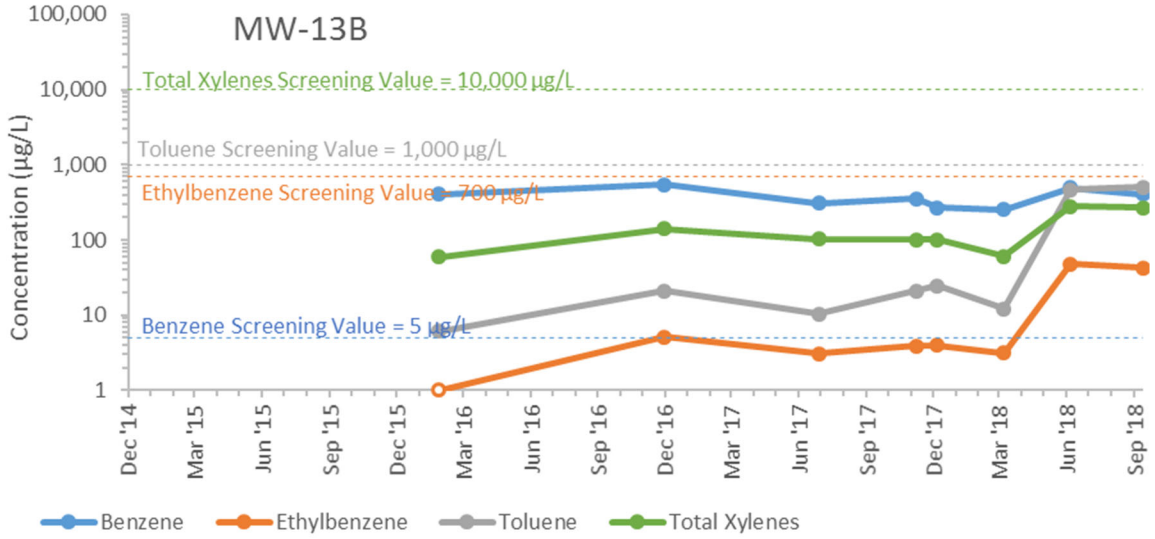
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



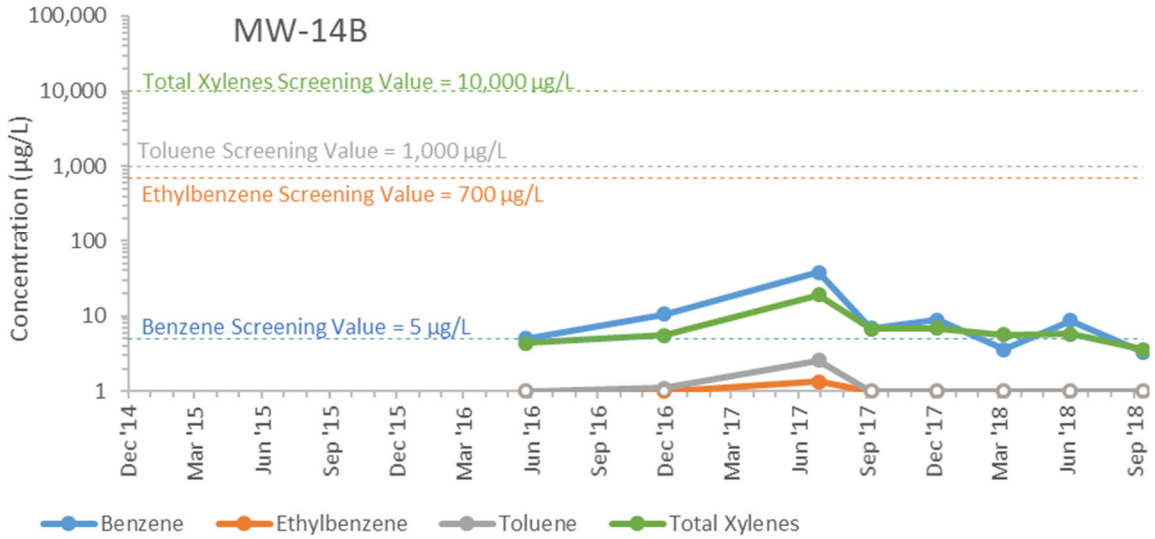
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



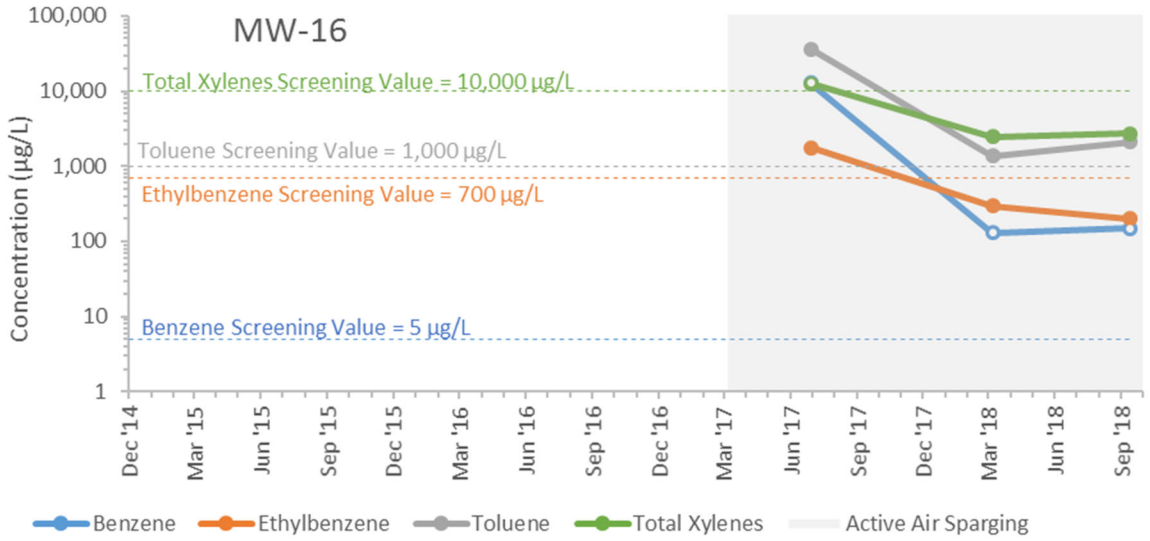
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



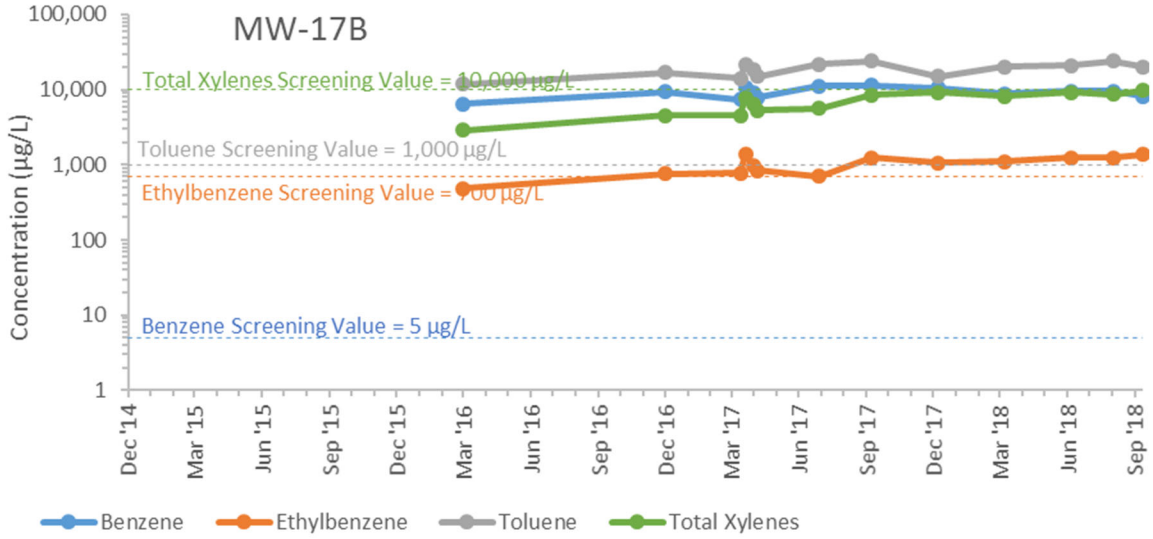
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



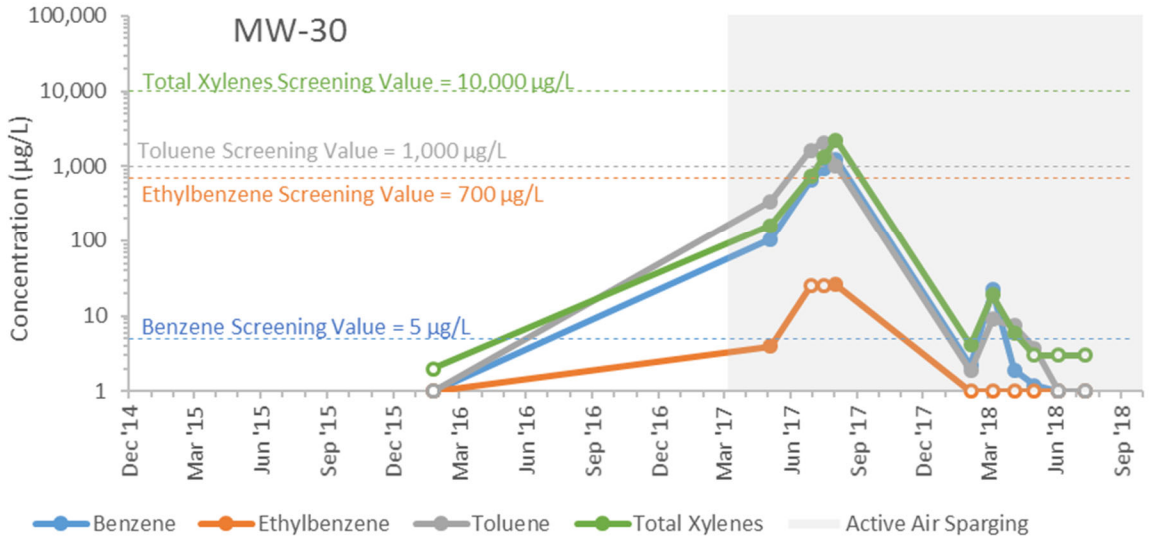
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



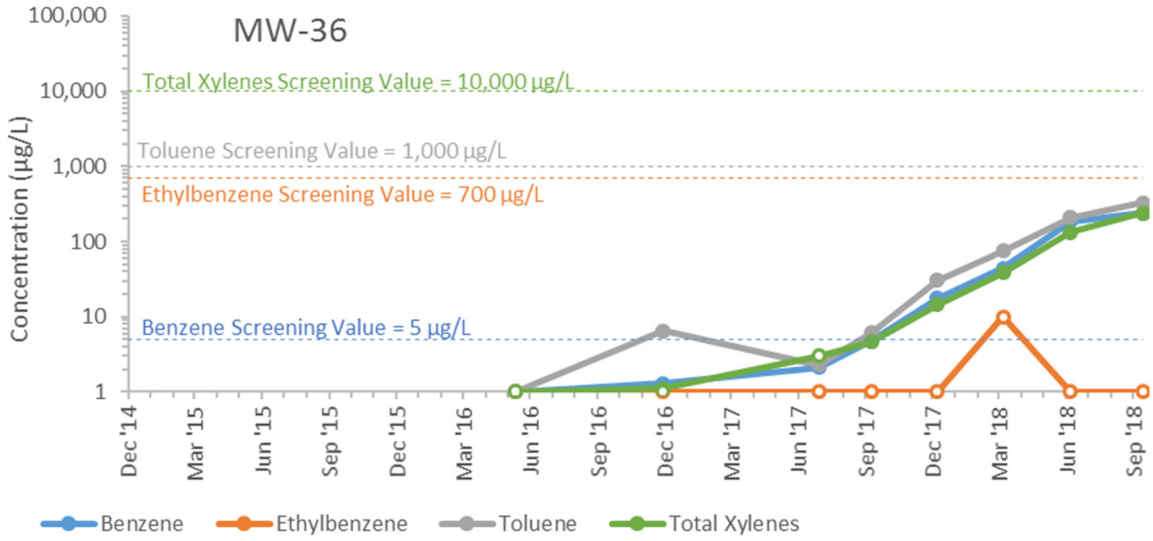
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



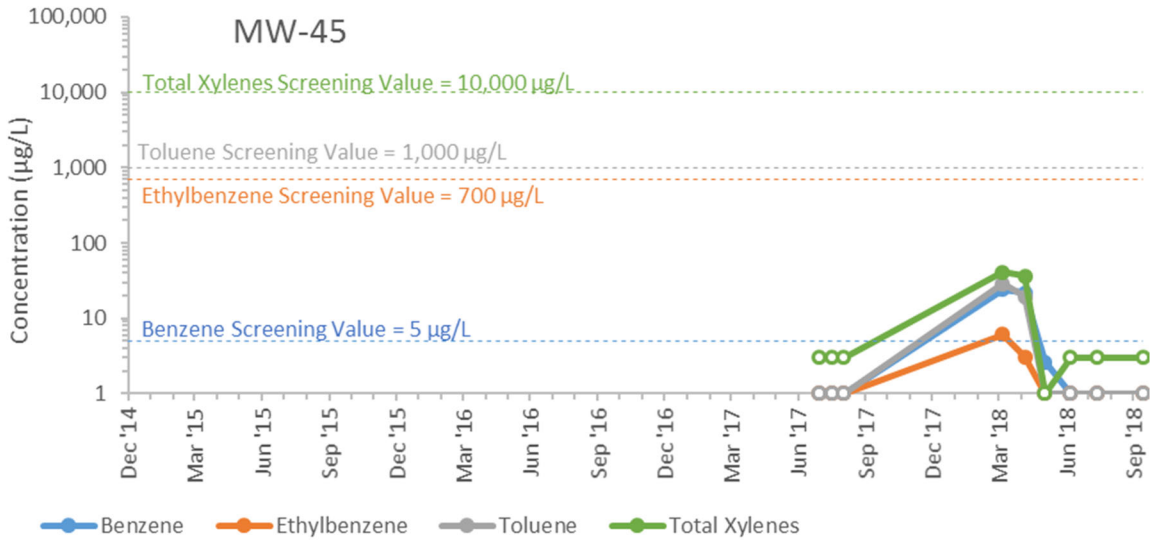
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

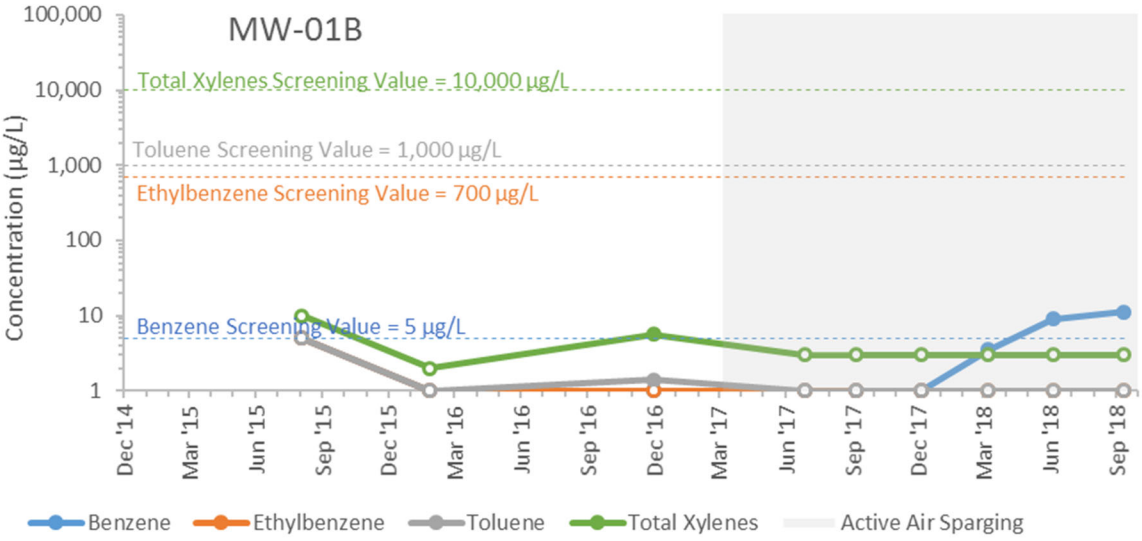


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

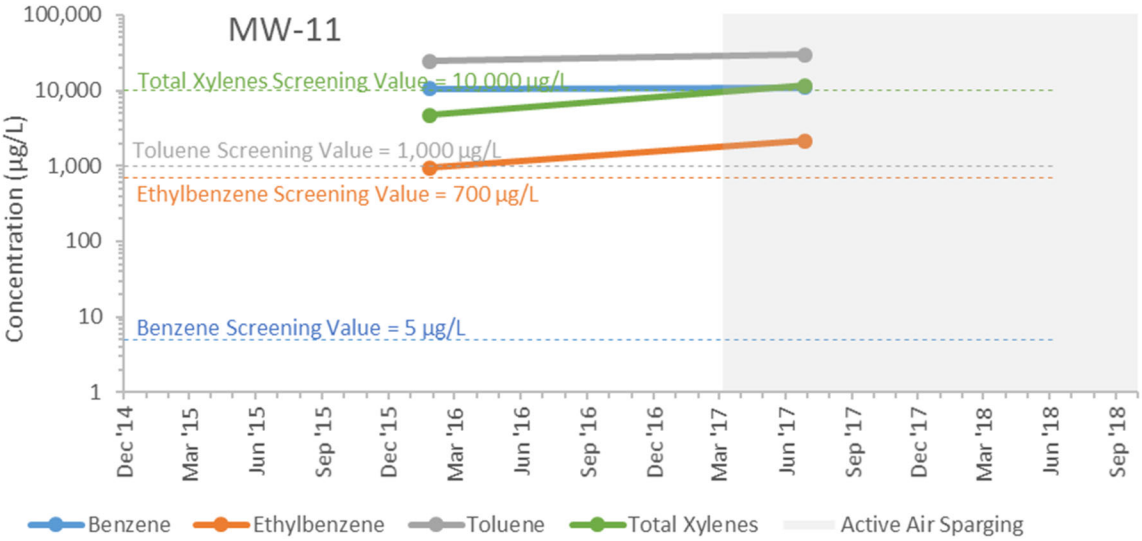


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

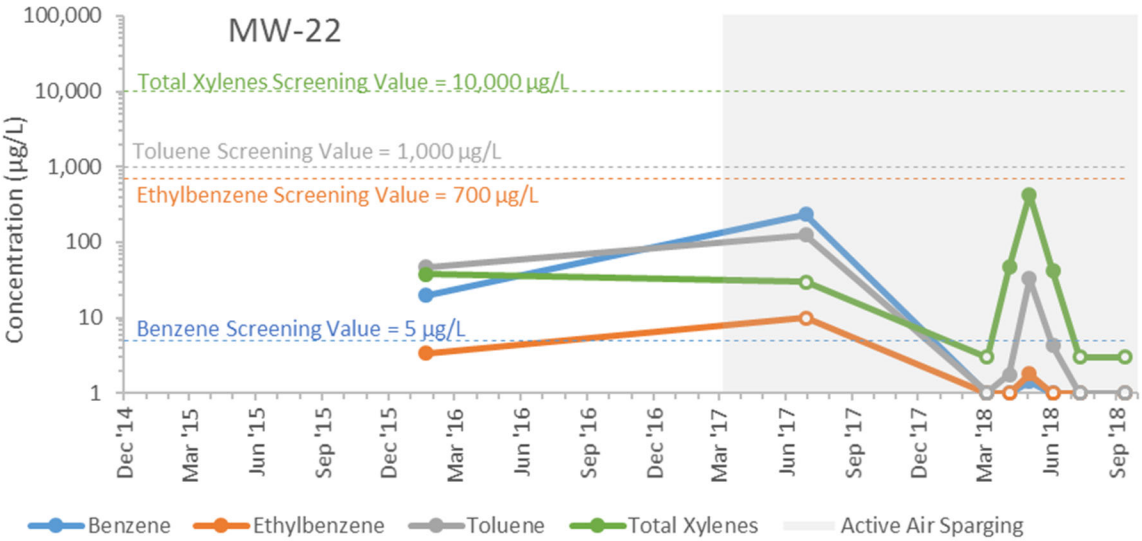
Shallow Bedrock Monitoring Well Trends:



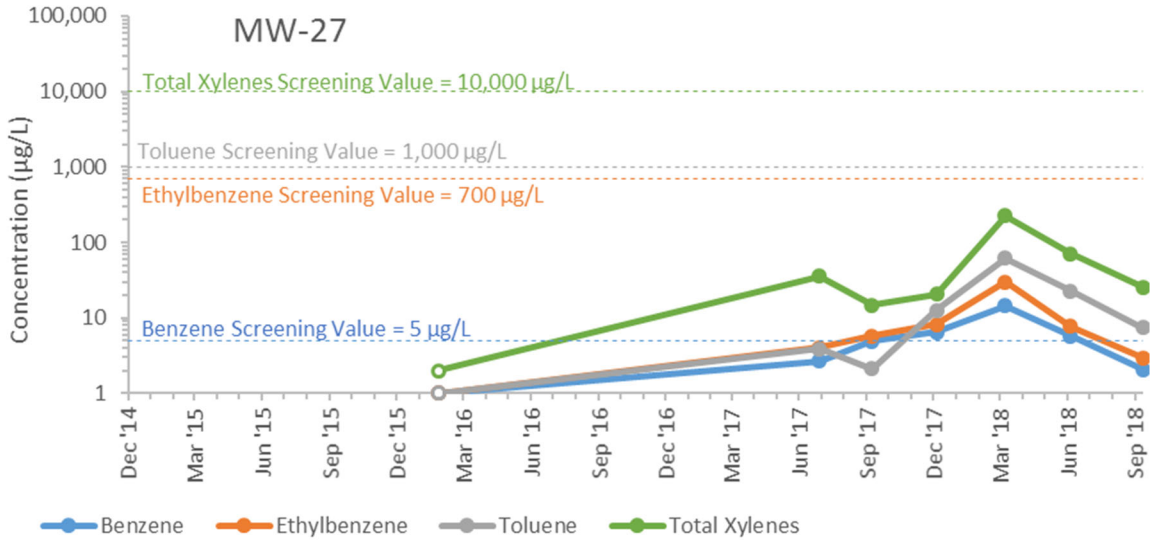
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



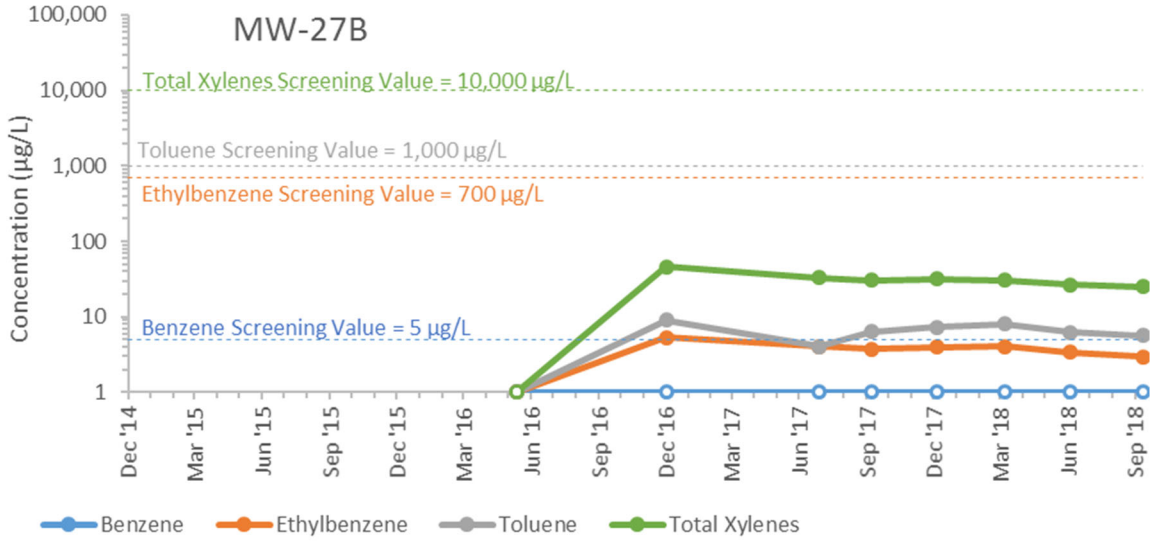
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.